



**TXU Electric
Comanche Peak
Steam Electric Station**
P.O. Box 1002
Glen Rose, TX 76043
Tel: 254 897 8920
Fax: 254 897 6652
lterry1@txu.com

C. Lance Terry
Senior Vice President & Principal Nuclear Officer

CPSES 200100469
Log # TXX-01033
File # 10250 (RP-85)
Ref. # 10CFR50.36

February 26, 2001

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
ANNUAL OPERATING REPORT FOR 2000

Gentlemen:

Attached is the CPSES Annual Operating Report for 2000 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.

If you have any questions, please contact Mr. Douglas W. Snow at (254) 897-8448.

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

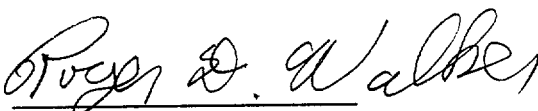
DO29

CPSES 200100469
TXX-01033

PAGE 2 OF 2

Sincerely,

C. L. Terry

By: 
Roger D. Walker
Regulatory Affairs Manager

RDW/dws

Attachment

c - E. W. Merschoff, Region IV
J. I. Tapia, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES
Ms M.L. Thomas, REIRS Project Manager
(W/Original copy of Personnel Exposure & Monitoring Report)

COMANCHE PEAK STEAM ELECTRIC STATION

ANNUAL OPERATING REPORT

2000

TXU ELECTRIC COMPANY

TABLE OF CONTENTS

- 1.0 Summary of Operating Experience
- 2.0 Outages and Reductions in Power
- 3.0 Personnel Exposure and Monitoring Report
- 4.0 Irradiated Fuel Inspection Results
- 5.0 Outage Related Single Radioactivity Release or Radiation Exposure to an Individual that Accounts for More than 10 Percent of Allowable Annual Values

1.0 SUMMARY OF OPERATING EXPERIENCE

The Comanche Peak Steam Electric Station (CPSES) is a dual unit pressurized water reactor power plant, Unit 1 is licensed at 3411 Megawatt thermal (MWt) and Unit 2 is licensed at 3445 MWt. It is located in Somervell County in North Central Texas approximately 65 miles southwest of the Dallas-Fort Worth Metropolitan area. The nuclear steam supply system was purchased from Westinghouse Electric Corporation and is rated for a 3425 MWt output. On October 7, 1999, Unit 2 implemented Technical Specification Amendment 72 and TRM Rev. 33, increasing the rating of Unit 2 from 3411 MWt to 3445 MWt output.

1.1 CPSES UNIT 1

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 83,129,587 net Megawatt-hours (MWH) of electricity as of December 31, 2000, with a net unit capacity factor of 79.4% (using MDC). The unit and reactor availability factors were 86.4% and 90.1%, respectively, for the year 2000.

There were no refueling outages for this unit in 2000. During this reporting period there were no failures or challenges to the Power Operated Relief Valves or Safety Valves.

Figure 1.1-1 provides the generation profile of the average daily net electrical output of Unit 1 for 2000. Table 1.1-1 is a compilation of the monthly summaries of the operating data and Table 1.1-2 contains the yearly and total summaries of the operating data.

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 60,260,146 net Megawatt-hours (MWH) of electricity as of December 31, 2000, with a net unit capacity factor of 80.6% (using MDC). The unit and reactor availability factors were 86.7% and 91.0%, respectively, for the year 2000.

On September 15, 2000, the unit began the power ramp down for its fifth refueling outage. The unit entered the refueling outage on September 30..

During the refueling outage, 88 fresh fuel assemblies were loaded for Cycle 6. The refueling outage lasted 35 days and ended on November 5, 2000. Unit 2 was returned to 100% power on November 15, 2000.

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

- Main Generator Inspection.
- Eddy current inspection of Last Stage Blades for both LP Turbines
- Emergency Diesel Generator replacement of four cylinder liners.
- Emergency Diesel Generators 18 month Inspection
- Upgrade of Vibration Monitoring Equipment
- 40% Eddy Current Testing on #1 and #4 Steam Generators
- Refueling machine Modifications for increased reliability
- Upgrade oil coolers for 2MT1 and 2MT2 transformers

On October 7, 1999, Unit 2 implemented Technical Specification Amendment 72 and TRM Rev. 33, increasing the rating of Unit 2 from 3411 MWt to 3445 MWt output.

