

FEB 5 1992

Docket Nos. 50-445  
50-446  
License No. NPF-87  
Construction Permit No. CPPR-127

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

Gentlemen:

This refers to the meeting conducted at NRC Region IV's request at the Comanche Peak Steam Electric Station (CPSES), Unit 2, plant management building on January 23, 1992. This meeting related to activities authorized by NRC Construction Permit No. CPPR-127 for CPSES, Unit 2, and was attended by those on the attached Attendance List. The subjects discussed at this meeting are described in the enclosed Meeting Summary. It is our opinion that this meeting was beneficial and has provided a better understanding of the overall status of Unit 2.

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.

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

Sincerely,

Original Signed by

*L.A. Yandell*

A. Bill Beach, Director  
Division of Reactor Projects

Enclosure:  
Meeting Summary w/attachments

cc w/enclosure:  
TU Electric  
ATTN: Roger D. Walker, Manager  
Nuclear Licensing  
Skyway Tower  
400 North Olive Street, L.B. 81  
Dallas, Texas 75201

RIV:DRP/B  
CEJohnson;bh  
2/4/92

C:DRP/B  
LAYandell  
2/4/92

DD:DRP/  
TPGwynne  
2/5/92

D:DRP  
ABBeach  
2/5/92

9202120057 920205  
PDR ADDCK 05000445  
P PDR

IE45

TU Electric

-2-

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

Texas Department of Labor & Standards  
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

Owen L. Thero, President  
Quality Technology Company  
Lakeview Mobile Home Park, Lot 35  
4793 E. Loop 820 South  
Fort Worth, Texas 76119

TU Electric

-3-

bcc to DMB (IE45)

bcc distrib. by RIV:

R. D. Martin  
DRP  
Section Chief (DRP/B)  
DRSS-RPEPS  
MIS System  
RIV Files

Resident Inspector (2)  
DRS  
Project Engineer (DRP/B)  
Lisa Shea, RM/ALF  
RSTS Operator

bcc to DMB (IE45)

bcc distrib. by RIV:

R. D. Martin  
DRP  
Section Chief (DRP/3)  
DRSS-RPEPS  
MIS System  
RIV Files

Resident Inspector (2)  
DRS  
Project Engineer (DRP/B)  
Lisa Shea, RM/ALF  
RSTS Operator

111

TU Electric

-3-

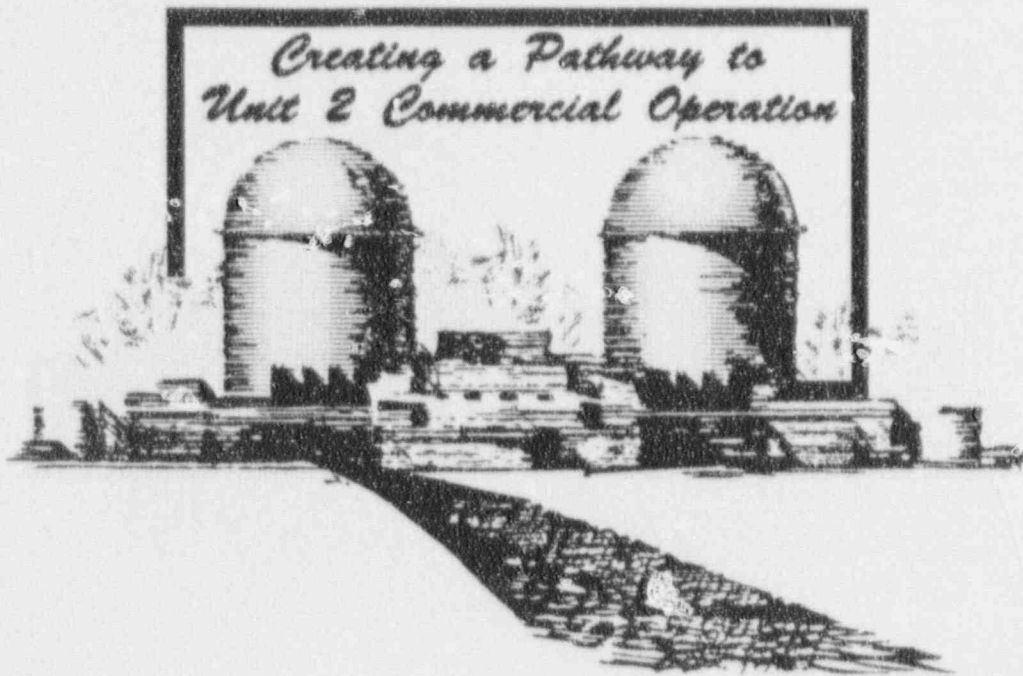
bcc to DMB (IF&S)

bcc distrib. by RIV:

R. D. Martin  
DRP  
Section Chief (DRP/B)  
DPSS-RPEPS  
MIS System  
RIV Files

Resident Inspector (2)  
DRS  
Project Engineer (DRP/B)  
Lisa Sheu, RM/ALF  
RSTS Operator

