



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

MAR - 9 1994

Dockets: 50-445  
50-446  
Licenses: NPF-87  
NPF-89

TU Electric  
ATTN: W. J. Cahill, Jr., Group Vice President  
Nuclear Engineering and Operations  
Skyway Tower  
400 North Olive Street, L.B. 81  
Dallas, Texas 75201

SUBJECT: PUBLIC MEETING ON THE COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1  
REFUELING OUTAGE 3 AND OVERALL SITE PERFORMANCE

This refers to the public meeting conducted at our request in the Comanche Peak Steam Electric Station Personnel Processing Center on March 3, 1994. This meeting was attended by those listed in Attachment 1.

This meeting was held to discuss activities associated with the recently completed Unit 1 refueling outage. In addition, your staff also presented an overview of facility performance for the last year.

The outage presentation included discussions on major projects completed, outage goals, scheduling adherence and comparison to industry average, employee concern program, and nuclear overview evaluation. Weaknesses with the temporary modification program and radiological work practices that had been identified during the previous outage did not manifest themselves during this outage.

Your staff's self-assessment did identify strengths in that personnel errors were reduced from the previous outages; the rate of status control and clearance issues decreased from the second refueling outage; mode transitions were more controlled; and the outage radioactive waste volume was reduced. In addition, the need for improvement in the areas of the reliability of refueling tools and foreign material exclusion was identified.

Managers of engineering, operations, and maintenance discussed recent improvements, future goals, and continued areas for improvement. No significant weaknesses were identified by your staff.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the NRC's Public Document Room.

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PDR ADOCK 05000445  
P PDR

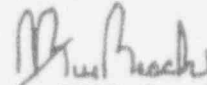
TEYS

TU Electric

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Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,



A. Bill Beach, Director  
Division of Reactor Projects

Attachments:

1. Attendance List
2. Licensee Presentation

cc:

TU Electric

ATTN: Roger D. Walker, Manager of  
Regulatory Affairs for Nuclear  
Engineering Organization

Skyway Tower  
400 North Olive Street, L.B. 81  
Dallas, Texas 75201

Juanita Ellis  
President - CASE  
1426 South Polk Street  
Dallas, Texas 75224

GDS Associates, Inc.  
Suite 720  
1850 Parkway Place  
Marietta, Georgia 30067-8237

TU Electric  
Bethesda Licensing  
3 Metro Center, Suite 610  
Bethesda, Maryland 20814

Jorden, Schulte, and Burchette  
ATTN: William A. Burchette, Esq.  
Counsel for Tex-La Electric  
Cooperative of Texas  
1025 Thomas Jefferson St., N.W.  
Washington, D.C. 20007

Newman & Holtzinger, P.C.  
ATTN: Jack R. Newman, Esq.  
1615 L. Street, N.W.  
Suite 1000  
Washington, D.C. 20036

Texas Department of Licensing & Regulation  
ATTN: G. R. Bynog, Program Manager/  
Chief Inspector  
Boiler Division  
P.O. Box 12157, Capitol Station  
Austin, Texas 78711

Honorable Dale McPherson  
County Judge  
P.O. Box 851  
Glen Rose, Texas 76043

Texas Radiation Control Program Director  
1100 West 49th Street  
Austin, Texas 78756

TU Electric

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MAR - 9 1994

bcc to DMB (IE45)

bcc distrib. by RIV:

L. J. Callan

Branch Chief (DRP/B)

MIS System

RIV File

Branch Chief (DRP/TSS)

Resident Inspector (2)

Lisa Shea, RM/ALF, MS: MNBB 4503

DRSS-FIPB

Project Engineer (DRP/B)

RIV:DRP/B	C:DRP/B	D:DRP
GEWerner <i>Stw</i>	LAYandell <i>Lay</i>	ABBeach
3/8/94	3/8/94	3/9/94

TU Electric

-4-

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RIV:DRP/B	C:DRP/B	D:DRP
GEWerner <i>JW</i>	LAYandell <i>Lay</i>	AMBeach
3/8/94	3/8/94	3/9/94

140176

## ATTENDANCE LIST

Attendance for the March 3, 1994, meeting between TU Electric and NRC:

TU Electric

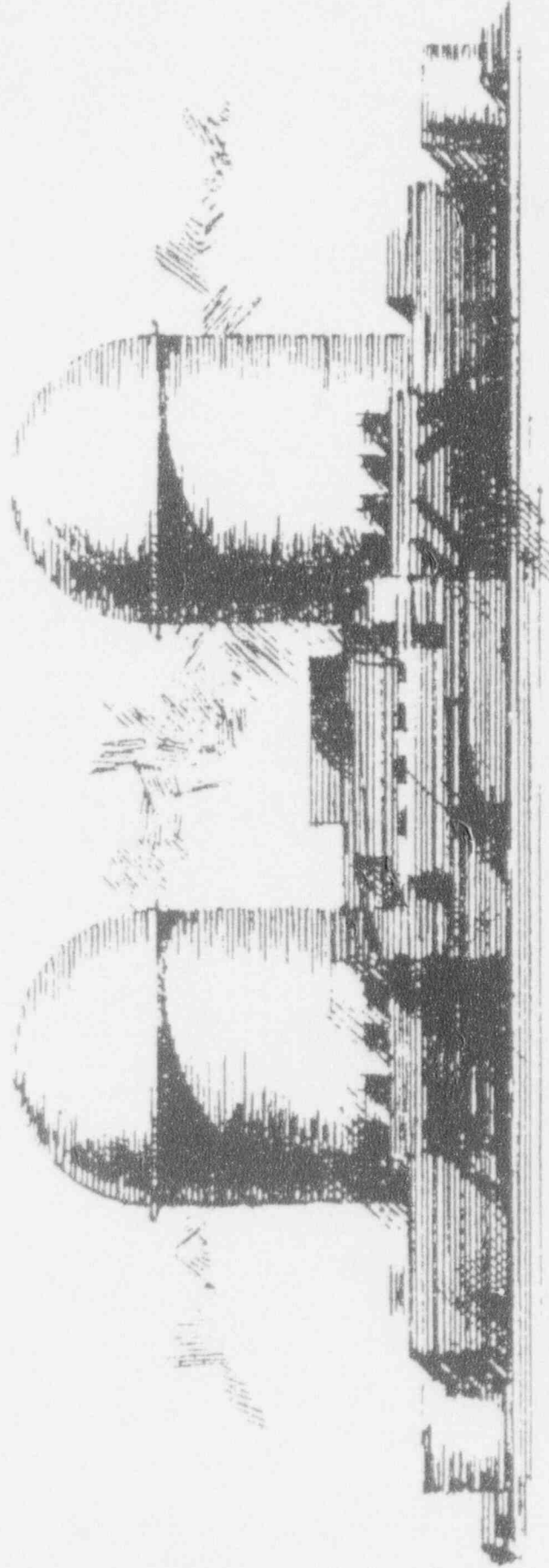
T. Hope, Regulatory Compliance Manager  
J. Donahue, Manager, OPS  
D. Davis, Manager, Maintenance Overview  
J. Walker, Manager, Operations Overview  
S. Sawa, Unit 2 Outage Manager  
B. Bird, Planning and Scheduling Manager  
G. Laughlin, Planning and Scheduling Support Manager  
S. Ellis, Work Control Manager  
F. Madden, Mechanical Engineering Manager  
L. Terry, Vice President, Nuclear Operations  
J. Kelley, Vice President, Engineering/Support  
J. Muffett, Station Engineering Manager  
R. Walker, Regulatory Affairs Manager  
J. Audas, SAFETEAM Manager  
D. Woodlan, Docket Licensing Manager  
W. Taylor, Executive Vice President  
R. Prince, RPM  
C. Ruebgaun, Electrical Maintenance Manager  
D. Palmer, Event Analysis Manager  
J. Gallman, Trend Analysis Manager  
B. Winters, Performance and Test Supervisor (Maintenance Engineering)  
W. Guldmond, System Engineering Manager  
N. Harris, Regulatory Affairs Specialist

