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February 28, 2003

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 2002**

Gentlemen:

Attached is the CPSES Annual Operating Report for 2002 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.

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TXX-03042

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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

C. L. Terry  
Senior Vice President and Principal Nuclear Officer

By:   
Fred W. Madden  
Nuclear Licensing Manager

DWS/dws

Attachment

c - E. W. Merschoff, Region IV  
W. D. Johnson, Region IV  
D. H. Jaffe, NRR  
Resident Inspectors, CPSES

Mail Original copy of Personnel Exposure & Monitoring Report to:  
Ms. Sheryl Burrows, REIRS Project Manager  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

CPSES-200300346  
Attachment to TXX-03042

COMANCHE PEAK STEAM ELECTRIC STATION

ANNUAL OPERATING REPORT

2002

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. A 4.5 percent increase in steam flow results in the maximum calculated NSSS output of 3579 MWt, and thus a maximum calculated core output of 3565 MWt. All safety systems, including the containment and engineered safety features, are designed for operation at the maximum calculated power output. 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.

### 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 99,359,170 net Megawatt-hours (MWH) of electricity as of December 31, 2002, with a net unit capacity factor of 79.6% (using MDC). The unit and reactor availability factors were 86.3% and 89.7%, respectively, for the year 2002.

On September 28, 2002, the unit entered a forced outage due to a steam generator tube leak and began the ninth refueling outage. The unit was scheduled to begin the refueling outage on October 5, 2002.

On November 18, 2002, Unit 1 implemented Technical Specification Amendment 89, increasing the rating of Unit 1 from 3445 MWt to 3458 MWt output.

During the refueling outage, 88 fresh fuel assemblies were loaded for Cycle 10. The forced outage and the refueling outage lasted 51 days and ended on November 18, 2002. Unit 1 reached 100% power on November 29, 2002.

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

- Identification and disposition of indicated fuel failure during Cycle 9.
- High Pressure Turbine Upgrade and Replacement.
- Eddy current inspection of Last Stage Blades for both LP Turbines
- Emergency Diesel Generators 18 month Inspection
- 100% Eddy Current Testing on all four Steam Generators
- Sleeving of Steam Generator Tubes.

Figure 1.1-1 provides the generation profile of the average daily net electrical output of Unit 1 for 2002. 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 78,931,912 net Megawatt-hours (MWH) of electricity as of December 31, 2002, with a net unit capacity factor of 83.2% (using MDC). The unit and reactor availability factors were 88.5% and 91.9.0%, respectively, for the year 2002.

On March 30, 2002, the unit began the power ramp down for its sixth refueling outage. The unit entered the refueling outage on March 30.

During the refueling outage, 92 fresh fuel assemblies were loaded for Cycle 7. The refueling outage lasted 35 days and ended on May 4, 2002. Unit 2 reached 100% power on May 10, 2002.

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

- Reactor Vessel 10 Year ISI
- Smart Motor Modification on RCP 2-04
- Major Inspection of Main Generator.
- Eddy current inspection of Last Stage Blades for both LP Turbines
- Emergency Diesel Generator replacement of four cylinder liners.
- Emergency Diesel Generators 10 Year Inspection
- 40% Eddy Current Testing on two Steam Generators
- Refueling machine Modifications for increased reliability

Figure 1.2-1 provides the generation profile of the average daily net electrical output of Unit 2 for 2002. 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

The reactor coolant fission product activity levels were carefully monitored throughout Unit 1, Cycle 9. Analysis of the activity levels indicated no leaking fuel throughout most of the cycle. However, in early August 2002, analyses of RCS fission product activity levels indicted the development of a fuel failure. In order to identify the failed assembly, in-mast sipping of Unit 1, Cycle 9 fuel assemblies was conducted during 1RFO9 core off-load. To specifically locate the leaking fuel rod within the failed assembly, ultrasonic testing (UT) of the assemblies identified as suspect during in-mast sipping was performed following core off-load. Visual examinations of U1C9 fuel assemblies were also performed by inspection personnel by viewing the assemblies from the edge of Spent Fuel Pool #1 as assemblies were off-loaded from the core. Randomly selected fuel assemblies were also examined using underwater camera equipment. All fuel assemblies identified as suspect by in-mast sipping were further visually inspected using the high magnification underwater camera located on the UT inspection rig.