111



# NRC QUARTERLY PRESENTATION

JANUARY 23, 1992

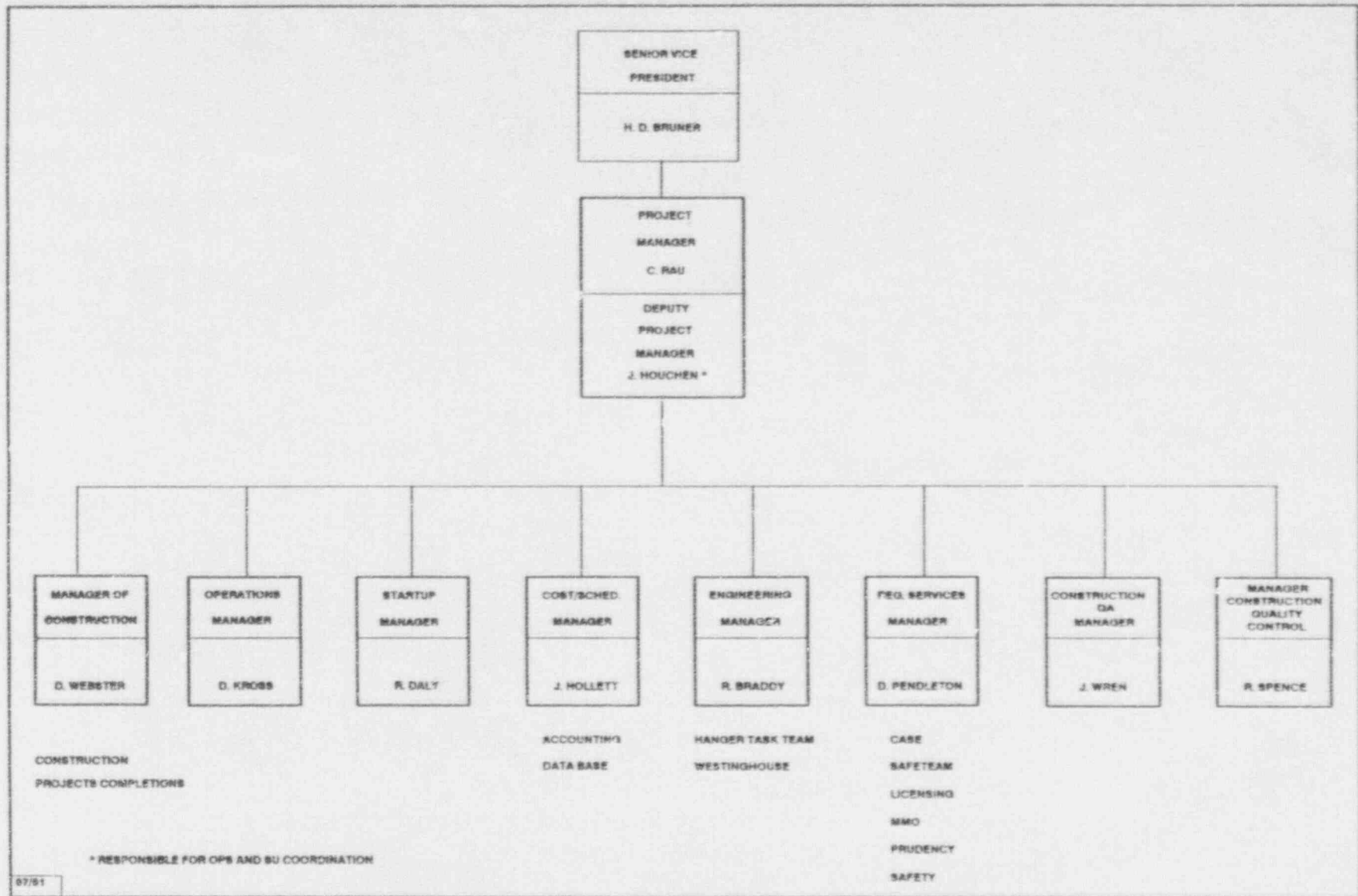


TUELECTRIC



# ***OVERALL STATUS***

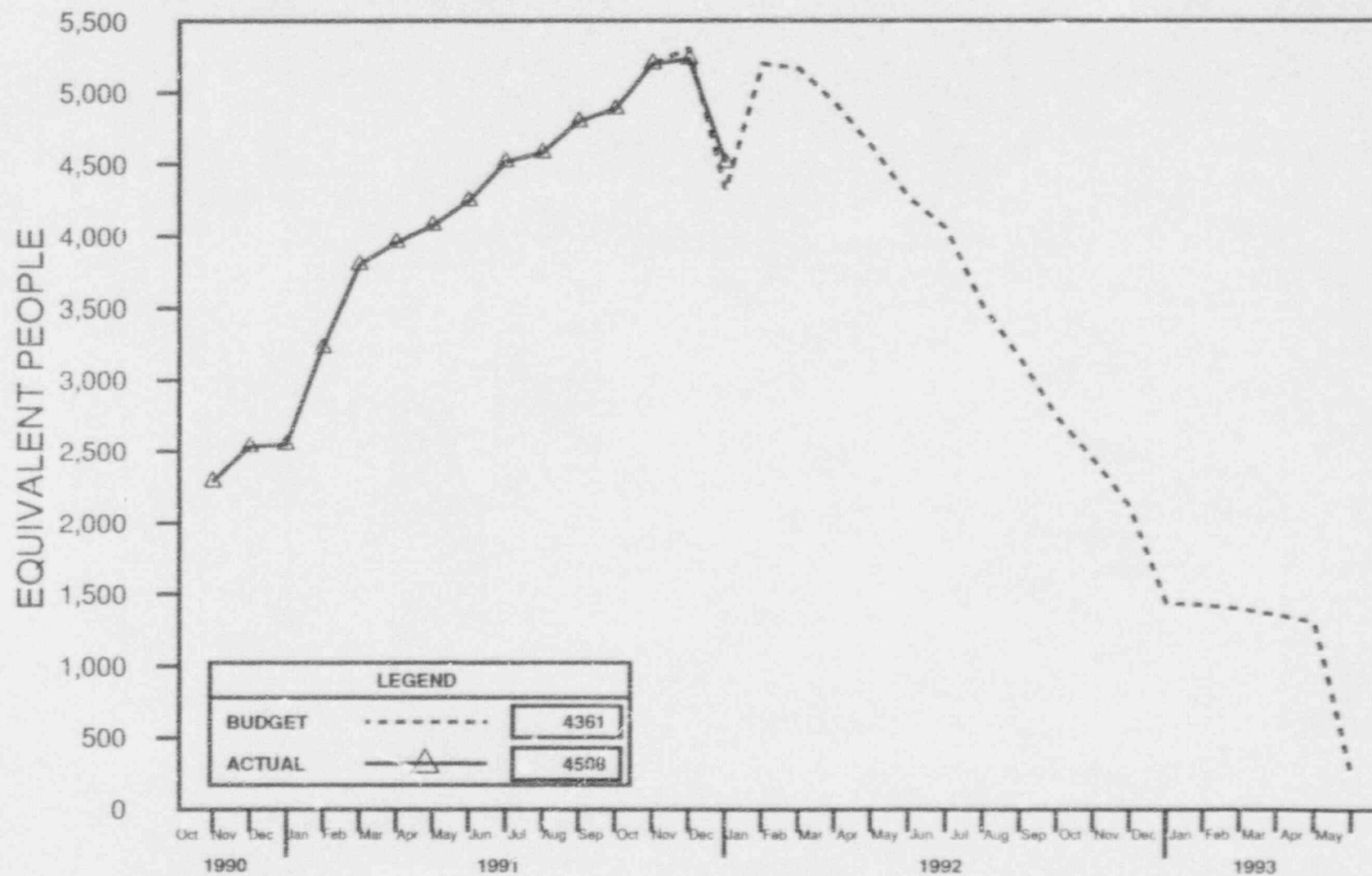
# UNIT 2 PROJECT MANAGEMENT



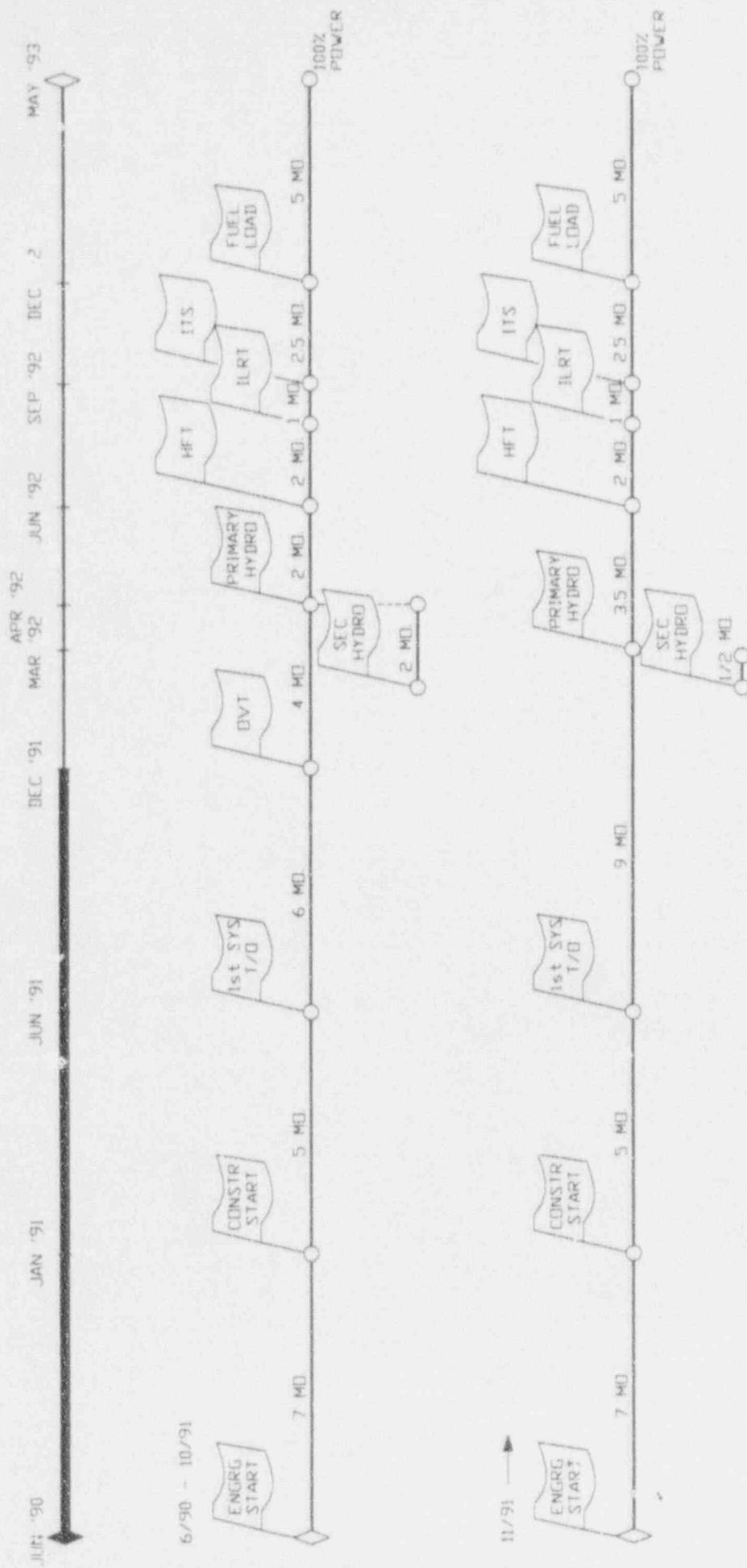


# COMANCHE PEAK STEAM ELECTRIC STATION

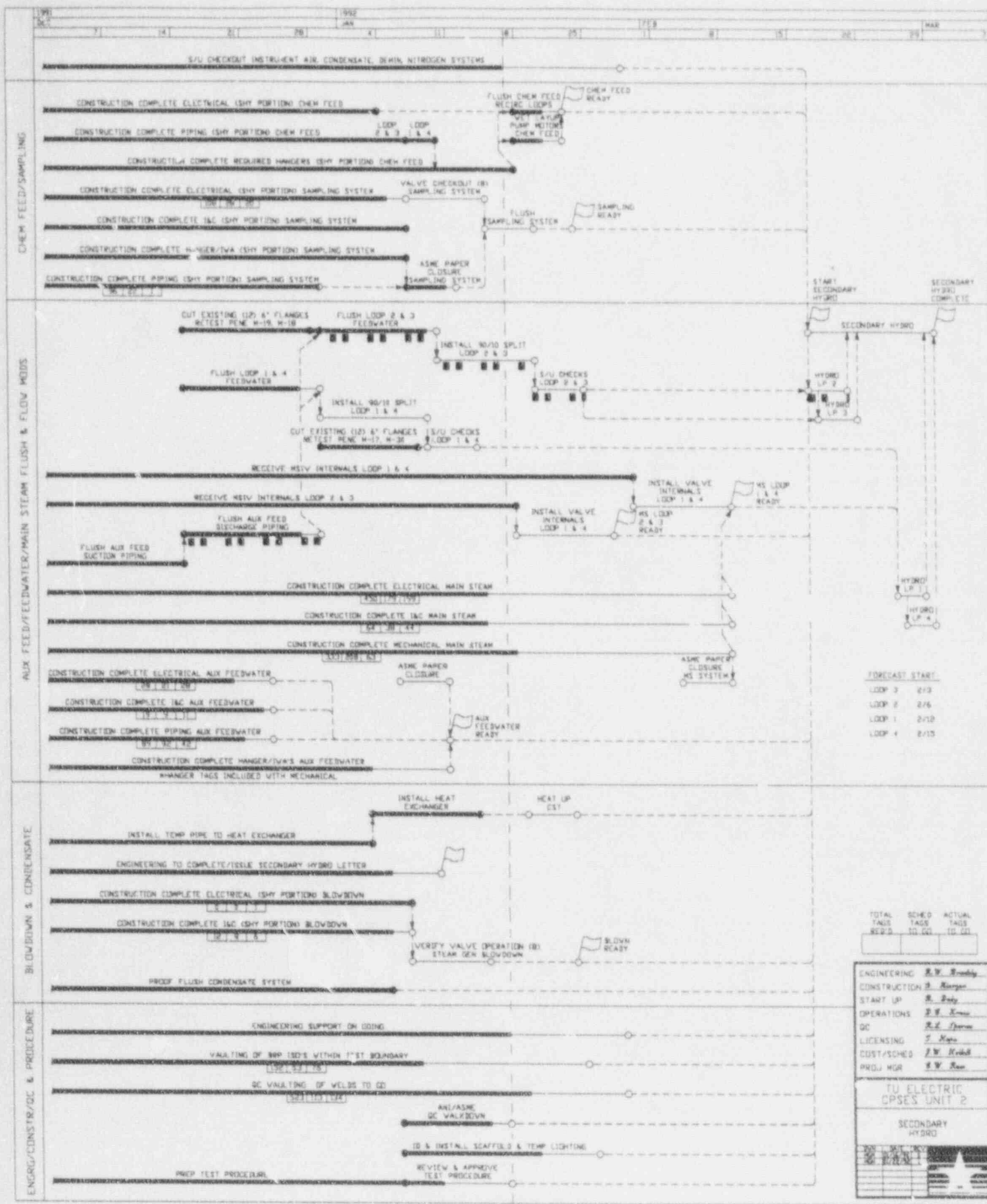
## TOTAL PROJECT STAFFING



# MILESTONE COMPARISON



REV. 3  
1/2/92



| TOTAL TAGS REQ'D | SCHED TO GO | ACTUAL TAGS TO GO |
|------------------|-------------|-------------------|
|                  |             |                   |

|              |                    |
|--------------|--------------------|
| ENGINEERING  | <i>R.W. Brandy</i> |
| CONSTRUCTION | <i>B. Morgan</i>   |
| START UP     | <i>B. Brady</i>    |
| OPERATIONS   | <i>D.W. Kline</i>  |
| QC           | <i>R.L. Thomas</i> |
| LICENSING    | <i>T. Kline</i>    |
| COST/SCHED   | <i>D.W. Kline</i>  |