NRC

G. Werner, Resident Inspector, Division of Reactor Projects (DRP)  
T. Gwynn, Director, Division of Reactor Safety  
D. Powers, Chief, Maintenance Branch, Division of Reactor Safety  
D. Graves, Senior Resident Inspector, DRP  
L. Yandell, Chief, Project Branch B, DRP  
K. Kennedy, Resident Inspector, DRP

# COMANCHE PEAK STEAM ELECTRIC STATION NRC PRESENTATION

MARCH 3, 1994





# AGENDA

- I. Lance Terry Opening Remarks
- II. Bill Beach (NRC) Opening Remarks
- III. Jay Laughlin Outage Overview
- IV. Dean Palmer Outage Overview Assessment
- V. John Audas for Safeteam Activities During Outage
- VI. Lance Terry Remarks on Facility Performance for Last Year
- VII. Joe Donahue for Operations Activities for Last Year
- VIII. Chuck Rickgauer for Maintenance Activities for Last Year
- IX. Bill Guldemand for Engineering Activities for Last Year
- X. Jim Kelley on Significant NRC Issues in Progress
- XI. Lance Terry Closing Remarks
- XII. Presentation of Operator Licenses by A. B. Beach (NRC)





## **MAJOR PROJECTS COMPLETED DURING 1RF03**

- New Plant Computer Installed and Functional
- Main Transformer 1MT1 Replaced
- Compliance with NRC Generic Letter 89-10 "Safety-Related Motor Operated Valve Testing and Surveillance"
- Repair of Loose Shrouded Turbine Blades on LP1 and LP2
- Diesel Generator Maintenance and Testing
- Thermolag
- Hot Leg Nozzle Inspections
- ILRT



## RADIOLOGICAL GOALS

- **GOAL:** ≤ 145 Person-Rem Total Exposure  
**Result:** 96 Person-Rem
- **GOAL:** ≤ 1 Contamination/7000 RCA-Hours  
**Result:** 2,163 Contaminations/7000 RCA-Hours
- **GOAL:** ≤ 1200 ft<sup>3</sup> Dry / 120 ft<sup>3</sup> Resin Waste  
**Result:** 410 ft<sup>3</sup> Dry / 153 ft<sup>3</sup> Resin Waste



## **SAFETY/SECURITY GOALS**

- **GOAL:** No Lost-Time Accidents  
**Result:** 6 Lost-Time Accidents
- **GOAL:**  $\leq 8$  OSHA Recordable Injuries  
**Result:** 13 OSHA Recordable Injuries
- **GOAL:**  $\leq 3$  Security Infractions Per Day  
**Result:** 1.43 Security Infractions Per Day
- **GOAL:**  $\leq 2$  Reportable Fires/No Fire Brigade Activation  
**Result:** No Reportable Fires/ No Fire Brigade Activation



## WORK SCOPE GOALS

- **GOAL:** Complete 22 Design Modifications  
**Result:** 27 Design Modifications Completed
- **GOAL:** Eliminate 6 Temporary Modifications  
**Result:** 9 Temporary Modifications Were Removed
- **GOAL:** Complete All Surveillances, PMs, and  $\geq 90\%$  of Corrective Work Orders  
**Result:** 763 or 100% of Surv., 1202 or 100% of PMs, 915 of 943 or 97% of CWOs Completed
- **GOAL:** Complete 22 Identified Inst./Annunciation Problems  
**Result:** Original 22 + 13 Additional Instrument/Annunciation Problems Corrected
- **GOAL:**  $\leq 20\%$  Increase in Work Scope  
**Result:** 7.21% Increase in Work Scope
- **GOAL:** Repair Identified Leakers  
**Result:** 316 of 316 Repaired



## OTHER GOALS

- **GOAL:** Maintain Chemistry Out Of Spec Time  $\leq$  50 Hours per SG and  $\leq$  100 Hours for each Cooling System  
**Result:** 4 Hours Out Of Spec on Non Safety Chilled Water  
All Other Systems Remained in Specification
- **GOAL**  $\geq$  95% Quality Control Acceptance  
**Result:** 99.7% Quality Control Acceptance



## SCHEDULE ADHERENCE

BREAKER 100%

TO TO

BREAKER 100%

1RF01 SCHEDULE	56 DAYS	63 DAYS
1RF01 ACTUAL	68 DAYS	95 DAYS
1RF02 SCHEDULE	52 DAYS	62 DAYS
1RF02 ACTUAL	64 DAYS	79 DAYS
1RF03 SCHEDULE	59 DAYS	67 DAYS
1RF03 ACTUAL	70 DAYS	78 DAYS



## UNIT 1 REFUELING OUTAGES COMPARED TO INDUSTRY AVERAGES (BREAKER TO BREAKER)

	COMANCHE PEAK	INDUSTRY AVERAGE * (ACTUALS)
1RF01 ACTUAL	68 DAYS	104 DAYS
1RF02 ACTUAL	64 DAYS	88 DAYS
1RF03 ACTUAL	70 DAYS	86 DAYS

\* Actual Outage Length for the first three (3) Outages  
@ Westinghouse 4-Loop Reactors Nationwide



## **CLEARANCE PROGRAM**

- **Development**
  - ▶ **Use of Dedicated Individuals for Development of Clearances Greatly Improved the Process**
  - ▶ **PRISM Improvements for Clearances and Limited Condition for Operations Action Requirements (LCOARs) Streamlined the Process**
- **Implementation**
  - ▶ **Clearance Processing Center Manpower Levels were Increased Resulting in Increased Efficiency**
- **Clearance Processing Center Moved Close to the Control Room Increasing Efficiency and Coordination**





## **RADIOLOGICAL LESSONS LEARNED FROM 1RF02**

- **Communications Training for RP Technicians**
- **Contamination Event Reports Covered in Rad Worker Training**
- **Restructured RP Control Points and Technician Assignments for Containment**
  - ▶ **Containment RP Control Point Located at Containment Entry**
  - ▶ **RP Tech Pool used for Job Assignments**
  - ▶ **House Techs Assigned as Rovers to Provide Oversight and Assistance**
  - ▶ **Standard Questions for Rad Workers Prior to Work**
- **NRC Inspection 93-40 Conducted during 1RF03 Noted No Indications of the Communication Failures that were Identified in the Previous Outage**



