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February 28, 2007

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 2006

Dear Sir or Madam:

By means of the Attachment to this letter, TXU Generation Company LP (TXU Power) hereby submits the CPSES Annual Operating Report for 2006, prepared and submitted pursuant to guidance provided in C.1.b of U.S. NRC Regulatory Guide 1.16, Revision 4.

This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2. Should you have any questions, please contact Robert Kidwell at (254) 897-5310.

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

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

A001

TXX-07050

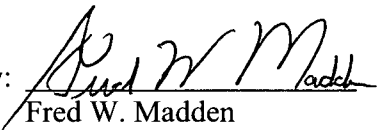
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Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC  
Its General Partner

Mike Blevins

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

RJK  
Attachment

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

Attachment to TXX-07050

COMANCHE PEAK STEAM ELECTRIC STATION

ANNUAL OPERATING REPORT

2006

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. 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. All safety systems, including the engineered safety features, are designed for operations at a maximum NSSS output of 3579 MWt and an associated maximum core output of 3565 MWt.

### 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 137,519,035 net Megawatt-hours (MWH) of electricity as of December 31, 2006, with a net unit capacity factor of 83.26% (using MDC). The cumulative unit and reactor availability factors were 88.39% and 91.04% respectively, as of December 31, 2006.

There was no refueling outage for Unit 1 in 2006

Figure 1.1 provides the generation profile of the average daily net electrical output of Unit 1 for 2006. Table 1.1 is a compilation of the yearly and total summaries of the operating data.

During this reporting period there were no failures or challenges to the Safety Valves.

### 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 115,917,723 net Megawatt-hours (MWH) of electricity as of December 31, 2006, with a net unit capacity factor of 85.74% (using MDC). The cumulative unit and reactor availability factors were 89.57% and 92.09% respectively, as of December 31, 2006.

On October 7, 2006, the unit began a power ramp down for its ninth refueling outage. The unit entered the refueling outage on the same day. During the refueling outage, 88 fresh fuel assemblies were loaded for Cycle 10. The refueling outage lasted 18 days 16 hours and ended on October 26, 2006. Unit 2 reached 100% power on November 2, 2006.

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

- Fuel rod oxide (corrosion) measurements in support of the CPSES elevated pH pilot program.
- Identification of leaking fuel assemblies
- Alloy 600 Inspections of the Reactor Vessel BMI's
- Reactor Head Penetration Volumetric Inspections
- GSI-191 containment sump modifications
- Digital upgrade to the Turbine-Generator Protection System controls
- SSW Train Bravo pump and motor replacement
- Performed 5-year inspection on Diesel Generator

Figure 1.2 provides the generation profile of the average daily net electrical output of Unit 2 for 2006. Table 1.2 is a compilation of 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

Deleted (Reference 69 FR 35067 & TSTF-369).

### 4.0 IRRADIATED FUEL INSPECTION RESULTS

#### 4.1 CPSES UNIT 1

Though there was no Unit 1 refueling outage during 2006, a follow-on reconstitution and inspection campaign was performed on three once-burned Unit 1, Cycle 11 (U1C11) failed assemblies N24, N17, and N46 in late July, 2006. The results of the follow-on campaign are provided below:

Assembly N46 - This assembly was re-examined using the ultrasonic testing (UT) equipment, however, none of the UT scans produced data indicative of a leaking rod and, therefore, no repairs or further inspections were performed. It is likely that this assembly contains a very tight defect.

Assembly N17 - One failed rod was detected and was successfully removed and replaced with a stainless steel rod. High magnification visual examination of this rod showed indications of debris wear scars. An adjacent non-leaking fuel rod was also removed and replaced with a stainless steel rod as a precaution. No wear scars were observed on that rod however.

Assembly N24 - One failed fuel rod was located and successfully removed and replaced with a stainless steel rod. High magnification visual examination of this rod showed indications of a debris wear scar near the location of visible debris in the assembly. The debris was removed prior to the reconstitution attempt. Also, near the bottom end plug, the failed rod visual examination revealed a severe through-wall debris scar. An adjacent non-leaking rod was also removed and showed debris wear scars. This rod location was also reloaded with a stainless steel rod.

It was concluded that assemblies N17 and N24 were successfully reconstituted and are acceptable for re-use. It was also concluded that debris was the likely cause of all of the U1C11 fuel failures.