| PROJ. MGR    | <i>R.W. Kline</i>  |

| TU ELECTRIC CPSES UNIT 2 |  |
|--------------------------|--|
| SECONDARY HYDRO          |  |



## PROJECT MILESTONES

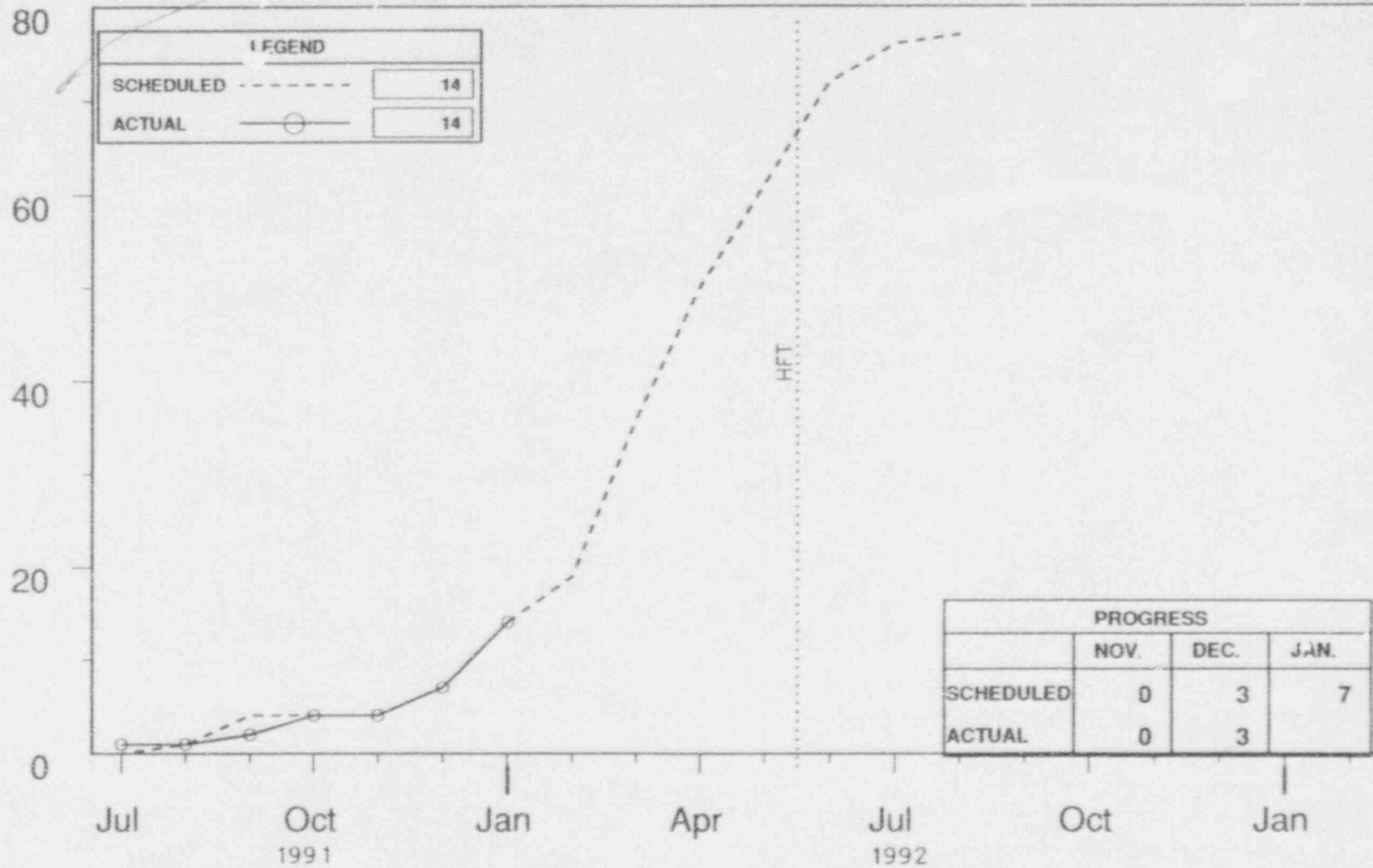
|                       | <u>FEB. '90</u> | <u>APRIL '91</u>      | <u>DEC. '91</u>       |
|-----------------------|-----------------|-----------------------|-----------------------|
| First System Turnover | 08/01/91        | 07/11/91<br>06/29/91A | 07/11/91<br>06/29/91A |
| Secondary Hydro       | 02/28/92        | 02/17/92              | 02/17/92              |
| Primary Hydro         | 04/01/92        | 04/17/92              | 03/04/92              |
| HFT                   | 07/16/92        | 06/15/92              | 06/15/92              |
| ILRT                  | 09/16/92        | 08/17/92              | 08/17/92              |
| Fuel Load             | 01/01/93        | 12/01/92              | 12/01/92              |