# **NUCLEAR OVERVIEW EVALUATION OF 1RF03 STRENGTHS**

- **Reduction in Personnel Errors from Previous Outages**
- **Improved Status Control and Clearance Processing**
  - **Rate of Status Control Issues was <31% of that experienced during 1RF02**
  - **Rate of Clearance Issues was <18% of that experienced during 1RF02**
- **Smoother Mode Transitions**
- **Well Planned and Implemented Plant Computer Installation and Testing**
  - **Multi-Discipline Team**
  - **Good Communication between Team and Operations**
- **Greatly Reduced Volume of Radioactive Waste from Previous Outages**
  - **Laundered and Reused Materials**
  - **Color Coding and Reusing Hoses**
  - **Enhanced Training**



# **NUCLEAR OVERVIEW EVALUATION OF 1RF03**

## **AREAS FOR IMPROVEMENT**

- **Reliability of Refueling Tools**

- ▶ **Corrective Actions:**

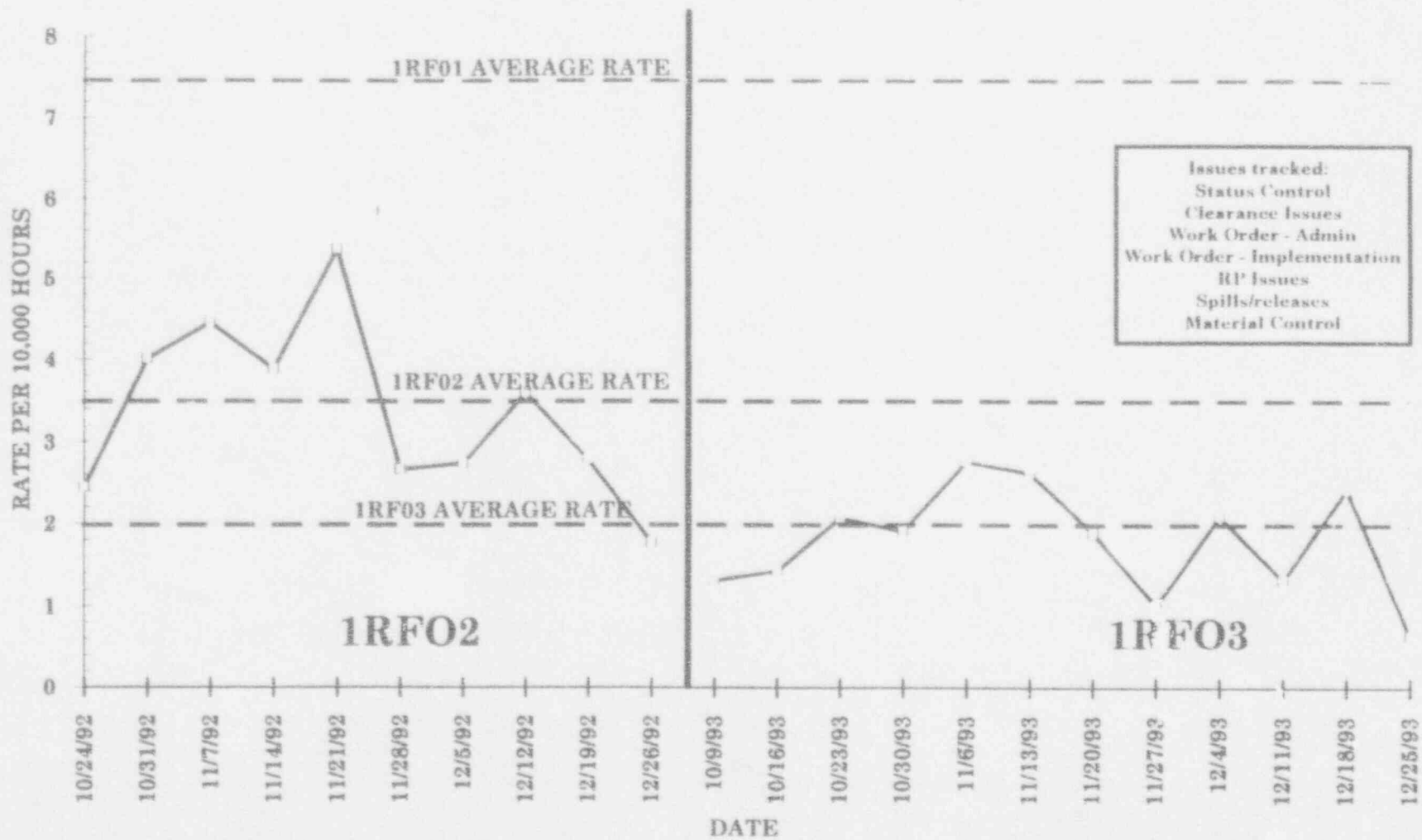
1. Enhancements were made to the Scheduled PMs
2. Long Term Tool Refurbishment Contract let to same Contractor that will use the Tools.

- **Personnel and Material Accountability in some Foreign Material Exclusion Areas**

- ▶ **Corrective Actions:**

These Concerns are being Tracked as Outage Critique Items and have been Assigned to the Unit 2 Outage Manager for Resolution

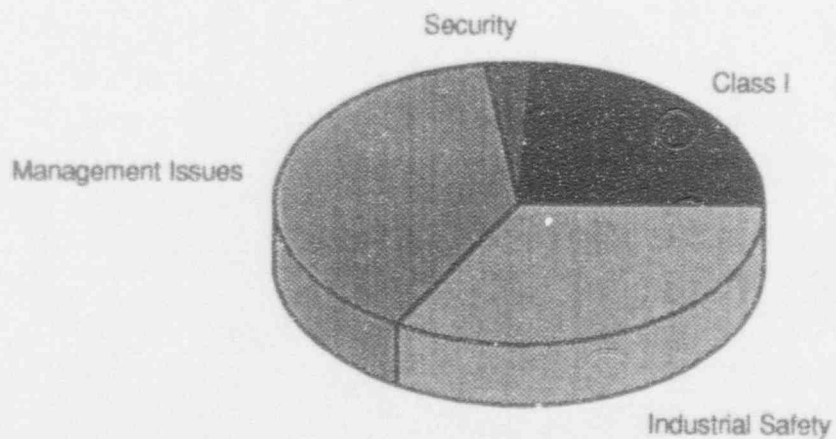
# OUTAGE ISSUE WEEKLY RATE





## SAFETEAM CONCERNS 1RF03

<u>CLASSIFICATION</u>	<u>CONCERNS</u>	<u>%</u>
1. CLASS I	8	24.2
2. SECURITY	1	3.0
3. MANAGEMENT ISSUES	13	39.4
4. INDUSTRIAL SAFETY	11	33.3
<b>TOTAL</b>	<b>33</b>	<b>100</b>





## SAFETEAM ACTIVITY

<u>ACTIVITY:</u>		<u>SOURCE OF CONCERNS</u>	
EXITS	619	EXIT INTERVIEWS	7
LETTERS SENT	268	WALK IN	2
<b>TOTAL</b>	887	PHONE	4
		MAIL IN	<u>2</u>
		<b>TOTAL</b>	<b>15</b>

### CONCERNS STATUS

	<u>TOTAL</u>	<u>RESPONSES COMPLETE</u>	<u>OPEN</u>
1. CLASS I	8	8	0
2. SECURITY	1	1	0
3. MANAGEMENT ISSUES	13	13	0
4. INDUSTRIAL SAFETY	11	7	4



# SAFETEAM CLASSIFICATIONS

## CLASS 1:

Any concern which relates to the protection of health and safety of the public or Comanche Peak workforce, or which could affect the public trust of TU Electric to reliably operate Comanche Peak, including the following: design, construction, engineering, maintenance, operation, inspection, licensing, testing, hardware, procurement, records, regulatory required management control processes, quality assurance, quality control, procedures, work activities, harassment and intimidation, professional dissent, chilling effect, protected activities, radiological control or environmental issues.