Figure 1.2-1 provides the generation profile of the average daily net electrical output of Unit 2 for 2000. Table 1.2-1 is a compilation of the monthly summaries of the operating data and Table 1.2-2 contains 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 CPSES UNIT 1

There were no irradiated fuel inspections performed on Unit 1 fuel since Unit 1 did not have a refueling outage in 2000.

4.2 CPSES UNIT 2

The reactor coolant fission product activity levels were carefully monitored throughout Unit 2, Cycle 5. Analysis of the activity levels indicated no leaking fuel throughout the cycle. During refueling outage 2RFO5, visual inspections were performed by inspection personnel from the edge of the spent fuel pool to assess the external condition of the fuel assemblies. Underwater camera inspections of randomly selected fuel assemblies were also performed. During 2000, several Westinghouse fueled plants reported fractured fuel assembly top nozzle holddown spring screws. As a result, underwater camera visual inspections of the top nozzle clamps of the only two Westinghouse fuel assemblies which operated in Cycle 5 were performed in order to observe any indications of fractured holddown spring screw damage. All fuel assemblies inspected appeared to be in good condition with no anomalies observed.

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

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 2000.

During 2000 CPSES Unit 2 conducted a refueling outage (see section and 1.2). 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 6.0.

FIGURE 1.1-1
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1
GENERATION PROFILE
AVERAGE DAILY UNIT POWER LEVEL for 2000