## BULK COMMODITY QUANTITIES

|                              | <u>FEB 1990</u> |    | <u>SEPT 1991</u> |    | <u>DEC 1991</u> |    |
|------------------------------|-----------------|----|------------------|----|-----------------|----|
|                              |                 |    | TO GO            |    | TO GO           |    |
| <u>ELECTRICAL</u>            |                 |    |                  |    |                 |    |
| CABLE PULL                   | 478,000         | LF | 212,554          | LF | 184,504         | LF |
| SEISMIC CONDUIT SUPPORTS     | 6,000           | EA | 1,587            | EA | 1,700           | EA |
| CONDUIT                      | 60,000          | LF | 19,257           | LF | 5,843           | LF |
| CABLE TRAY SUPPORTS          | 2,140           | EA | 1,453            | EA | 546             | EA |
| <u>MECHANICAL</u>            |                 |    |                  |    |                 |    |
| ASME LARGE BORE SUPPORTS     | 6,094           | EA | 2,451            | EA | 1,619           | EA |
| ASME SMALL BORE SUPPORTS     | 4,823           | EA | 2,159            | EA | 1,356           | EA |
| <u>HVAC</u>                  |                 |    |                  |    |                 |    |
| SAFETY RELATED DUCT PIECES   | 688             | EA | 39               | EA | 20              | EA |
| SAFETY RELATED DUCT SUPPORTS | 218             | EA | 5                | EA | 3               | EA |
| <u>PENETRATION SEALS</u>     | 6000            | EA | 5000             | EA | 3690            | EA |