During core off-load, in-mast sipping detected a strong indication of leaking fuel in fuel assembly K-53. The results of the UT inspection of K-53 confirmed a leaking fuel rod near the center of the fuel assembly. Assembly K-53 is a twice-burned Framatome ANP supplied fuel assembly, which was originally scheduled for discharge following U1C9. No U1C10 core design changes were therefore required. There were no indications of leaking fuel in Unit 1 Cycle 10 during 2002.

From the visual inspections discussed in the previous paragraph, 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 and were consistent with crud patterns observed during previous refueling outage inspection campaigns. Underwater camera inspection of assembly K-53 was not successful in visually identifying the defect because the leaking rod was located near the center of the assembly.

4.2 CPSES UNIT 2

Visual examinations of Unit 2, Cycle 6 fuel assemblies were performed by inspection personnel by viewing the assemblies from the edge of Spent Fuel Pool #2 as assemblies were off-loaded from the core. Randomly selected fuel assemblies were examined using underwater camera equipment, which were performed concurrently with the poolside visual examinations.

From the inspections discussed above, 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 and were consistent with crud patterns observed during previous refueling outage inspection campaigns.

During refueling outage 2RFO6, Westinghouse personnel performed control rod wear measurements through eddy current examination of all 53 Unit 2 control rod clusters. In summary, the results of the exams showed minimum wear (<5% clad volume reduction) on all control rodlets.

During 2RFO6, eight fuel assemblies were inspected for crud deposition and cladding corrosion. The purpose of this exam was to benchmark crud and corrosion (oxide thickness) performance before implementation of an elevated RCS pH program in Unit 2 beginning in Cycle 7. All assemblies measured were Framatome ANP design. The measured oxide thicknesses were generally as expected with some minor crud deposition observed on most fuel assemblies.

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 2002.

During 2002 CPSES 1 and Unit 2 conducted a refueling outage (see sections 1.1 and 1.2). During the outage activities, six individuals 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 2002