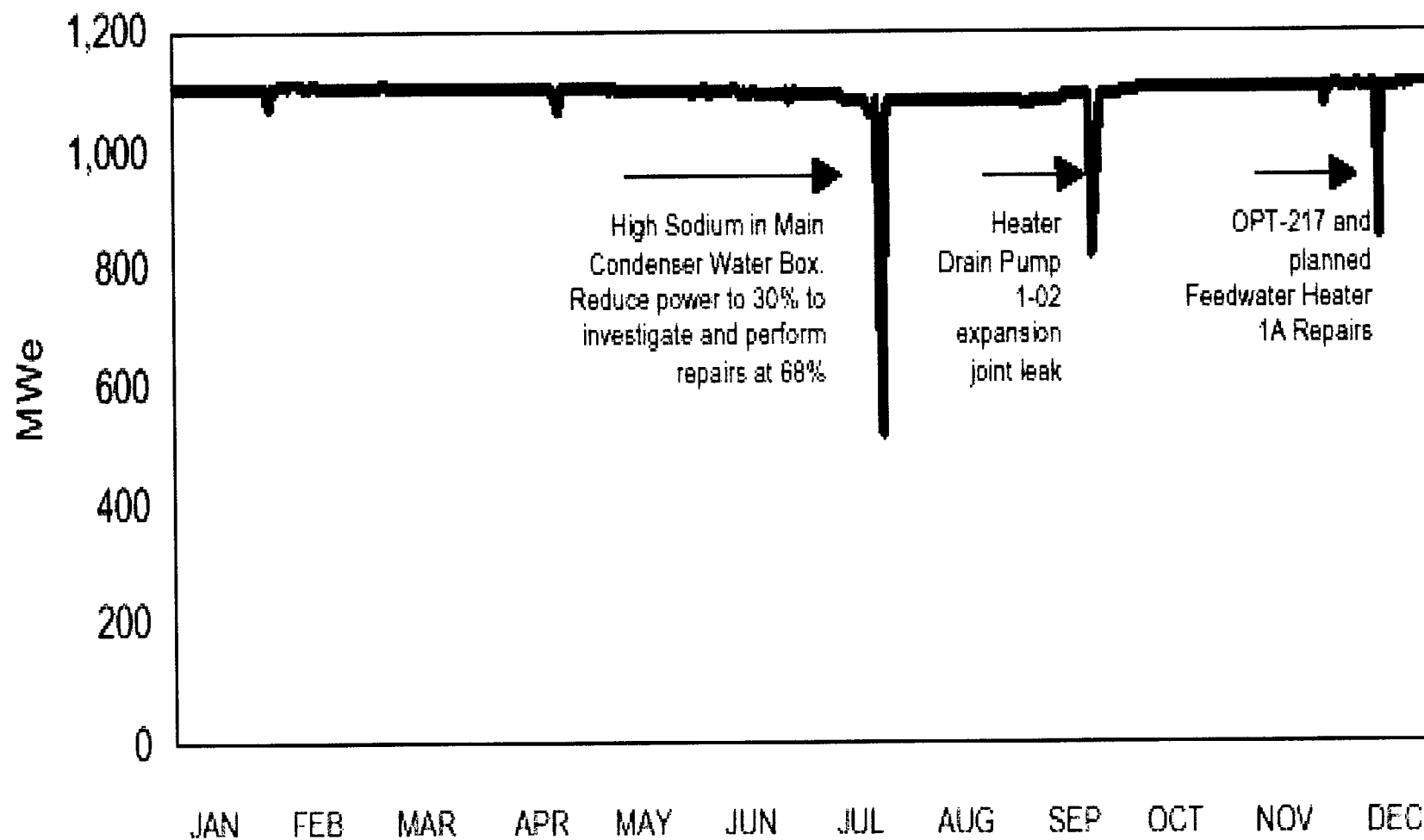


TABLE 1.1-1 (PAGE 1 OF 2)
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1
MONTHLY ELECTRIC POWER GENERATION DATA (2000)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
Hours RX was Critical	744	696	744	719	744	720
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744	696	744	719	744	720
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,531,882	2,372,280	2,535,722	2,450,959	2,536,073	2,454,250
Gross Electric Energy Generated (MWH)	857,039	802,621	856,664	824,861	852,537	820,904
Net Electric Energy Generated (MWH)	821,232	773,106	822,753	793,529	818,992	788,424
RX Service Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
RX Availability Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Service Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Availability Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Capacity Factor(%, using MDC net)	96.0	96.6	96.2	96.0	95.7	95.2
Unit Capacity Factor(%, using DER net)	96.0	96.6	96.2	96.0	95.7	95.2
Unit Forced Outage Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0
Hours in Month	744	696	744	719	744	720
Net MDC (MWe) Estimated						

TABLE 1.1-1 (PAGE 2 OF 2)
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1
MONTHLY ELECTRIC POWER GENERATION DATA (2000)

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hours RX was Critical	744	744	720	745	720	744
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744	744	720	745	720	744
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,472,398	2,535,713	2,431,920	2,535,696	2,452,147	2,519,062
Gross Electric Energy Generated (MWH)	818,647	839,697	806,886	856,633	829,286	851,228
Net Electric Energy Generated (MWH)	785,023	806,151	744,110	821,723	796,096	818,658
RX Service Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
RX Availability Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Service Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Availability Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Capacity Factor(%, using MDC net)	91.8	94.2	93.5	95.9	96.1	95.7
Unit Capacity Factor(%, using DER net)	91.8	94.2	93.5	95.9	96.1	95.7
Unit Forced Outage Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0
Hours in Month	744	744	720	745	720	744
Net MDC (MWe) Estimated						

TABLE 1.1-2
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1
ANNUAL ELECTRIC POWER GENERATION DATA (2000)

	YEAR	CUMULATIVE
Hours RX was Critical	8,784	79,385
RX Reserve Shutdown Hours	0	2,632
Hours Generator On-line	8,784	78,665
Unit Reserve Shutdown Hours	0	0
Gross Thermal Energy Generated (MWH)	29,828,102	259,799,957
Gross Electric Energy Generated (MWH)	10,017,003	86,940,111
Net Electric Energy Generated (MWH)	9,619,797	83,129,587
RX Service Factor (%)	100.0	87.2
RX Availability Factor (%)	100.0	90.1
Unit Service Factor (%)	100.0	86.4
Unit Availability Factor (%)	100.0	86.4
Unit Capacity Factor(%, using MDC net)	95.2	79.4
Unit Capacity Factor(%, using DER net)	95.2	79.4
Unit Forced Outage Rate (%)	0.0	2.9
Hours in Reporting Period		

FIGURE 1.2-1
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2
GENERATION PROFILE
AVERAGE DAILY UNIT POWER LEVEL for 2000