# COMANCHE PEAK STEAM ELECTRIC STATION

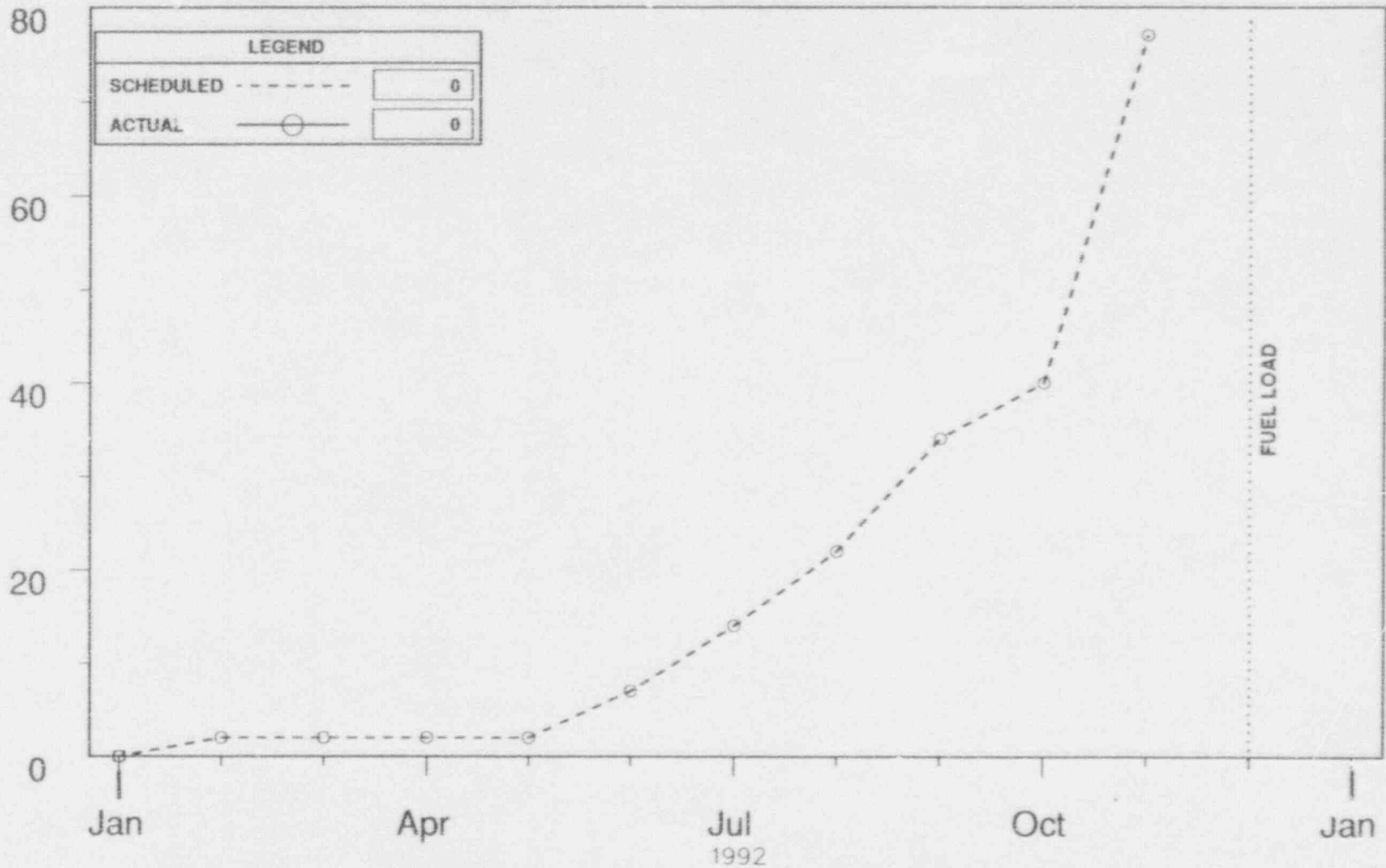
## UNIT 2 SYSTEM TURNS TO STARTUP



# COMANCHE PEAK STEAM ELECTRIC STATION

UNIT 2

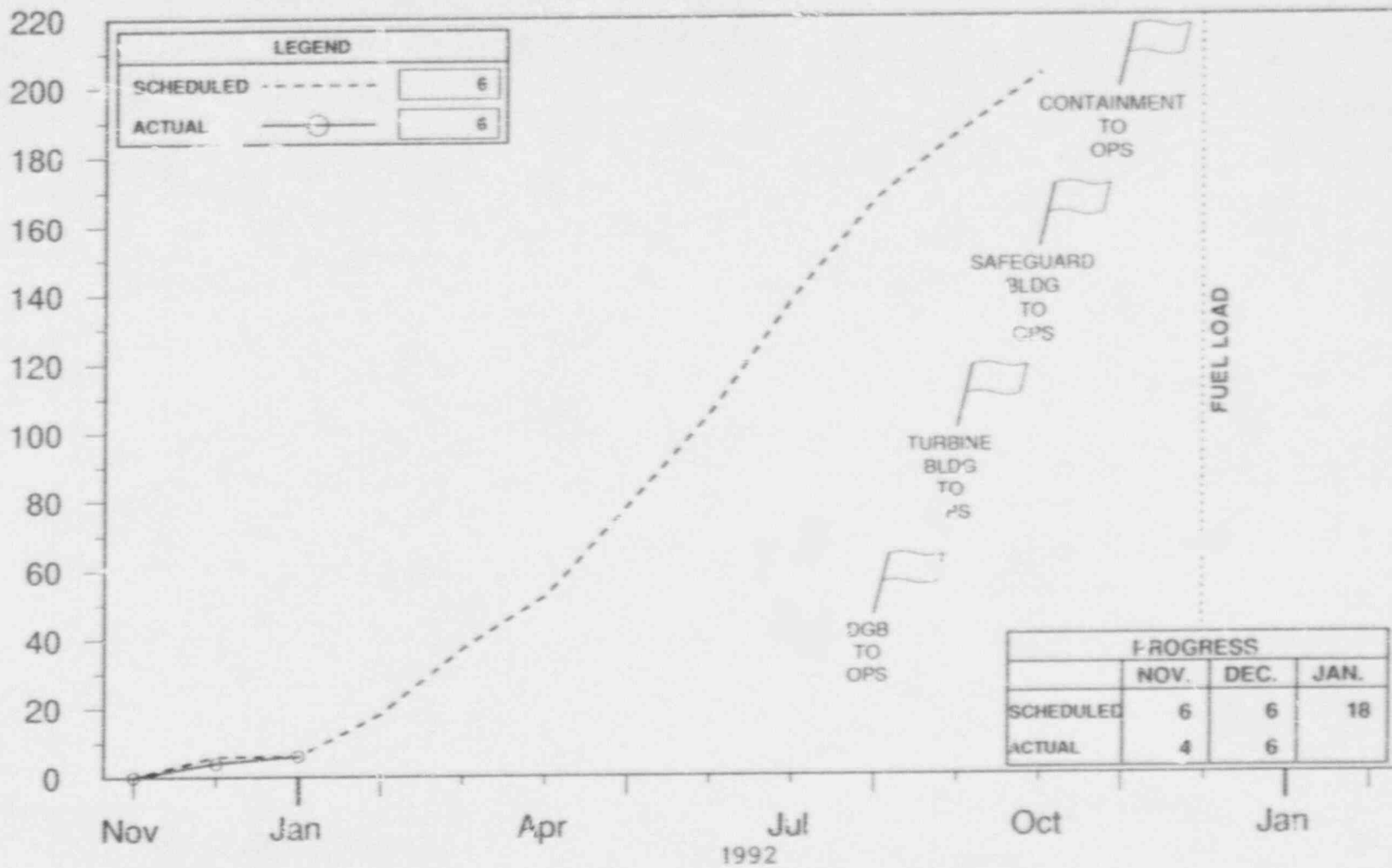
SYSTEM TURNOVER TO OPERATIONS





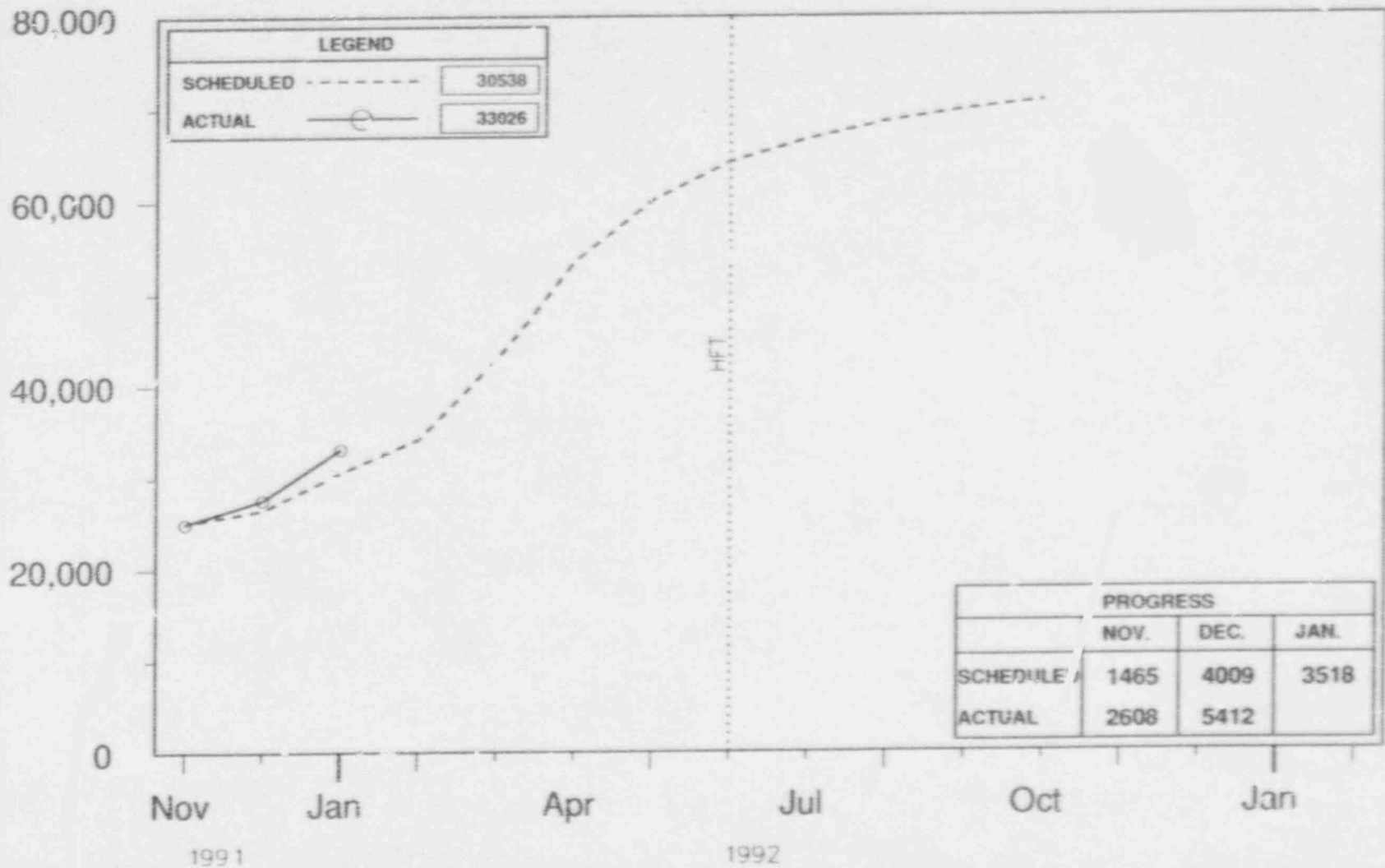
# COMANCHE PEAK STEAM ELECTRIC STATION

## UNIT 2 ROOM/AREA COMPLETION SCHEDULE



# COMANCHE PEAK STEAM ELECTRIC STATION

## UNIT 2 DOCUMENT CLOSURE ALL DISCIPLINES



## CMI RESULTS

- FINDINGS NOTED IN THESE GENERAL AREAS
  - Unit 2 Flushing Program
  - System Turnover Process
  - Design Basis Documents (DBDs)
  - Design Calculations
  - Procedure Compliance
  - Implementation of Corrective Actions
  