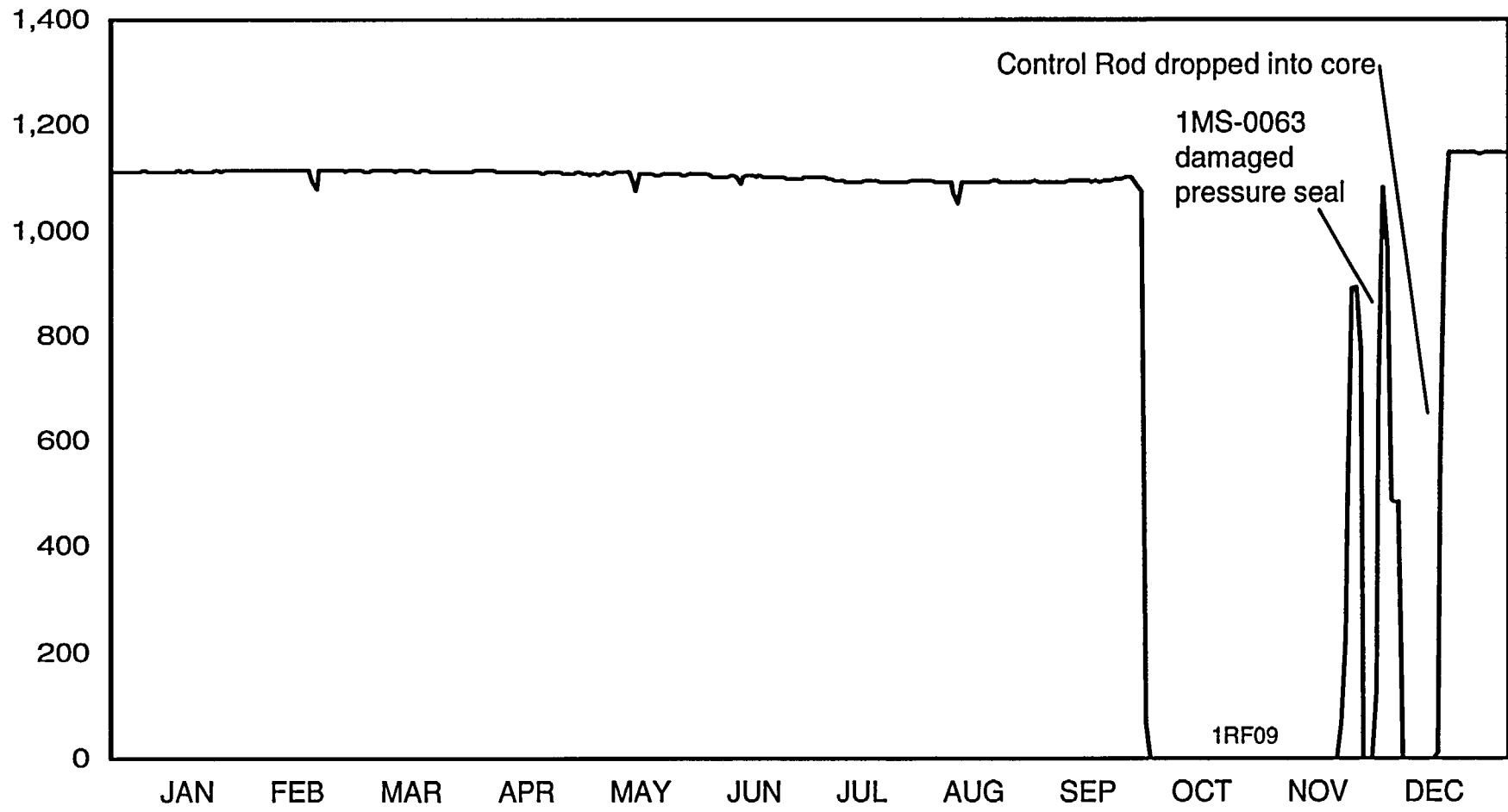


TABLE 1.1-1 (PAGE 1 OF 2)  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
MONTHLY ELECTRIC POWER GENERATION DATA (2002)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
Hours RX was Critical	744	672	744.0	719.0	744.0	720
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744	672	744.0	719.0	744.0	720
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,536,265	2,286,146	2,535,146	2,449,925	2,531,606	2,452,826
Gross Electric Energy Generated (MWH)	861,651	776,600	861,649	831,759	857,423	824,385
Net Electric Energy Generated (MWH)	828,152	747,614	828,429	799,174	823,316	790,891
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)	96.8	96.7	96.8	96.7	96.2	95.5
Unit Capacity Factor(% , using DER net)	96.8	96.7	96.8	96.7	96.2	95.5
Unit Forced Outage Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0
Hours in Month	744	672	744	719	744	720

TABLE 1.1-1 (PAGE 2 OF 2)  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
MONTHLY ELECTRIC POWER GENERATION DATA (2002)

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hours RX was Critical	744	744.0	651.2	0.0	280.3	516.9
RX Reserve Shutdown Hours	0	0.0	0	0.0	0	0
Hours Generator On-line	744	744.0	651.2	0.0	221.8	510.6
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,535,590	2,531,416	2,204,280	0	491,755	1,569,091
Gross Electric Energy Generated (MWH)	846,733	844,024	739,521	0	160,058	535,169
Net Electric Energy Generated (MWH)	811,822	808,994	706,331	0	133,829	506,713
RX Service Factor (%)	100.0	100.0	90.4	0	38.9	69.5
RX Availability Factor (%)	100.0	100.0	90.4	0	38.9	69.5
Unit Service Factor (%)	100.0	100.0	90.4	0	30.8	68.6
Unit Availability Factor (%)	100.0	100.0	90.4	0	30.8	68.6
Unit Capacity Factor(% , using MDC net)	94.9	94.6	85.3	0	16.2	59.2
Unit Capacity Factor(% , using DER net)	94.9	94.6	85.3	0	16.2	59.2
Unit Forced Outage Rate (%)	0.0	0.0	9.6	100.0	27.0	31.4
Hours in Month	744	744	720	745	720	744

TABLE 1.1-2  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
ANNUAL ELECTRIC POWER GENERATION DATA (2002)