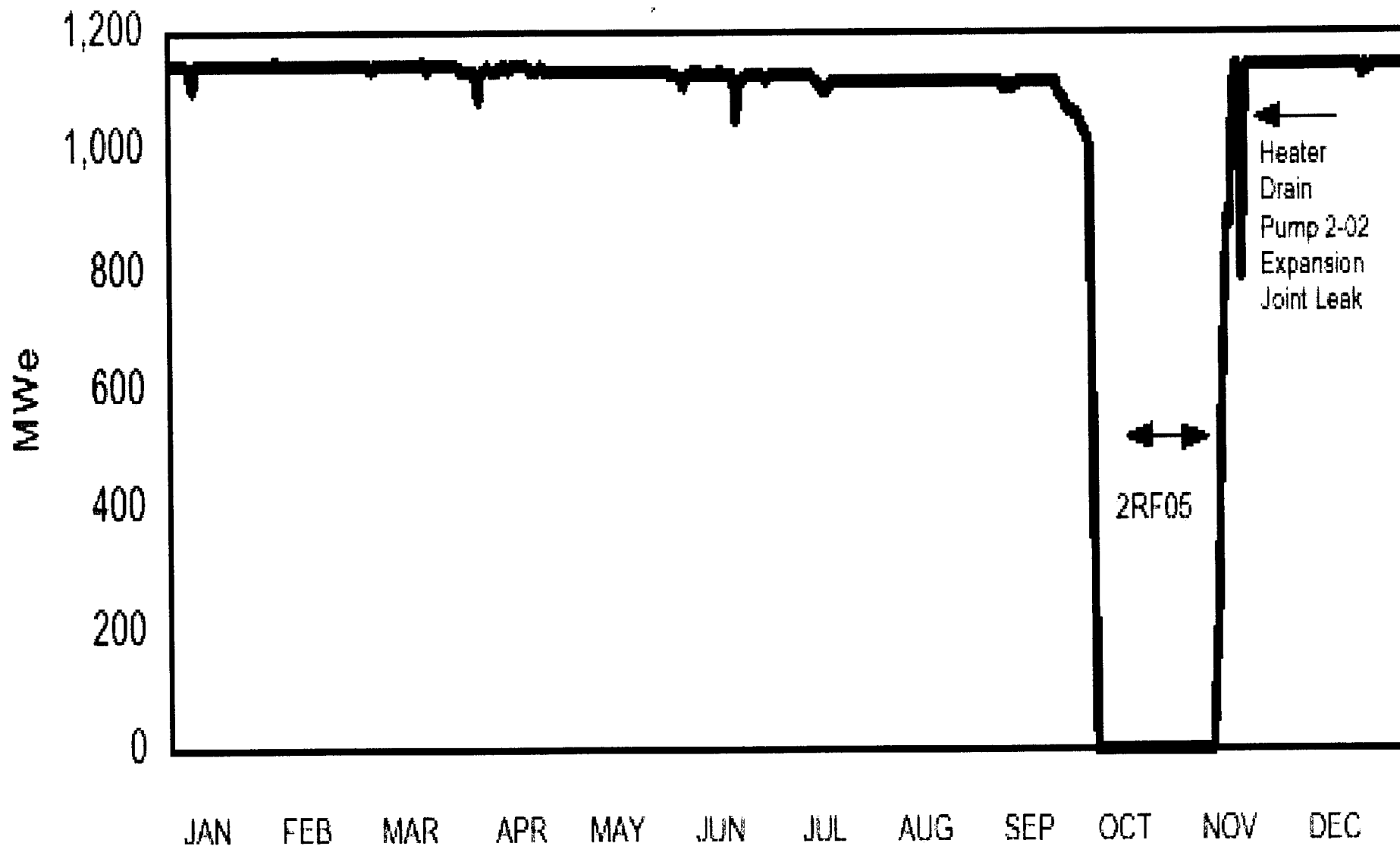


TABLE 1.2-1 (PAGE 1 OF 2)
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2
MONTHLY ELECTRIC POWER GENERATION DATA (2000)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
Hours RX was Critical	744	696	744	719	744	720
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744	696	744	719	744	720
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,558,038	2,396,090	2,559,137	2,476,416	2,531,244	2,472,281
Gross Electric Energy Generated (MWH)	880,252	824,661	880,396	849,195	877,241	843,043
Net Electric Energy Generated (MWH)	846,507	795,789	847,848	816,627	843,292	809,862
RX Service Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
RX Availability Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Service Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Availability Factor (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unit Capacity Factor(%, using MDC net)	98.9	99.4	99.1	98.8	98.6	97.8
Unit Capacity Factor(%, using DER net)	98.9	99.4	99.1	98.8	98.6	97.8
Unit Forced Outage Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0
Hours in Month	744	696	744	719	744	720
Net MDC (MWe) Estimated						

TABLE 1.2-1 (PAGE 2 OF 2)
 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2
 MONTHLY ELECTRIC POWER GENERATION DATA (2000)

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hours RX was Critical	744	744	707.52	0	649	744
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744	744	707.52	0	621	744
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,558,035	2,561,287	2,383,872	0	1,926,718	2,560,104
Gross Electric Energy Generated (MWH)	866,327	864,675	805,990	0	655,803	881,194
Net Electric Energy Generated (MWH)	831,925	830,065	773,118	0	623,978	849,034
RX Service Factor (%)	100.0	100.0	98.3	0.0	90.1	100.0
RX Availability Factor (%)	100.0	100.0	98.3	0.0	90.1	100.0
Unit Service Factor (%)	100.0	100.0	98.3	0.0	86.3	100.0
Unit Availability Factor (%)	100.0	100.0	98.3	0.0	86.3	100.0
Unit Capacity Factor(%, using MDC net)	97.2	97.0	93.4	0.0	75.4	99.2