- STRENGTHS NOTED IN THESE AREAS
  - Scaling Calculations Program
  - DBDs Comprehensive and Useful for Design Activities
  - Pipe Stress and Pipe Support Program
  - CPSES Staff Responsiveness
  - Check Valve Reliability Program
  - Fuse Control Program and Related Safety Practices
  - Corrective Action Program Comprehensiveness
  - Effectiveness of Team Plus Program

## HIGHLIGHTS

- Installation of New Plant Computer Phase I
- Completion of Steam Generator Outages
- All Instrument/Tubing Isometric Drawings Issued
- Operations Completion of Phase I Technical Specification Review
- Circulating Water System Operational to Support RF01
- Completion of outages for RHR, SI, and CVCS Systems
- Performance of Verification Flushes on RHR and SI Systems
- All Deficiency Reports (DRs) for Unit 2 Closed
- ACCESS/MEL Update I Finalized

## CHALLENGES

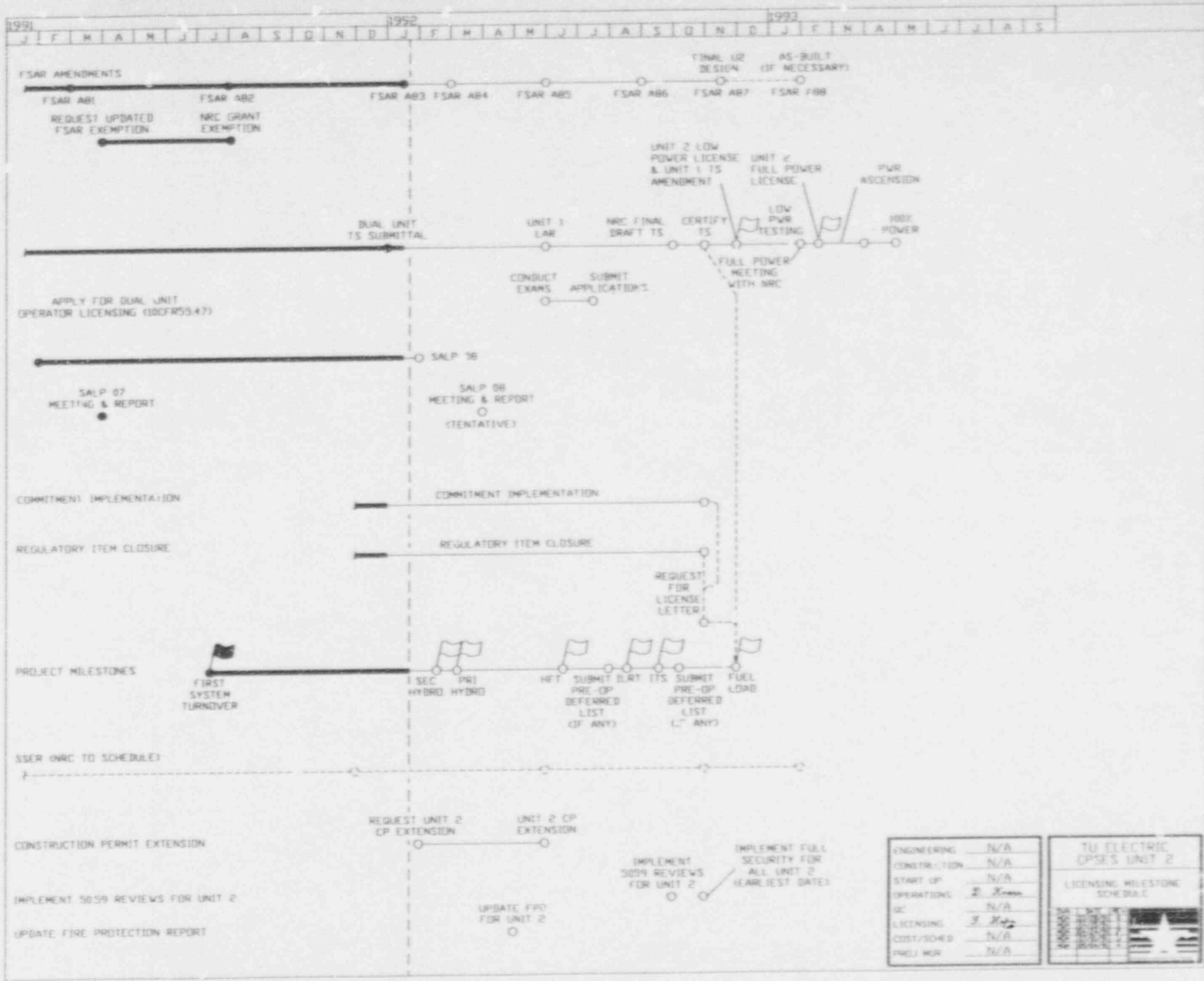
- N-5 Plan and Implementation
- Turbine Generator Rotor Replacement (RF01 Schedule)
- Safety
- Paperwork Review and Closeout
- Retention of Personnel
- System Flushing
- Component Testing
- Plant Computer Upgrade
- Pre Op Schedule

**CHALLENGES**  
**(Continued)**

- System Turnover
- Diesel Generator
- Implementation of Interface Design Modifications
- As-Built Reconciliation (ABR) Program