	YEAR	CUMULATIVE
Hours RX was Critical	7,279.4	94,513
RX Reserve Shutdown Hours	0.0	2,871
Hours Generator On-line	7,214.6	93,663
Unit Reserve Shutdown Hours	0	0
Gross Thermal Energy Generated (MWH)	24,124,048	310,106,179
Gross Electric Energy Generated (MWH)	8,138,972	103,905,593
Net Electric Energy Generated (MWH)	7,785,265	99,359,170
RX Service Factor (%)	83.1	87.1
RX Availability Factor (%)	83.1	89.7
Unit Service Factor (%)	82.4	86.3
Unit Availability Factor (%)	82.4	86.3
Unit Capacity Factor(% , using MDC net)	77.3	79.6
Unit Capacity Factor(% , using DER net)	77.3	79.6
Unit Forced Outage Rate (%)	6.4	3.3

FIGURE 1.2-1  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
GENERATION PROFILE  
AVERAGE DAILY UNIT POWER LEVEL for 2002

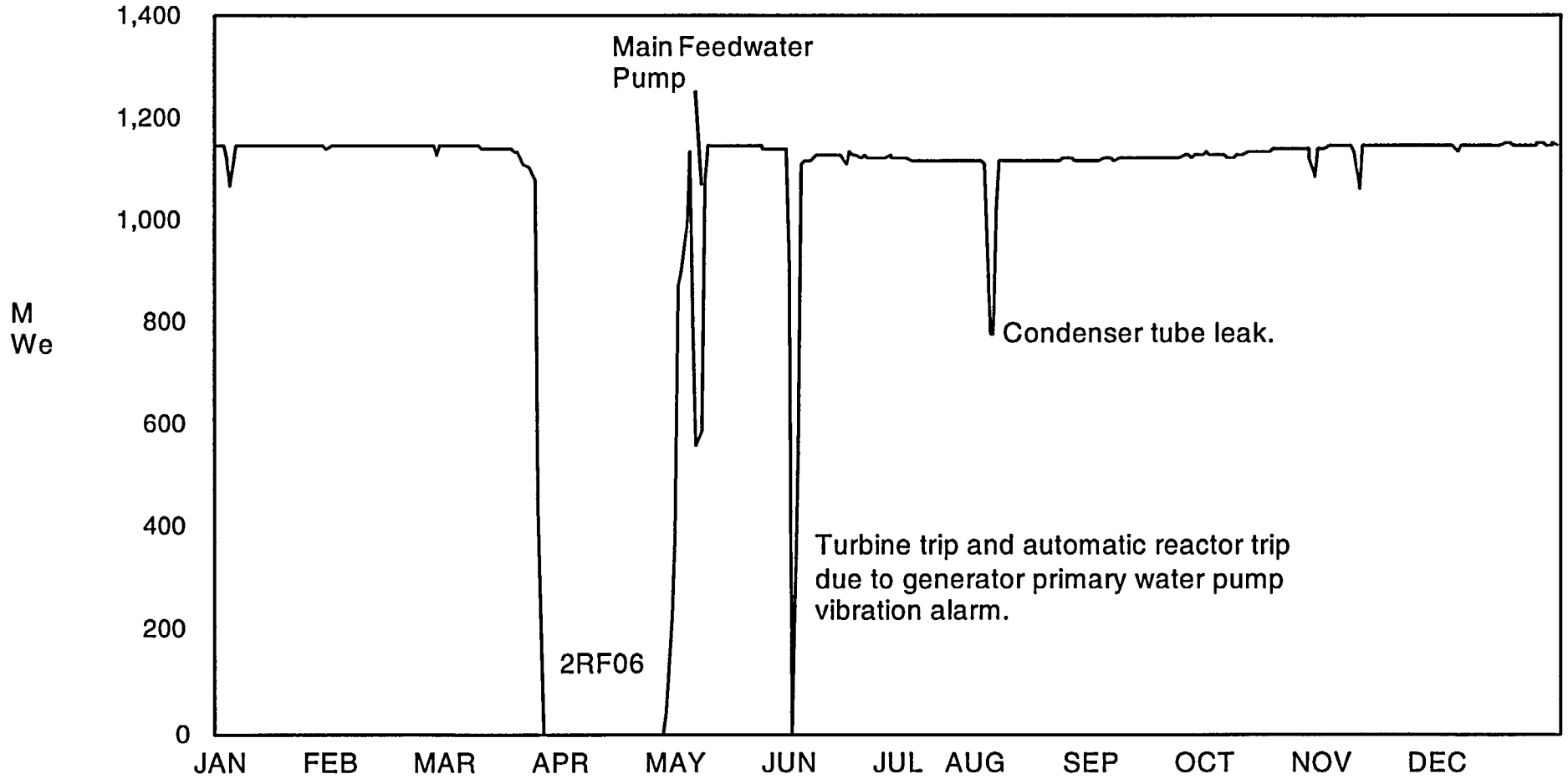


TABLE 1.2-1 (PAGE 1 OF 2)  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
MONTHLY ELECTRIC POWER GENERATION DATA (2002)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
Hours RX was Critical	744	672	707.8	0.0	714.5	694.5
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744	672	707.8	0.0	658.0	690.6
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,563,716	2,320,836	2,419,438	0	1,996,301	2,333,719
Gross Electric Energy Generated (MWH)	881,639	797,957	827,902	0	677,213	795,808
Net Electric Energy Generated (MWH)	849,107	768,653	797,643	0	644,577	763,873
RX Service Factor (%)	100.0	100.0	95.1	0.0	88.4	96.5
RX Availability Factor (%)	100.0	100.0	95.1	0.0	88.4	96.5
Unit Service Factor (%)	100.0	100.0	95.1	0.0	96.0	95.9
Unit Availability Factor (%)	100.0	100.0	95.1	0.0	96.0	95.9
Unit Capacity Factor(% , using MDC net)	99.2	99.5	93.2	0.0	75.3	92.3
Unit Capacity Factor(% , using DER net)	99.2	99.5	93.2	0.0	75.3	92.3
Unit Forced Outage Rate (%)	0.0	0.0	0.0	0.0	0.0	4.1