## SECURITY:

Any concern relating to the physical security of Comanche Peak, the security plan, Fitness For Duty issues, or protected area access requirements.

## MANAGEMENT ISSUES:

Any concern other than Class 1, Security, or Industrial Safety, including: pay, working conditions, benefits, EEO issues, terms of employment, promotions, hiring, terminations, disciplinary actions, evaluations, organization, open door, chain of command, management style, Reductions of Force, job assignments, morale, sexual harassment, discrimination, favoritism, nepotism, peer disagreement or communication.

## INDUSTRIAL SAFETY:

Any concern involving personnel safety, health, hazards, or injury



## WRITTEN COMMENTS

**The following positive comment was received with Concern No. 13604 on December 2, 1993:**

*CPSES should be proud as a utility if this is the only concern I could mention in the last outage of Unit 1. This has been one of the safer and more organized outages that I've been privileged to work. Keep up the good outage planning.*

**Received December 7, 1993:**

*I found no problems whatsoever at CPSES. It is a very well run and safe facility. I enjoyed my stay at your plant and hope to return soon.*

*Thank You  
(Signed)*

**Received December 7, 1993:**

*No concerns - I just wanted to say that I enjoyed my term of employment at your site and I'm sorry for missing the SAFETEAM step in processing out. Please have a safe and happy holiday.*

*Thank You  
(Signed)*

**Received December 28, 1993:**

*While working at Comanche Peak #1 during the 1993 Fall/Winter outage I saw no evidence of any work habits that would cause concern that the job was not getting done properly.*





## ORAL COMMENTS

### **November 9, 1993:**

*An exiting employee was impressed that TU cared enough to make sure contractors and their own employees had every opportunity to express concerns they may have. "I have never been treated this nice and with this much concern at any other plant."*

### **November 11, 1993:**

*An exiting outage employee stated that everything went very smooth. At other plants, he never saw so much cooperation between the various departments to get the job done, with minimal exposure (to radiation).*

### **November 11, 1993:**

*An exiting outage employee stated that everything went very well during this outage and that the cooperation between the various departments surpasses what he has experienced at other plants. He also indicated that there was minimal exposure to radiation.*

### **November 11, 1993:**

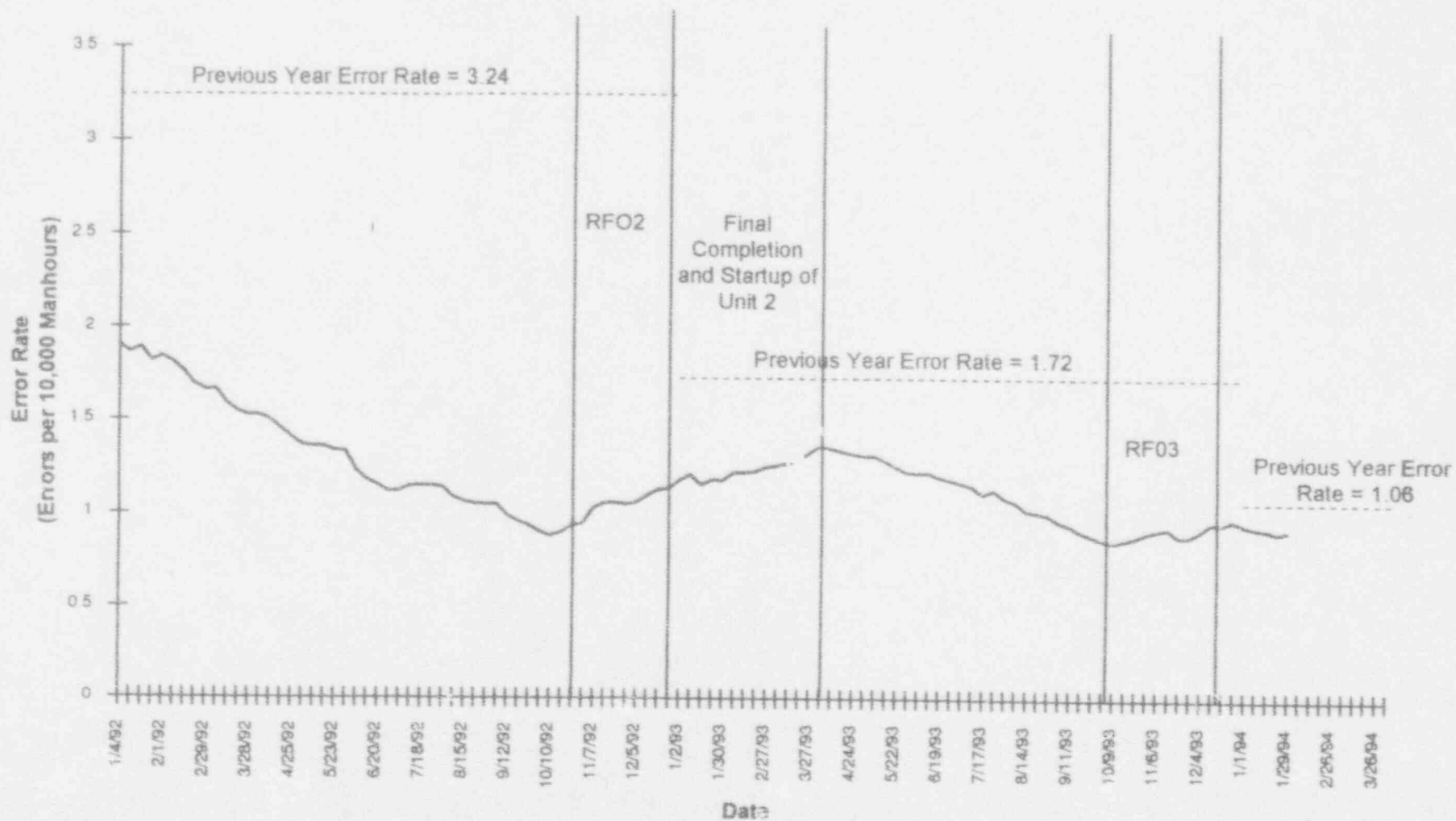
*A PTS employee said CPSES is one of the best plants he has ever worked. Site management used to have problems, but they have been working to correct them. The plant is built very sound and personnel errors which do occur are part of the learning process.*