#### 4.2 CPSES UNIT 2

Inspection personnel performed visual examination of Unit 2, Cycle 9 fuel assemblies as each assembly was withdrawn from the Fuel Building upender during core off-load operations. All fuel assemblies appeared to be in good condition with no anomalies observed, including the assemblies identified as failed by in-mast sipping (IMS).

##### IMS Results

During 2RF09 core offload, IMS inspections were performed on all U2C9 assemblies. The results provided clear indications of two failed fuel assemblies, both of which were scheduled for discharge during the refueling outage. UT and visual inspections of the failed rods are currently scheduled for the upcoming Unit 1 refueling outage in March, 2007.

##### Clad Oxide Measurements

During 2RF09, fuel clad oxide thickness measurements were performed in support of the pilot elevated pH program (constant 7.4) on Unit 2. This was the third oxide measurement campaign performed on Unit 2 in support of the program. Although the final results of the measurements are still under review and analyses, overall, the measurements results were as expected and well within regulatory limits. Based on these preliminary results, the elevated pH program at CPSES was continued.

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

Deleted (Reference 69 FR 35067 & TSTF-369)



FIGURE 1.1  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
GENERATION PROFILE  
AVERAGE DAILY UNIT POWER LEVEL for 2006

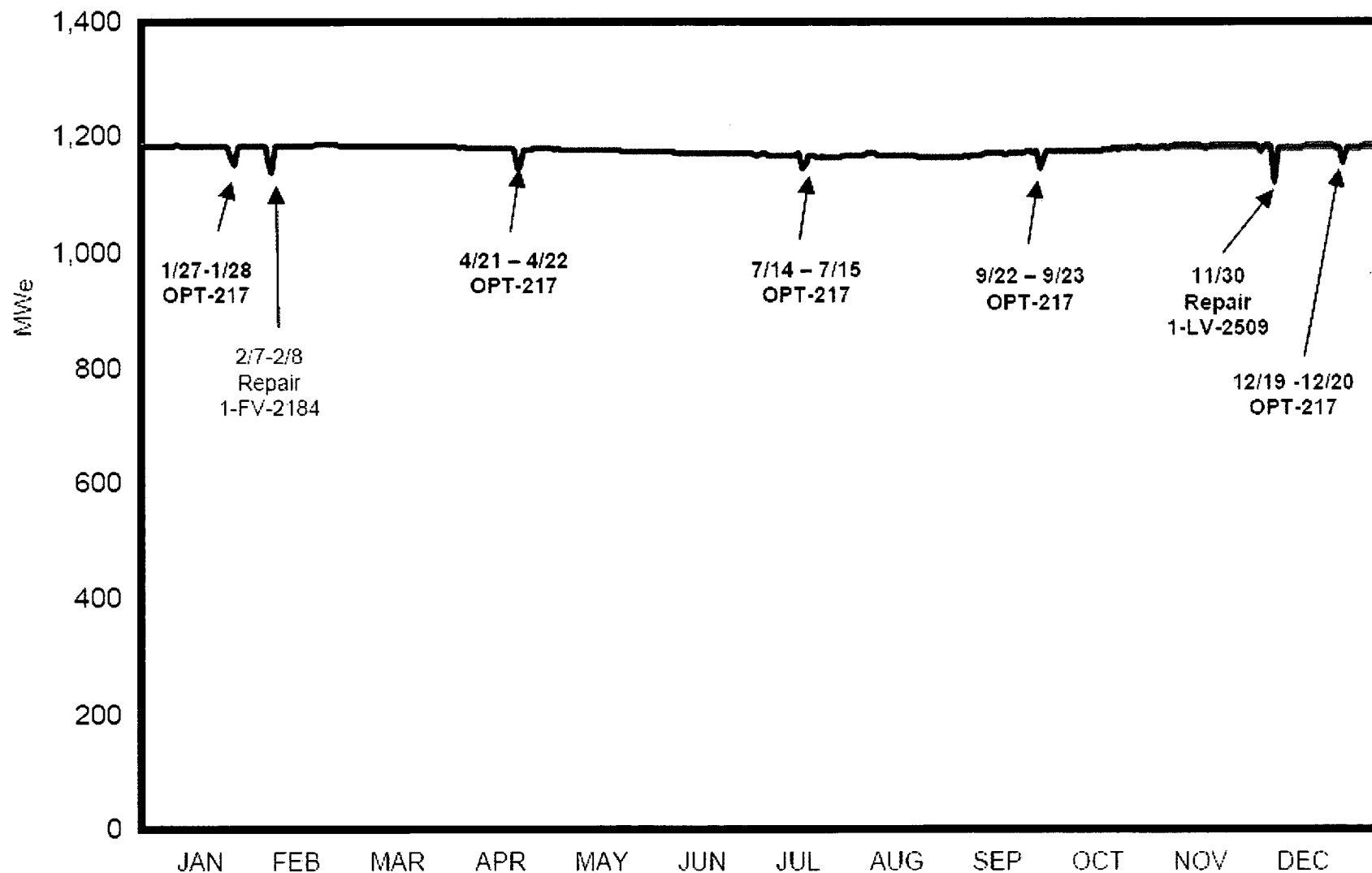


TABLE 1.1  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
ANNUAL ELECTRIC POWER GENERATION DATA (2006)

	YEAR	CUMULATIVE
Hours RX was Critical	8,760.00	127,898.75
RX Reserve Shutdown Hours	0	2,870.89
Hours Generator On-line	8,760.00	126,959.37
Gross Thermal Energy Generated (MWH)	30,254,772.00	424,045,360.20
Gross Electric Energy Generated (MWH)	10,672,575.00	143,550,327.00
Net Electric Energy Generated (MWH)	10,297,952.00	137,519,035.00
RX Service Factor (%)	100.00	89.05
RX Availability Factor (%)	100.00	91.04
Unit Service Factor (%)	100.00	88.39
Unit Availability Factor (%)	100.00	88.39
Unit Capacity Factor (% , using MDC net)	102.22	83.26
Unit Capacity Factor (% , using DER net)	102.22	83.26
Unit Forced Outage Rate (%)	0.00	2.44

FIGURE 1.2  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
GENERATION PROFILE  
AVERAGE DAILY UNIT POWER LEVEL for 2006