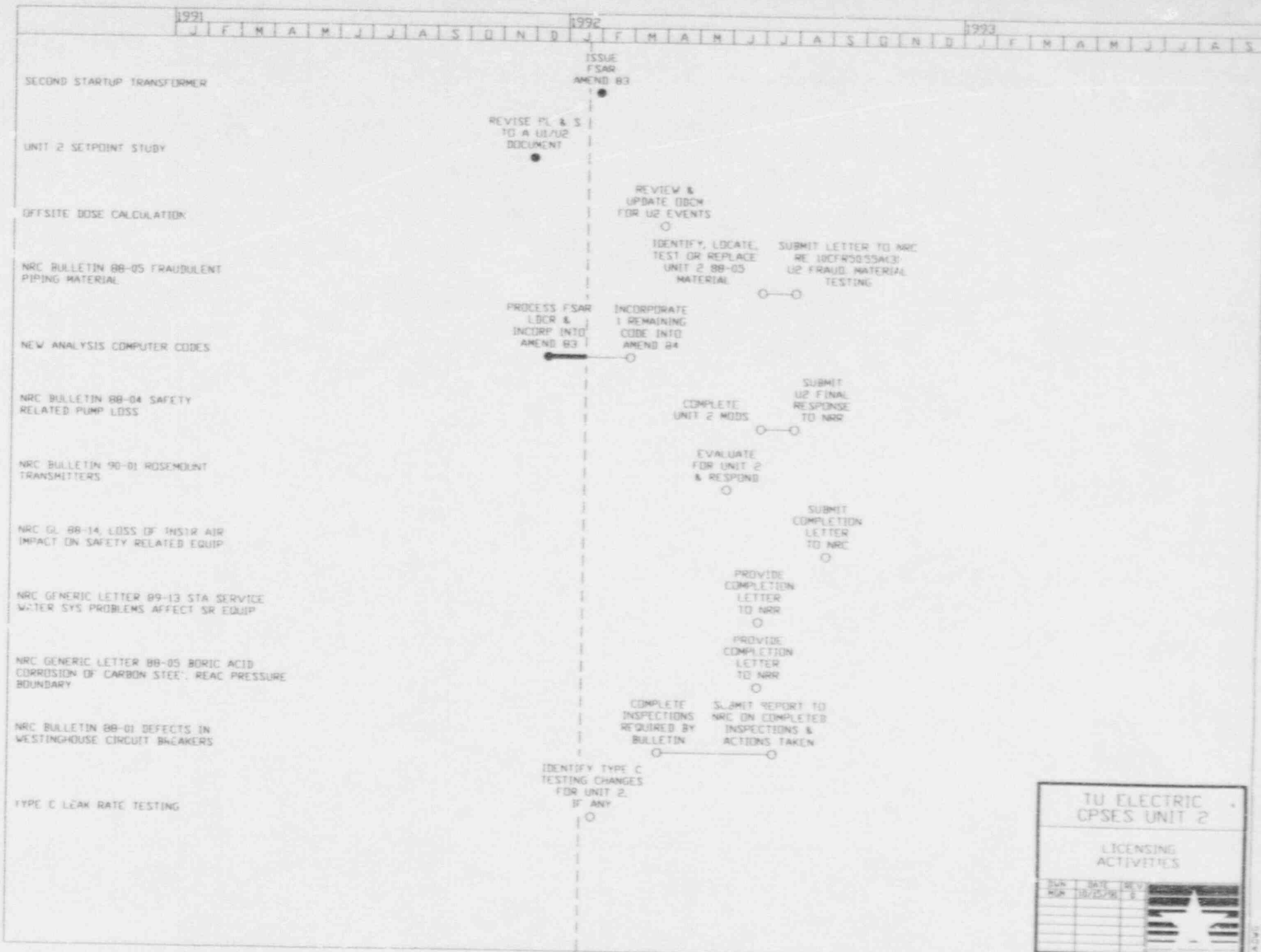
# ***LICENSING STATUS***



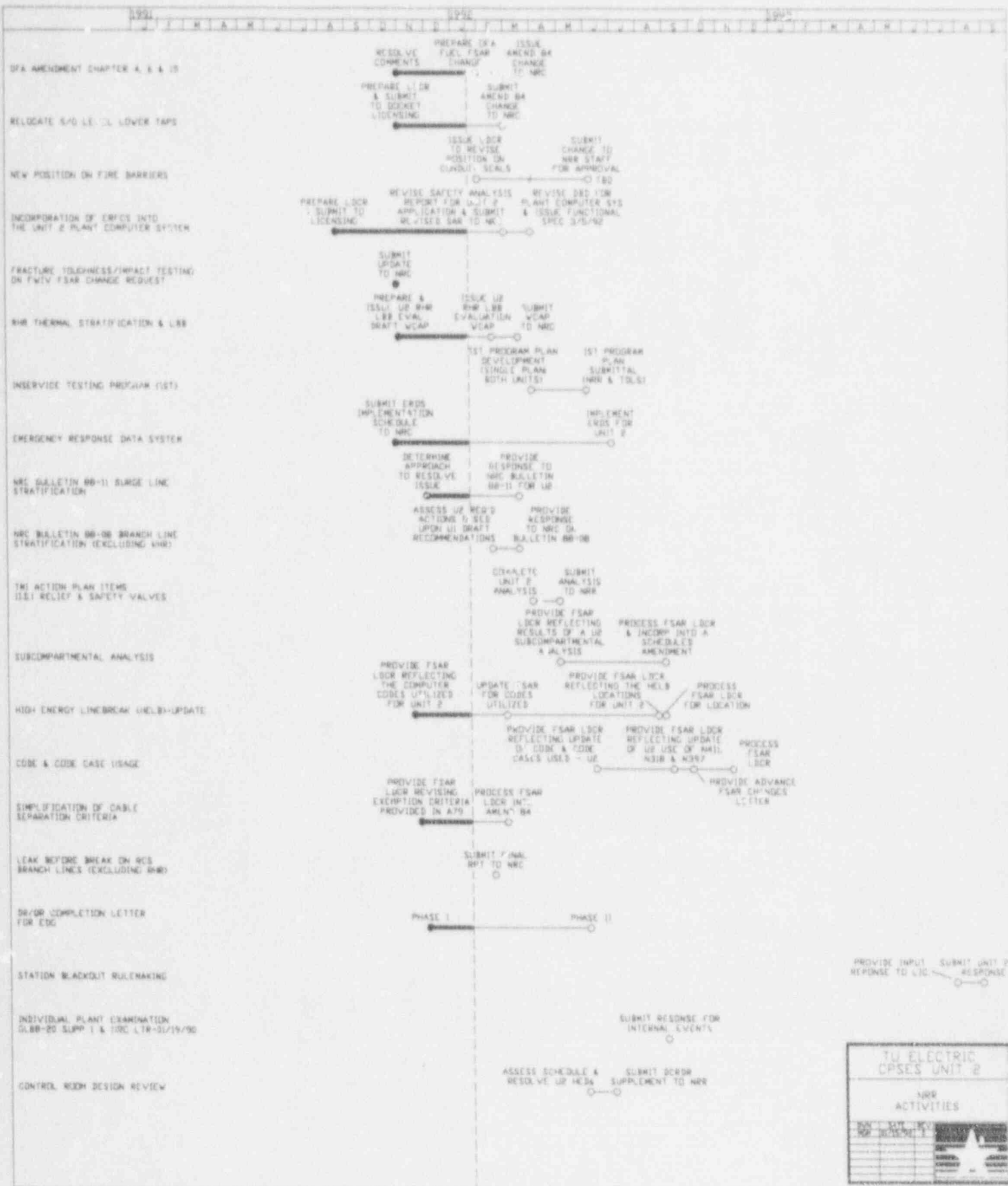
|              |        |
|--------------|--------|
| ENGINEERING  | N/A    |
| CONSTRUCTION | N/A    |
| START UP     | N/A    |
| OPERATIONS   | 2/3/93 |
| QC           | N/A    |
| LICENSING    | 3/3/93 |
| COST/SCHED   | N/A    |
| PREL MGR     | N/A    |

|                              |  |
|------------------------------|--|
| TU ELECTRIC CPSES UNIT 2     |  |
| LICENSING MILESTONE SCHEDULE |  |
| 1991                         |  |
| 1992                         |  |
| 1993                         |  |
| 1994                         |  |
| 1995                         |  |
| 1996                         |  |
| 1997                         |  |
| 1998                         |  |
| 1999                         |  |
| 2000                         |  |
| 2001                         |  |
| 2002                         |  |
| 2003                         |  |
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| 2022                         |  |
| 2023                         |  |
| 2024                         |  |
| 2025                         |  |
| 2026                         |  |
| 2027                         |  |
| 2028                         |  |
| 2029                         |  |
| 2030                         |  |