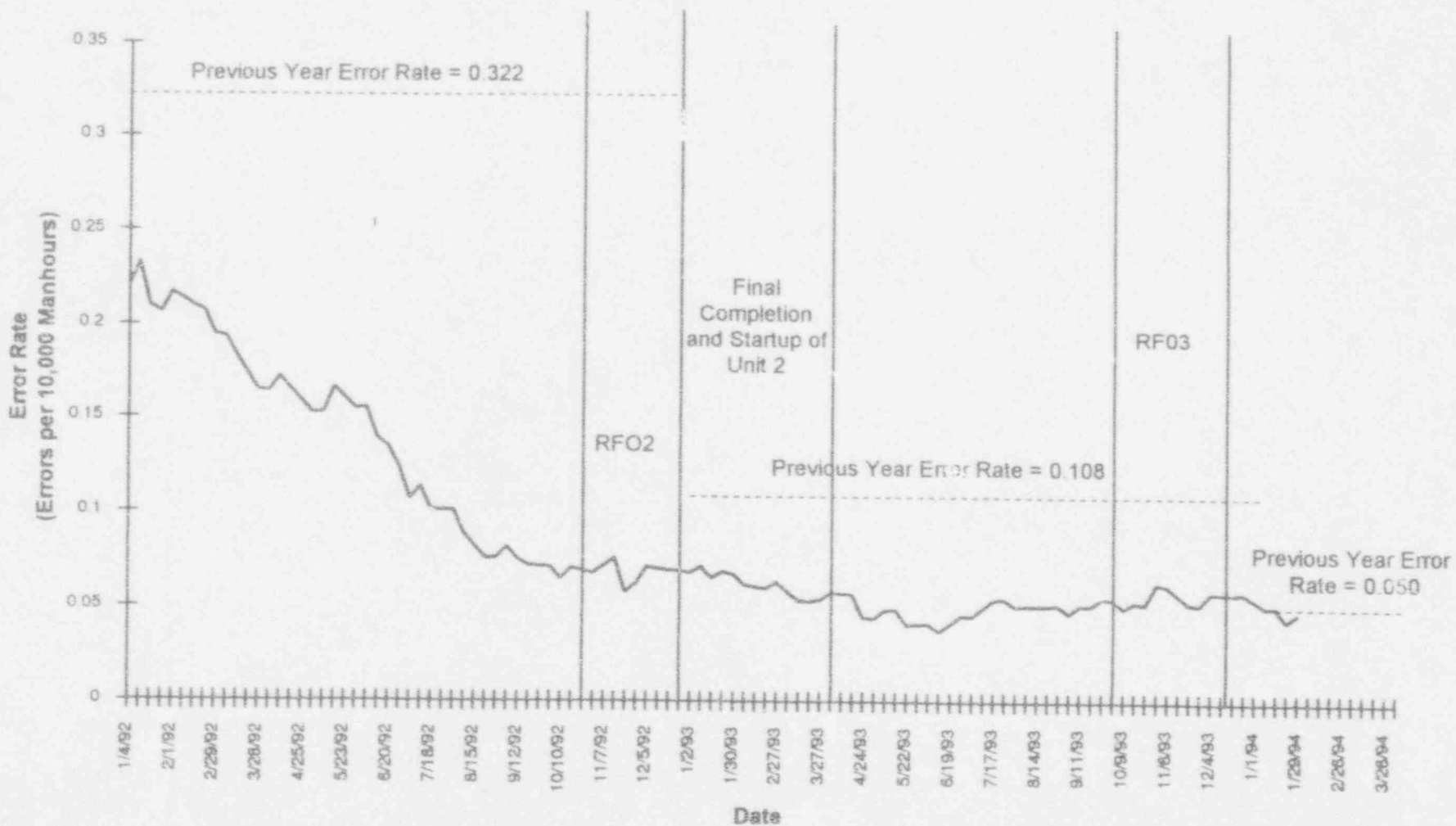
## **ORGANIZATIONAL IMPROVEMENTS**

- **Relocation of Planning, Scheduling, Maintenance, WCC, and Support Groups to Megawatt Support Center Building**
  - ▶ **Enhanced Logistics to Support Work Processes**
  
- **Reorganization of Nuclear Operations**
  - ▶ **Consolidated Planning Organization**
  - ▶ **Consolidated Responsibility for Identification and Tracking of Preventive Maintenance and Surveillances**
  - ▶ **Consolidate Scheduling into Planning and Scheduling Organization**
  
- **Reorganization of Nuclear Overview**
  - ▶ **Operations**
  - ▶ **Maintenance**
  - ▶ **Engineering**
  - ▶ **Support**
  - ▶ **Programs**

Total Personnel Error Rates From 1/4/92 - 1/29/94  
Based on a Rolling 26 Week Ratio of ONE Forms