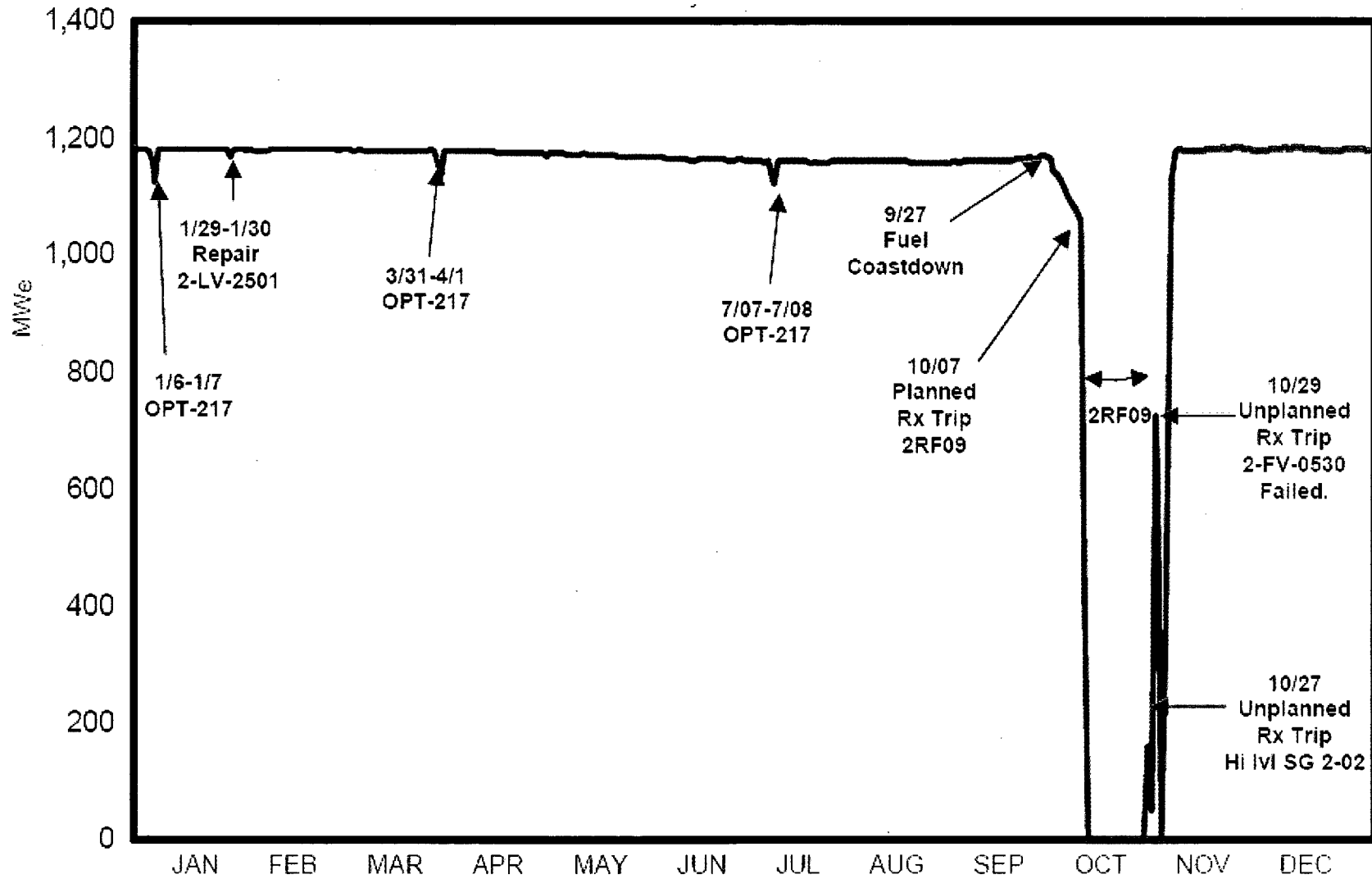


TABLE 1.2  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
ANNUAL ELECTRIC POWER GENERATION DATA (2006)

	YEAR	CUMULATIVE
Hours RX was Critical	8,286.92	105,906.79
RX Reserve Shutdown Hours	0.00	2,366.46
Hours Generator On-line	8,260.75	105,310.82
Gross Thermal Energy Generated (MWH)	28,323,583.20	352,879,084.80
Gross Electric Energy Generated (MWH)	9,981,348.00	120,795,508.00
Net Electric Energy Generated (MWH)	9,598,204.00	115,917,723.00
RX Service Factor (%)	94.60	90.08
RX Availability Factor (%)	94.60	92.09
Unit Service Factor (%)	94.30	89.57
Unit Availability Factor (%)	94.30	89.57
Unit Capacity Factor (% , using MDC net)	95.28	85.74
Unit Capacity Factor (% , using DER net)	95.28	85.74
Unit Forced Outage Rate (%)	0.62	2.43

TABLE 2.1  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1  
UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2006

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1	11/30/2006	F	1.42	A	4	On November 30, 2006 at 0010, the operators initiated a manual turbine runback from 100% reactor power to 57% reactor power, when Heater Drain Valve 1-LV-2509 failed causing a decrease in Main Feedwater Pump suction pressure. On November 30, 2006 at 0622, 1-LV-2509 repairs were completed and Unit 1 returned to 100% reactor power

## 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  
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2  
UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2006