Hours in Month	744	672	744	719	744	720

TABLE 1.2-1 (PAGE 2 OF 2)  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
MONTHLY ELECTRIC POWER GENERATION DATA (2002)

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hours RX was Critical	744.0	744.0	720.0	745	720	744
RX Reserve Shutdown Hours	0	0	0	0	0	0
Hours Generator On-line	744.0	744.0	720.0	745	720	744
Unit Reserve Shutdown Hours	0	0	0	0	0	0
Gross Thermal Energy Generated (MWH)	2,509,555	2,542,003	2,468,448	2,553,420	2,473,948	2,563,145
Gross Electric Energy Generated (MWH)	848,523	861,089	840,784	878,826	853,967	885,175
Net Electric Energy Generated (MWH)	815,409	828,063	808,586	843,342	821,637	852,929
RX Service Factor (%)	100.0	100.0	100.0	100.0	99.9	100.0
RX Availability Factor (%)	100.0	100.0	100.0	100.0	99.9	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)	95.3	96.8	97.7	98.4	99.2	99.7
Unit Capacity Factor(% , using DER net)	95.3	96.8	97.7	98.4	99.2	99.7
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

TABLE 1.2-2  
 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
 ANNUAL ELECTRIC POWER GENERATION DATA (2001)

	YEAR	CUMULATIVE
Hours RX was Critical	7,949.8	73,453
RX Reserve Shutdown Hours	0	2,366
Hours Generator On-line	7,889.4	72,978
Unit Reserve Shutdown Hours	0	0
Gross Thermal Energy Generated (MWH)	26,744,529	242,335,294
Gross Electric Energy Generated (MWH)	9,148,883	82,297,742
Net Electric Energy Generated (MWH)	8,793,819	78,931,912
RX Service Factor (%)	90.8	89.0
RX Availability Factor (%)	90.8	91.9
Unit Service Factor (%)	90.1	88.5
Unit Availability Factor (%)	90.1	88.5
Unit Capacity Factor(% , using MDC net)	87.3	83.2
Unit Capacity Factor(% , using DER net)	87.3	83.2
Unit Forced Outage Rate (%)	0.4	2.8



TABLE 2.1 (PAGE 1 OF 2)  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2002