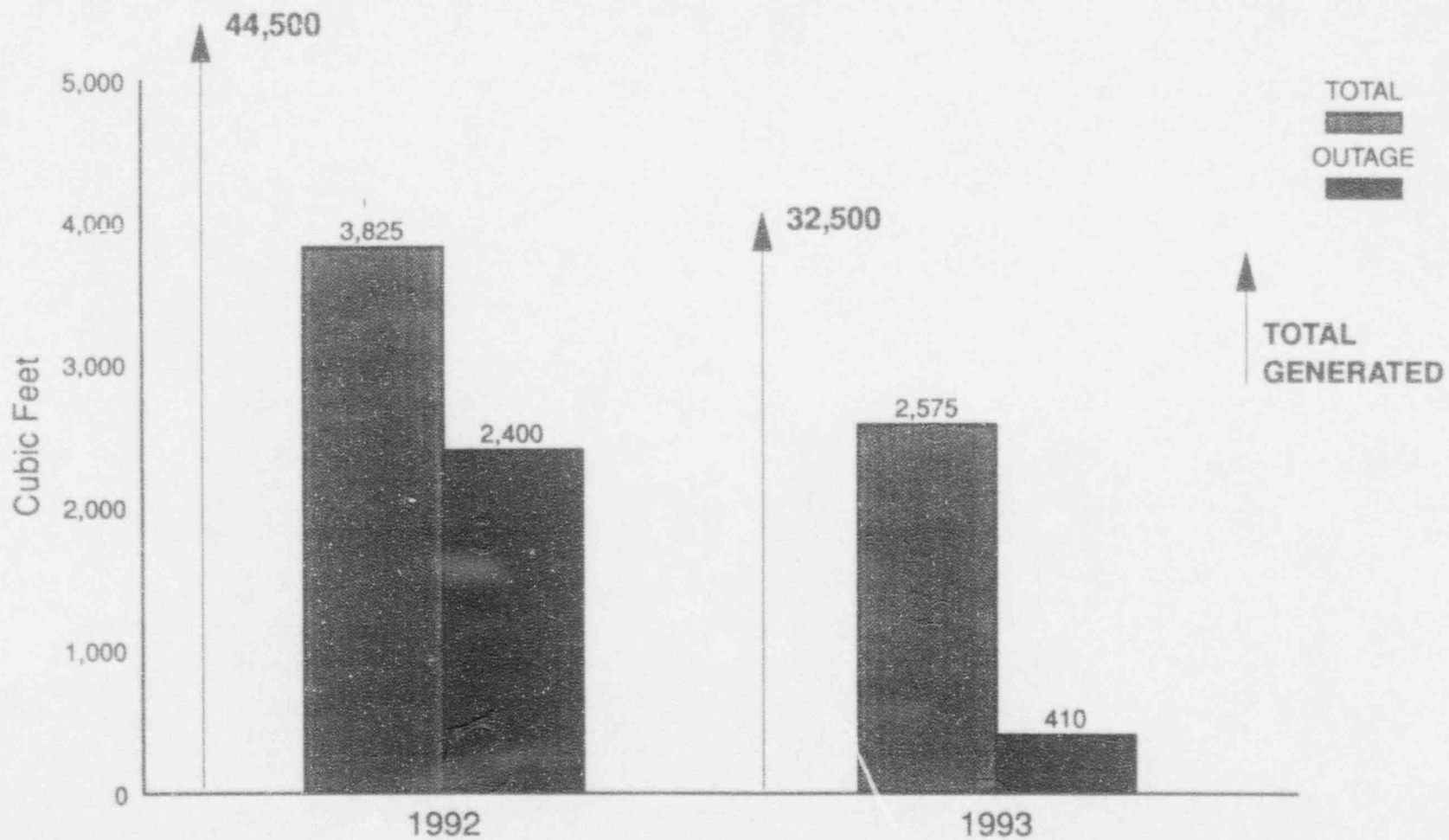


**Significant Personnel Error Rates From 1/4/92 - 1/29/94  
Based on a Rolling 26 Week Ratio of ONE Forms**





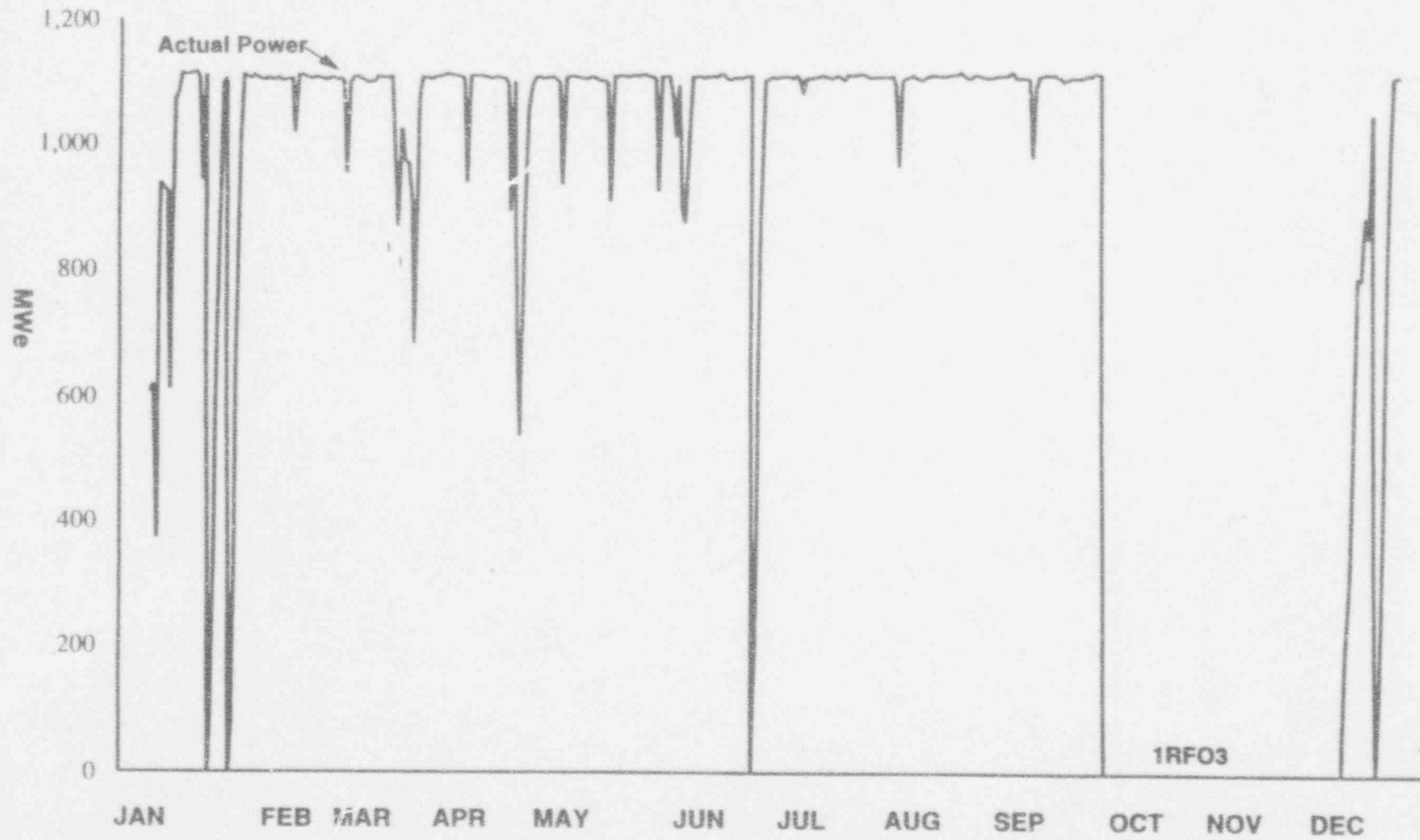
# RADWASTE BURIAL VOLUME



# COMANCHE PEAK UNIT 1 (CPK1)

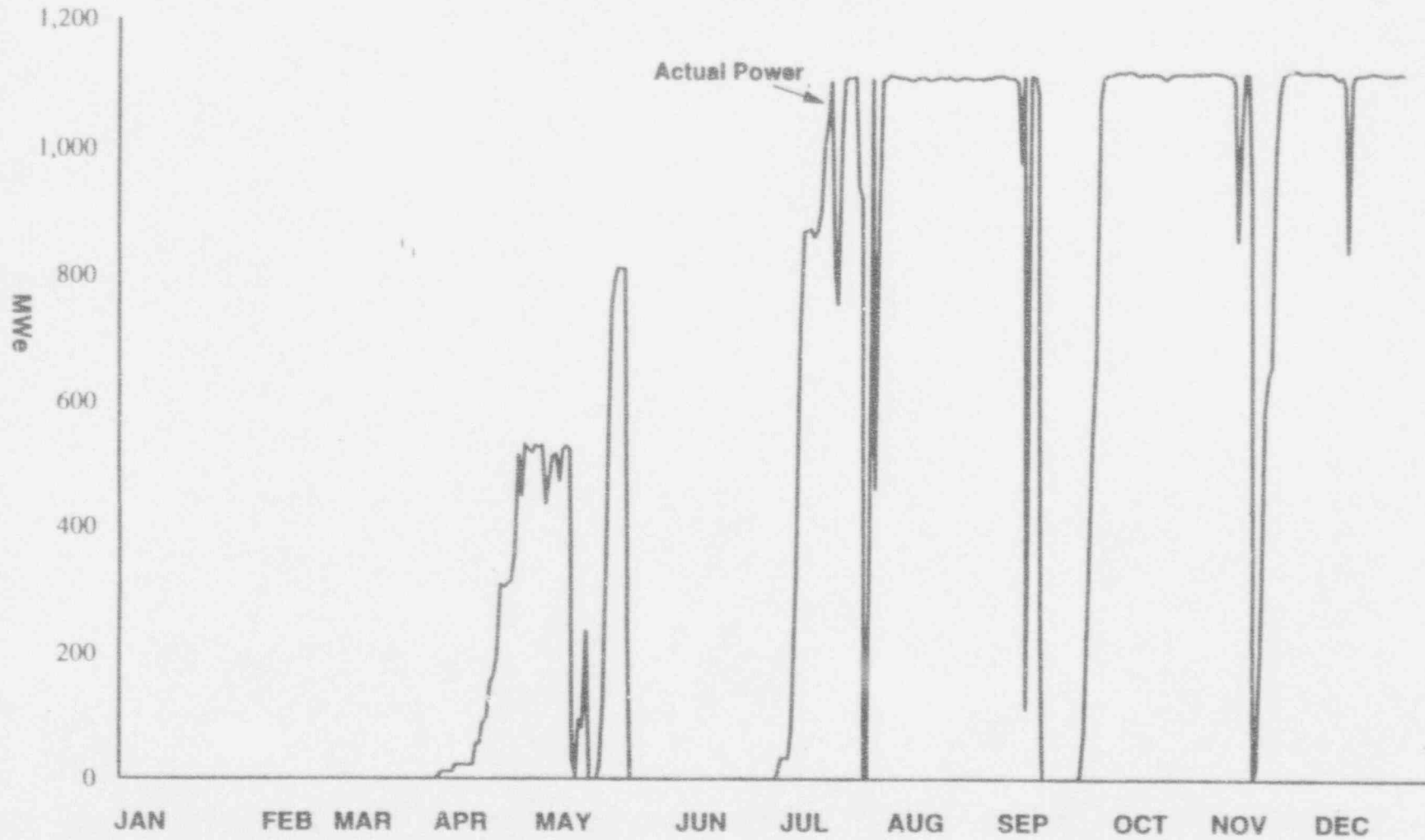
## GENERATION PROFILE

AVERAGE DAILY UNIT POWER LEVEL



# COMANCHE PEAK UNIT 2 (CPK2)

GENERATION PROFILE  
AVERAGE DAILY UNIT POWER LEVEL





## **OPERATIONS DEPARTMENT**

- **Continue Success Rate on Requalification and Initial License Classes**
- **INPO Accreditation of Operations and Chemistry Programs**
- **Commenced Operations Internal Self Assessments**
- **Continue Efforts on Improving Supervisor Effectiveness**
- **Two Unit Staffing Includes Future Pipeline**
- **Continue To Reduce Personnel Errors**
- **Continue To Improve Material Condition**
  - ▶ **Management Issues List**
  - ▶ **Operator Work Around List and Tracking**