Unit Capacity Factor(%, using DER net)	97.2	97.0	93.4	0.0	75.4	99.2
Unit Forced Outage Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0
Hours in Month	744	744	720	745	720	744
Net MDC (MWe) Estimated						

TABLE 1.2-2

COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2

ANNUAL ELECTRIC POWER GENERATION DATA (2000)

	YEAR	CUMULATIVE
Hours RX was Critical	7,955.0	56,763
RX Reserve Shutdown Hours	0	2,366
Hours Generator On-line	7,928.0	56,358
Unit Reserve Shutdown Hours	0	0
Gross Thermal Energy Generated (MWH)	26,983,222	185,562,004
Gross Electric Energy Generated (MWH)	9,228,777	62,881,230
Net Electric Energy Generated (MWH)	8,868,045	60,260,146
RX Service Factor (%)	90.6	87.3
RX Availability Factor (%)	90.6	91.0
Unit Service Factor (%)	90.3	86.7
Unit Availability Factor (%)	90.3	86.7
Unit Capacity Factor(%, using MDC net)	87.8	80.6
Unit Capacity Factor(%, using DER net)	87.8	80.6
Unit Forced Outage Rate (%)	0.0	3.5
Hours in Reporting Period		

TABLE 2.1 (PAGE 1 OF 1)
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1
UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2000

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1	000724	F	NA	A	1	On July 24, at 0911, the control room received a Sodium Hi-Hi alarm in hotwell B. Power was reduced to 30% to isolate and repair a tube leak in Main Condenser 1B. Power was raised to 70% power while repairs were being completed. The repairs were completed and the unit returned to 100% power on July 26, at 0455.
2	000924	F	NA	A	4	On September 24, 2000 at 0515, the unit began a downpower to approximately 70% due to an expansion joint leak in Heater Drain Pump 1-02. The leak was repaired and the unit was returned to 100% power on September 25, 2000 at 0935.
3	001215	S	NA	B	4	A 2100 on December 15, 2000 the unit was downpowered for routine stop valve testing and planned maintenance on Feedwater Heater 1A to repair a steam leak. The testing and repairs were completed and the unit returned to power on 12/17/2000.