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1a	020928	F	68.80	A	1	On September 28, at 0140 the unit commenced a downpower due to a steam generator tube leak and was taken offline at 0312 and entered Mode 3. The unit was in the end of cycle coastdown prior to the start of 1RF09 refueling outage. The SG tube leak exceeded station administrative limits of 40 gpd (Tech Specs limit 150 gpd). The unit ended the month in Mode 5 in a forced outage and mobilizing for entering 1RF09 early.
1b	021001	F	108.00	A	1	On September 28, at 0140 the unit commenced a downpower due to a steam generator tube leak and was taken offline at 0312 and entered Mode 3. The unit was in a forced outage prior to the start of 1RF09 refueling outage
2a	021005	S	637.00	C	4	Officially started 1RF09 planned refueling outage on 10/05/02 at 1200 per the original outage schedule.
2b	021101	S	416.27	C	4	Started month in Mode 5 1RF09. 1RF09 concluded with synchronization to the grid on November 18, 2002, at 0816 hours.
3	021123	S	81.92	A	1	On November 20, 2002, the pressure seal was damaged for 1MS-0063, while performing a hot torque on the valve. A decision was made to take the unit off line and down to Mode 5 to perform repairs on the valve. On November 23, 2002, at 1940 hours, unit commenced shut down from 80% power and was taken off line at 2127 hours. Valve repairs were successful and on November 27, 2002, at 0722 hours, unit was synchronized back to the grid. The unit reached full power on November 29, 2002, at 1112 hours.
4a	021130	F		A	4	On November 30, at 1412 hours, reactor control rod G13 in shutdown bank B, unexpectedly dropped into the core. Unit ended the month investigating cause of failure.

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 2.1 (PAGE 2 OF 2)  
 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
 UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2002

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
4b	021204	F	233.40	A	4	On November 30, at 1412 hours, reactor control rod G13 in shutdown bank B, unexpectedly dropped into the core. Unit began the month troubleshooting in progress to determine the cause for the dropped control rod. Troubleshooting revealed a CRDM canopy weld leak to be the root cause of the dropped control rod. The unit entered Mode 5, after a normal shutdown, for repairs on December 04, 2002 at 0021. Repairs were completed and the unit was returned to power on December 13, 2002 at 1745. The unit returned to full power on December 15, 2002 at 1643.

TABLE 2.2 (PAGE 1 OF 1)  
 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
 UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2002

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1a	020330	S	36.20	C	2	Unit began ramp down to begin 2RF06 refueling outage from end of cycle coastdown with power at 95% at 0859 on 03/30/2002. The reactor was tripped at 30% power per procedure and began normal refueling outage, 2RF06, at 1147 on 03/30/2002 and entered Mode 3. The unit ended this month in Mode 4 in 2RF06 refueling Outage.
1b	020501	S	85.98	C	2	Unit began 2RF06 refueling outage on 03/30/2002. 2RF06 refueling outage was sync to the grid on May 4 <sup>th</sup> at 1359 and returned to 100% power on May 9 <sup>th</sup> at 1817.
2	020511	F		A	4	Smoke was observed coming from Main Feedwater Pump 2-01 insulation. Plant power was reduced to 50% to investigate. The smoke was determined to be residual oil, which was cleaned up and the Unit returned to 100% power on 05/14/2002.
3	020606	F	29.50	A	3	On 06/06/2002 at 1924, Unit turbine trip and reactor trip due to a high vibration alarm on the turbine primary water pump. The alarm was identified as faulty and replaced. The unit returned to power on 06/08/2002 at 2116. (See LER-446 2-001-00)
4a	020729	S		B	1	On July 29, 2002 at 2200 hours, unit began reducing power due to sodium levels in steam generators, as a result of a leak from a tube in the condenser 2A. On July 30, at 0023 hours, unit at 80% power for condenser repairs. Unit ended the month at 74% power (771 MWe Gross), condenser repairs in progress.

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 2 OF 2)  
 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
 UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2002

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
4b	020801	F		B	1	On July 29, 2002 at 2200 hours, unit began reducing power due to sodium levels in steam generators, resulting from leaking tubes in the condenser. On July 30, at 0023 hours, unit at 80% power for condenser repairs. Unit ended the month at 74% power, condenser repairs in progress. Condenser repairs were completed and the unit ramped to full power on 08/01/2002.
5	021106	F		A	4	On November 6, 2002, at 2003 hours, the control system for the Turbine Generator malfunctioned resulting in a load rejection. Operator action stabilized the unit, lowering power to 78% and ultimately to 65% to effect repairs. Repairs were completed and the unit returned to full power on November 7, 2002, at 0930 hours.