- **Dedicated SRO Assigned To Individual Outage Preparation And One SRO Assigned TO Daily (POD) Planning**





## **MAINTENANCE DEPARTMENT**

- Performance Enhancement Program
- Plant Material Condition (Ownership)
  - ▶ Zone Accountability Program
  - ▶ Plant Cleanup Day
  - ▶ Secondary Leak Reduction
  - ▶ Painting
  - ▶ Annunciators
- Supervisor Effectiveness
  - ▶ Training
  - ▶ Management Observation Program
- Work Process Management Team Improvements
  - ▶ Move To MSC Building
  - ▶ Consolidated Planning And Scheduling



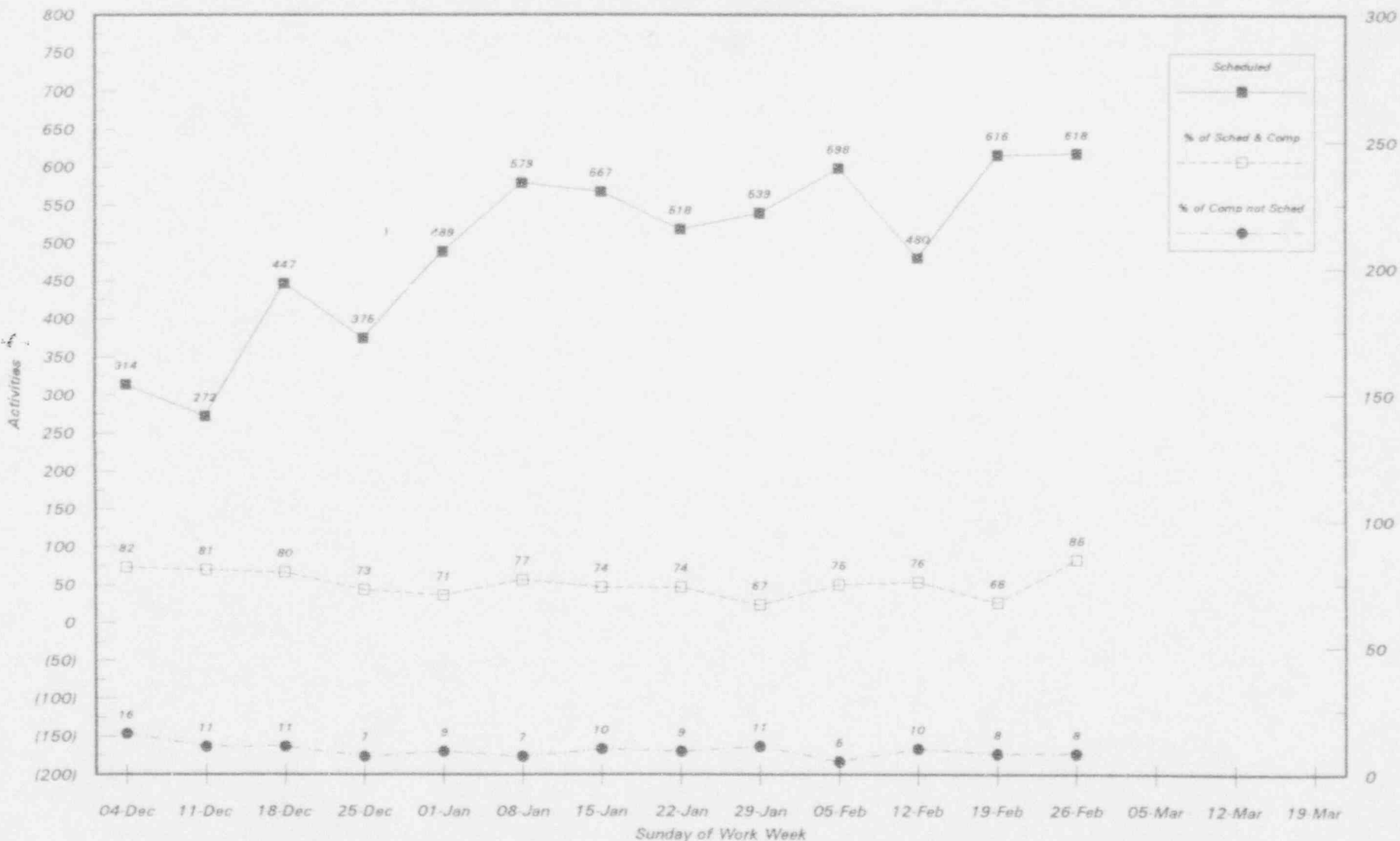
## **MAINTENANCE DEPARTMENT**

- **Corrective Maintenance Backlog Management**
- **Two Unit Organization Staffed**
- **Labor Agreement**
  - ▶ **12 Hour Shift (Teamwork)**
- **Radiation Exposure**
- **Plant Computer Replacement**
- **INPO Reaccreditation**

# COMANCHE PEAK STEAM ELECTRIC STATION

## Total - Weekly Schedule Adherence

Unit 1, 2 & X - CMs, PMs, Survs.