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

TABLE 2.2 (PAGE 1 OF 1)
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2
UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2000

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1	000930	S	12.48	C	2	On September 30, 2000, at 0855 the unit began to downpower to begin refueling outage 2RF05. At 1131, the unit was manually tripped per procedure at 20% power to begin the refueling outage 2RF05. The unit ended the month in Mode 3 in 2RF05.
1a	001001	S	745	C	2	On September 30, 2000, at 1131, the unit was manually tripped per procedure at 20% power to begin the refueling outage 2RF05. The unit began the month in Mode 3 and was in the refueling outage during the entire month. The unit ended the month in Mode 4 in 2RF05.
1b	001113	F	286.37	A	4	On September 30, 2000, at 1131, the unit was manually tripped per procedure at 20% power to begin the refueling outage 2RF05. The unit began the month of November in Mode 4 in 2RF05 refueling outage. On November 5, 2000 at 0252, the unit syncs to the grid and returned to 100% power on November 10, 2000 at 1733.
2	001113	F		A	4	On November 13, 2000 at 0242, the unit commenced a ramp to 65% power to repair a Heater Drain Pump expansion joint leak. The leak was repaired and the unit returned to 100% power on November 14, 2000 at 1325.

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

TABLE 3.0
COMANCHE PEAK STEAM ELECTRIC STATION - UNITS 1 AND 2
2000 PERSONNEL EXPOSURE AND MONITORING REPORT

<u>Work & Job Function</u>	<u>Station</u>	<u>#Personnel</u>		<u>Total</u>	<u>Person - rem</u>	
		<u>Utility</u>	<u>Contract</u>		<u>Utility</u>	<u>Contract</u>
Reactor Operations & Surveillance						
Maintenance & Construction	166	0	198	0.260	.000	0.364
Operations	304	1	198	2.065	.000	0.239
Health Physics & Lab	56	0	61	1.489	.000	0.268
Supervisory & Office Staff	41	1	12	0.031	.000	0.012
Engineering Staff	148	1	60	0.409	.000	0.049
Routine Plant Maintenance						
Maintenance & Construction	196	0	422	6.431	.000	22.840
Operations	98	1	37	1.487	.001	0.475
Health Physics & Lab	52	0	58	2.123	.000	3.808
Supervisory & Office Staff	22	0	3	0.204	.000	0.002
Engineering Staff	73	0	118	1.168	.000	9.479
In-service Inspection						
Maintenance & Construction	36	0	86	0.394	.000	1.211
Operations	15	0	5	0.029	.000	0.048
Health Physics & Lab	1	0	0	0.003	.000	0.000
Supervisory & Office Staff	4	0	1	0.010	.000	0.000
Engineering Staff	15	0	50	0.069	.000	3.853
*Special Plant Maintenance						
Maintenance & Construction	22	0	87	0.071	.000	5.008
Operations	22	0	8	0.453	.000	0.013
Health Physics & Lab	6	0	1	0.089	.000	0.000
Supervisory & Office Staff	4	0	1	0.024	.000	0.001
Engineering Staff	8	0	7	0.065	.000	0.465
Waste Processing						
Maintenance & Construction	13	0	19	0.011	.000	0.144
Operations	18	0	11	0.199	.000	0.593
Health Physics & Lab	27	0	6	0.394	.000	0.014
Supervisory & Office Staff	1	0	0	0.001	.000	0.000
Engineering Staff	2	0	3	0.026	.000	0.001
Refueling						
Maintenance & Construction	67	0	110	1.454	.000	2.377
Operations	131	0	16	3.914	.000	0.222
Health Physics & Lab	30	0	38	1.159	.000	1.946
Supervisory & Office Staff	5	0	0	0.024	.000	0.000
Engineering Staff	16	1	58	0.216	.000	9.551
Totals						
Maintenance & Construction	500	0	922	8.621	.000	31.944
Operations	588	2	275	8.147	0.001	1.590
Health Physics & Lab	172	0	164	5.257	.000	6.036
Supervisory & Office Staff	77	1	17	0.294	.000	0.015
Engineering Staff	262	2	296	1.953	0.000	23.398
Grand Totals	1599	5	1674	24.272	0.001	62.983

* PRZ Spray Permanent Shielding, Grating clamp replacement, Manzell Level Indicator Installation, Wireless LAN activities, and Painting and Coating activities.

TABLE 6.0

2000 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> <u>Exposure (mrem)</u>
NA	NA	NA	NA

No activities exceeded the allowable 10 percent dose limit.

* Subject annual dose limit is 5000 mrem deep dose equivalent