TABLE 3.0  
COMANCHE PEAK STEAM ELECTRIC STATION - UNITS 1 AND 2  
2002 PERSONNEL EXPOSURE AND MONITORING REPORT

<u>Work &amp; Job Function</u>	<u>Station</u>	<u>#Personnel</u>		<u>Total</u> <u>Station</u>	<u>Person -</u> <u>Utility</u>	<u>rem</u> <u>Contract</u>
		<u>Utility</u>	<u>Contract</u>			
<b>Reactor Operations &amp; Surveillance</b>						
Maintenance & Construction	138	0	151	0 483	.000	0.525
Operations	327	0	220	2 700	.000	0.349
Health Physics & Lab	50	0	97	1.975	.000	0.636
Supervisory & Office Staff	34	0	7	0 101	.000	0.023
Engineering Staff	173	0	82	0 273	.000	0.069
<b>Routine Plant Maintenance</b>						
Maintenance & Construction	219	0	626	11.042	.000	49.546
Operations	203	0	38	8 840	.000	1.178
Health Physics & Lab	46	0	139	3 649	.000	12.784
Supervisory & Office Staff	19	0	3	0 275	.000	0 064
Engineering Staff	103	0	210	2.248	.000	53.126
<b>In-service Inspection</b>						
Maintenance & Construction	34	0	109	0 402	.000	4 346
Operations	22	0	6	0.479	.000	0 075
Health Physics & Lab	6	0	19	0.024	.000	0.097
Supervisory & Office Staff	3	0	0	0 013	.000	0 000
Engineering Staff	24	0	125	0 632	.000	20.391
<b>*Special Plant Maintenance</b>						
Maintenance & Construction	52	0	228	0.738	.000	13.439
Operations	32	0	6	0 490	.000	0.079
Health Physics & Lab	15	0	26	0 092	.000	0.321
Supervisory & Office Staff	3	0	0	0.025	.000	0.000
Engineering Staff	18	1	43	0.241	.000	5.039
<b>Waste Processing</b>						
Maintenance & Construction	2	0	2	0.005	.000	0.000
Operations	15	0	5	0.221	.000	0 507
Health Physics & Lab	15	0	13	0.069	.000	0.031
Supervisory & Office Staff	0	0	0	0.000	.000	0 000
Engineering Staff	3	0	2	0.050	.000	0 008
<b>Refueling</b>						
Maintenance & Construction	89	0	159	0.840	.000	4 722
Operations	59	0	13	1.635	.000	0 202
Health Physics & Lab	41	0	88	2.259	.000	5 833
Supervisory & Office Staff	7	0	0	0 078	.000	0 000
Engineering Staff	31	1	111	0.751	.000	28 168
<b>Totals</b>						
Maintenance & Construction	534	0	1275	13.510	.000	72.577
Operations	658	0	288	14 365	.000	2 391
Health Physics & Lab	173	0	382	8 068	.000	19.702
Supervisory & Office Staff	66	0	10	0 493	.000	0 087
Engineering Staff	352	2	573	4 195	.000	106 800
<b>Grand Totals</b>	<b>1783</b>	<b>2</b>	<b>2528</b>	<b>40 631</b>	<b>0 000</b>	<b>201.557</b>

\* Transfer canal modifications, Installation of permanent lead shielding and Installation of LHRA Barriers.

TABLE 6.0

2002 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 Activity</u>	<u>Department</u>	<u>Individual's Single Event Exposure (mrem)</u>	<u>Total Annual Exposure (mrem)</u>
S/G Nozzle Dam Installation	System Engineering	647	753
S/G Activities	Westinghouse	918	1736
S/G Activities	Westinghouse	815	2874
S/G Activities	Westinghouse	613	887
S/G Activities	Westinghouse	858	918
S/G Activities	Westinghouse	980	1207

\*Subject annual dose limit is 5000 mrem deep dose equivalent