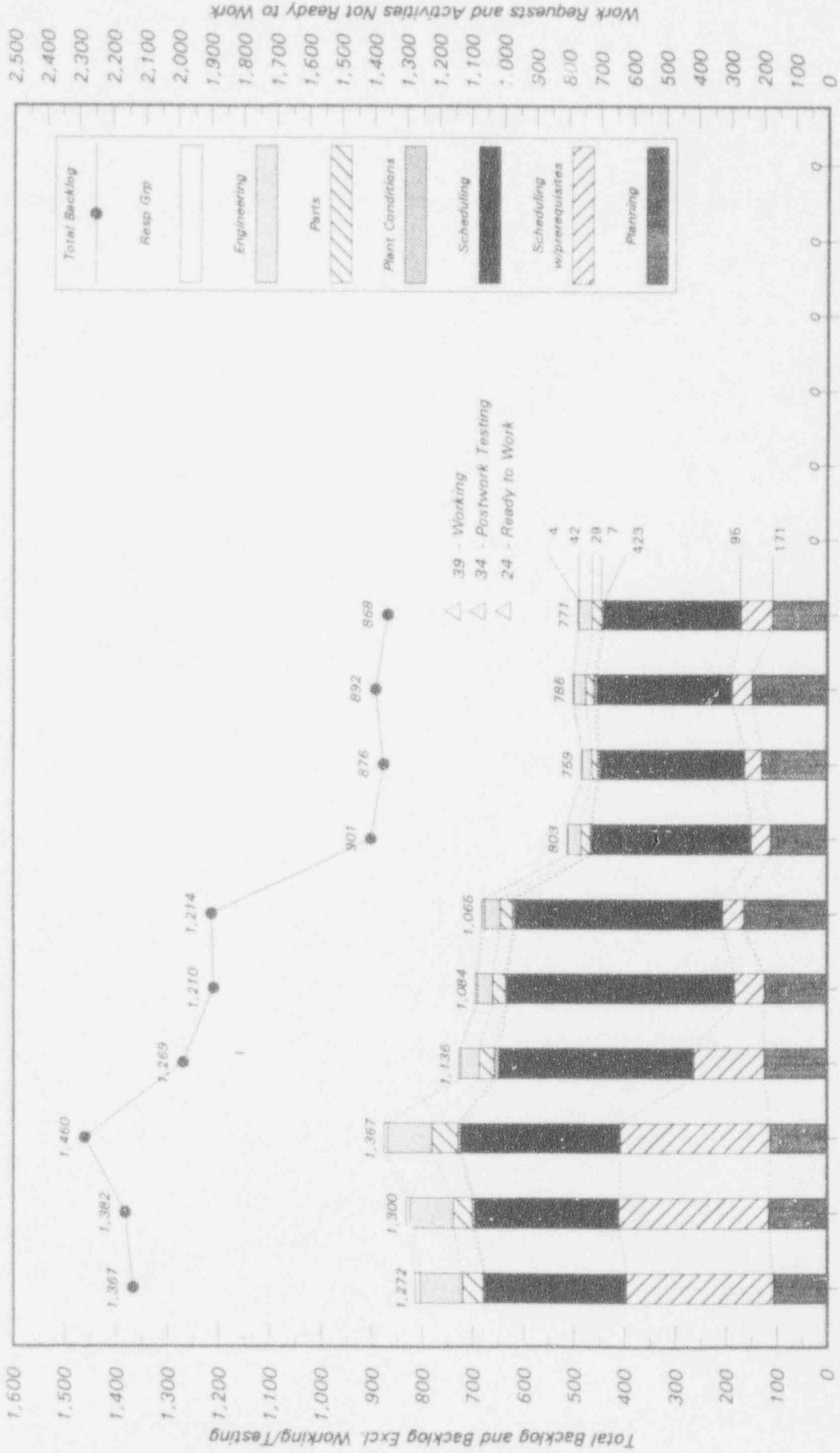


TLADHERE CH1

# COMANCHE PEAK STEAM ELECTRIC STATION

## Total Corrective Maintenance Backlog-Unit 1,2,&X

Incl. Corrective WOs/MRs/PWKT - no PWKR



AMBTLDRAW



## **ENGINEERING DEPARTMENT PROGRAM/PROCESS ISSUES**

### **COMPLETED ISSUES**

- **Transition to Two Unit Operations**
- **Completion of Unit 2 Startup**
- **Contractor Destaffing/Restructuring**
- **Check Valve Reliability**
- **Fuse Identification**
- **Temporary Modification Controls/Reductions**
- **Transition to 18 Month Fuel Cycle**
- **Assumption of Core Design and Accident Analysis Responsibilities**
- **Improved Power Ascension Testing Sequence and Content**
- **Enhanced/More Timely Updates to Wiring Diagrams**
- **Commercial Grade Dedications/Testing**



## **ENGINEERING DEPARTMENT PROGRAM/PROCESS ISSUES (continued)**

### **IN-PROCESS ISSUES**

- **Vendor Long-Range Planning Teams**
- **Extended Engineering Coverage**
- **Enhanced Concensus Prioritization**
- **Maintenance Rule Activities**
- **MOV Program**
- **Personnel Error Reduction**
- **Semi-Annual System Interface Meetings**
- **Process Improvement Teams**



## **ENGINEERING DEPARTMENT HARDWARE ISSUES**

### COMPLETED MATERIAL CONDITION IMPROVEMENTS

- Instrument Air Conditioning Intake
- 1A Main Feed Pump Inboard Bearing Temperature
- New Water Treatment Plant
- Alternate Power Supply Modifications (Unit 1)
- In Mast Sipping / Ultrasonic Testing for Fuel Defects
- Containment Air Lock Enhancements
- Condenser Air Inleakage Reduction
- Nitrogen Sparging/Deoxygenation of Makeup Water
- Plant Computer Replacement



## **ENGINEERING DEPARTMENT**

### **HARDWARE ISSUES (continued)**

#### IN-PROCESS MATERIAL CONDITION IMPROVEMENTS

- Annunciator Reduction/Reliability Efforts
- Thermolag Qualification/Upgrades
- Vibration Walkdowns/Corrective Actions
- Heater Drain System Evaluation
- Trip Reduction Evaluation
- Auxiliary Feedwater Draining

#### UPCOMING MATERIAL CONDITION IMPROVEMENTS

- Diesel Generator Air Start System
- Instrument Air Compressor and Service Air Upgrades
- Annunciator System Replacement
- Improved Chemistry Monitoring
- Diesel Generator Governor Replacement
- Condensate Polishing Valve Replacement





## **SIGNIFICANT NRC ISSUES IN PROGRESS**

- **Thermo-Lag**
  - ▶ NRC is Reviewing CPSES Test Reports
  - ▶ CPSES Submittal of Engineering Report Due In Approximately Two Weeks
  - ▶ CPSES Submittal of Engineering Evaluation Report for Installation of Non-Tested Configurations Due In The May Time Period
  
- **Fuel Pool Rerack**
  - ▶ Currently We Are Working With The NRR Project Manager To Establish A Meeting Date For A Presentation To The Staff of CPSES Plans
  - ▶ CPSES Currently Expects To Make A Submittal For NRC Review In The Fourth Quarter of 1994
  
- **Updated FSAR**
  - ▶ CPSES Will Make This Submittal In February of 1995
  
- **Technical Specification Upgrade To New Standard Technical Specifications**
  - ▶ CPSES Expects To Submit A Letter Announcing Our Intent In The Next Few Weeks