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1	10/07/2006	S	447.95	C	2	On October 7, 2006 at 0900, unit commenced a power ramp down to 60 MWe turbine power to enter 2RF09. On October 7, 2006 at 1200, operators initiated manual reactor trip per procedure to enter MODE 3. Unit exited MODE 6 after core reload on October 20, 2006 and entered MODE 5 at 2120. On October 25, 2006 unit entered MODE 2 and the reactor was critical at 0952. The unit entered MODE 1 and was synchronized to the grid on October 26, 2006 at 0357, ending 2RF09 with duration of 18 days and 16 hours. Unit returned to full power on November 2, 2006 at 1000.
2	10/27/2006	F	14.57	A	2	On October 27, 2006 at 0309 a manual reactor trip occurred after an automatic turbine trip on P-14, HI-HI steam generator level in SG 2-02, during post-outage load rejection testing from 29% reactor power. After repairs were completed, the unit entered MODE 2 on October 27, 2006 and the reactor was critical at 1416. The unit entered MODE 1 on October 27, 2006 and was synchronized to the grid at 1742.
3	10/29/2006	F	36.73	A	2	October 29, 2006 at 1520, operators manually tripped the reactor from 80% reactor power, due to decreasing steam generator level in SG 2-03; Feedwater Regulating Valve, 2-FV-0530, controller had failed. After repairs were completed, the unit entered MODE 2 on October 30, 2006 and the reactor was critical at 2326. The unit entered MODE 1 on October 31, 2006 and was synchronized to the grid at 0404.

## 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)  
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## 2) METHOD

1: MANUAL  
2: MANUAL SCRAM  
3: AUTOMATIC SCRAM  
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- INDICATES SHUTDOWN HOURS/OTHERWISE "NA" FOR NOT APPLICABLE