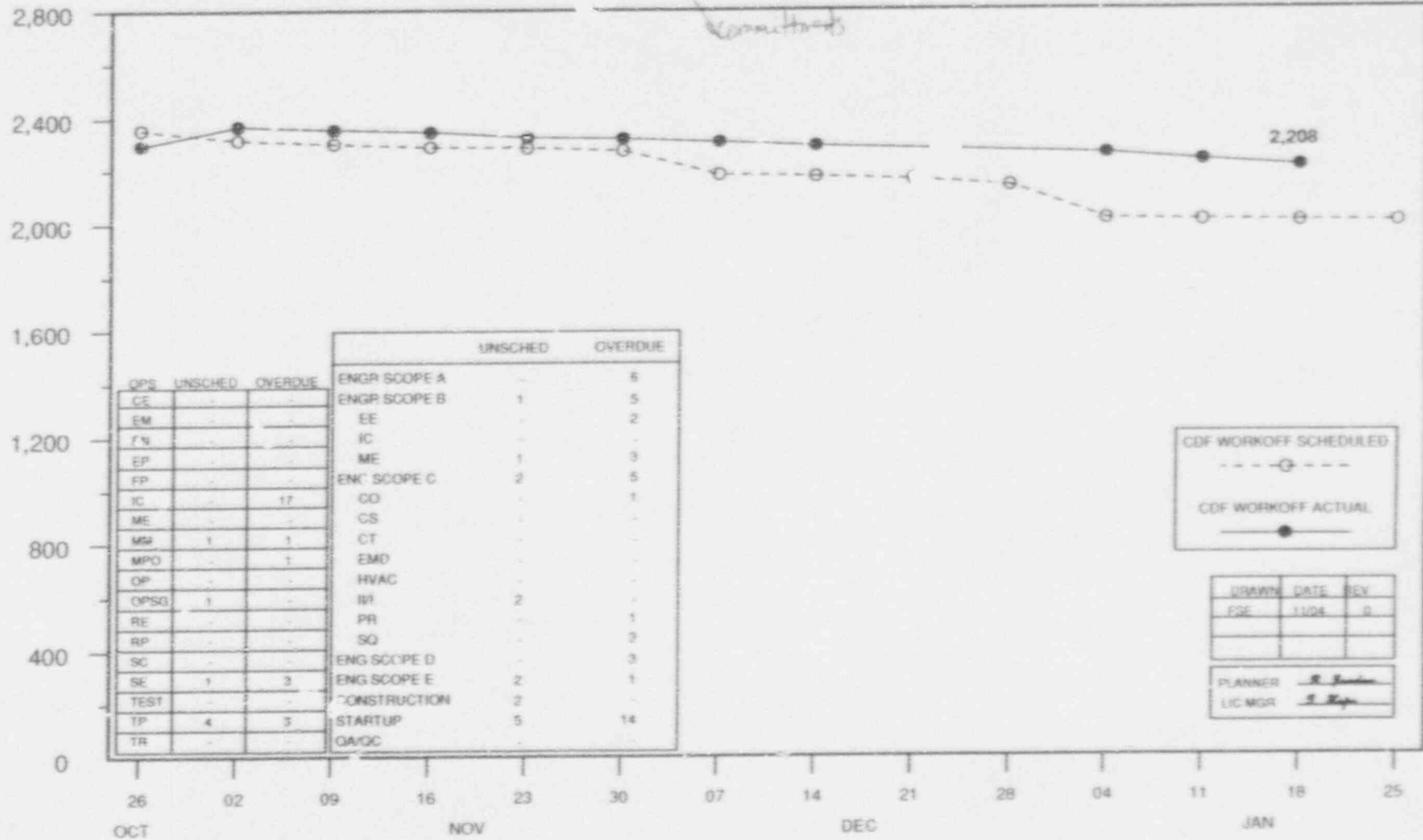




| TU ELECTRIC<br>CPSES UNIT 2 |     |  |
|-----------------------------|-----|--|
| LICENSING<br>ACTIVITIES     |     |  |
| DATE                        | REV |  |
| 10/25/91                    | 1   |  |
|                             |     |  |
|                             |     |  |
|                             |     |  |
|                             |     |  |
|                             |     |  |



# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 TOTAL CDF WORKOFF



NEWCDF3M

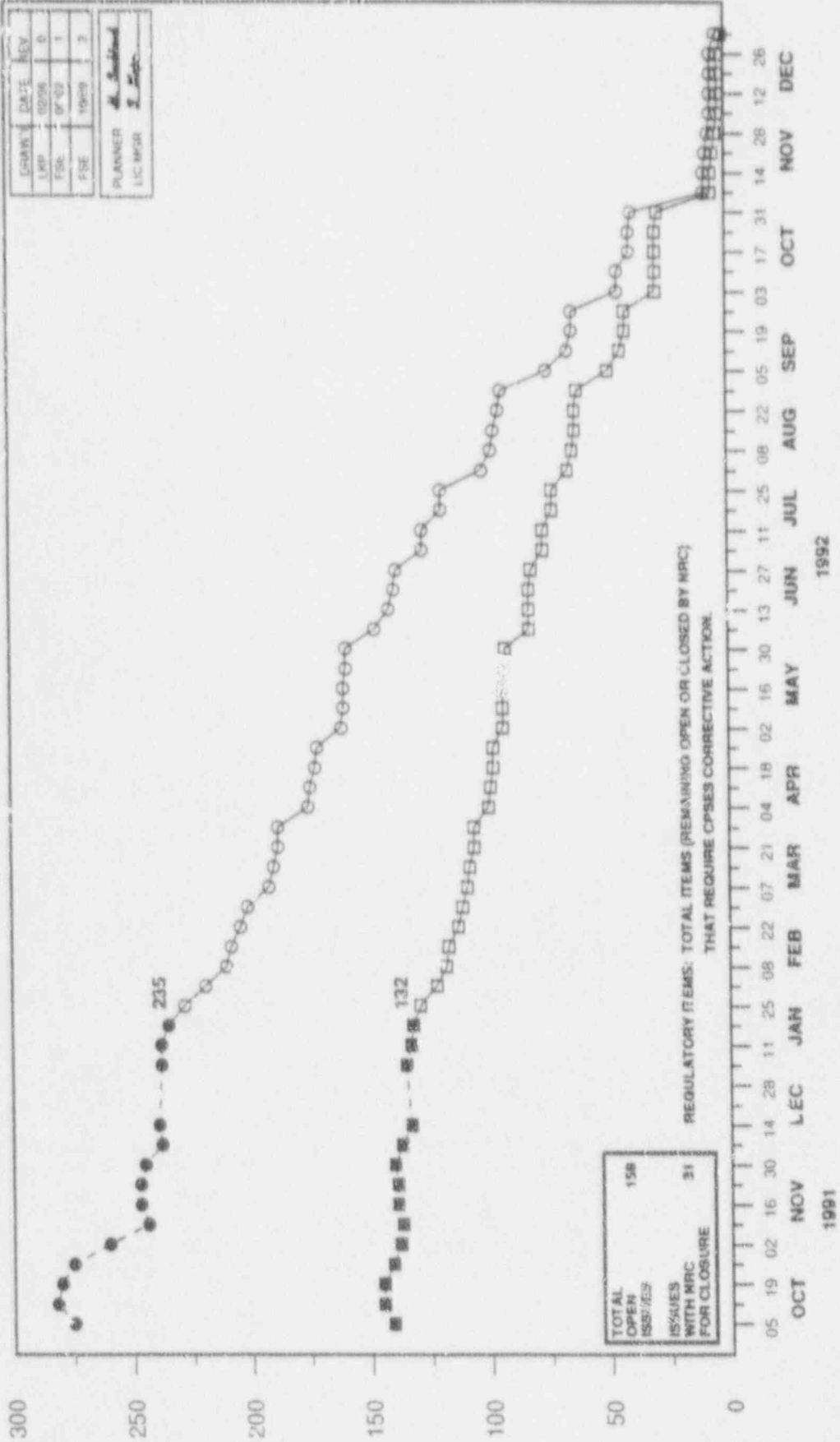
# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 REGULATORY ITEMS

OPEN (C.A. REV'D) OPEN (C.A. REV'D)  
 FORECAST ACTUAL FORECAST ACTUAL

| DRAWN | DATE     | REV |
|-------|----------|-----|
| LMP   | 10/29/88 | 0   |
| FSE   | 07/09/89 | 1   |
| FSE   | 10/09/89 | 2   |

| PLANNER  | DATE     |
|----------|----------|
| L.C. MOR | 10/29/89 |



REG 01

## CATEGORIES OF ISSUES READY FOR NRC

|   |    |   |
|---|----|---|
| Tentatively Closed at<br>Recent Exit Meeting                      | 11 | SDARs 87-103, 87-108,<br>88-21, 86-24, 91-04<br>91-07,<br>IEB 7701, 8902<br>446/9013-03,<br>446-9026-02,<br>446/9131-01, 02 |
| Package with Residents<br>for Review                              | 7  | SDARs 85-54, 86-24,<br>87-127, 89-014<br>445/9026-F-01,<br>446/9035-01<br>446/9111-V-01                                     |
| Issues Ready for RIV<br>(No Package Prepared,<br>Mostly EP Items) | 8  | 446/8943-B23, B37<br>446/8958-01, 02, 04,<br>05, 06<br>446/9043-D-01 (EA)   |
| NRC Inspect at HFT<br>(Inspect Adjacent to<br>RX Vessel)          | 1  | 446/9009-0-03   |

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Total 27 \*

\* As of 01/13/92



# ***ENGINEERING STATUS***

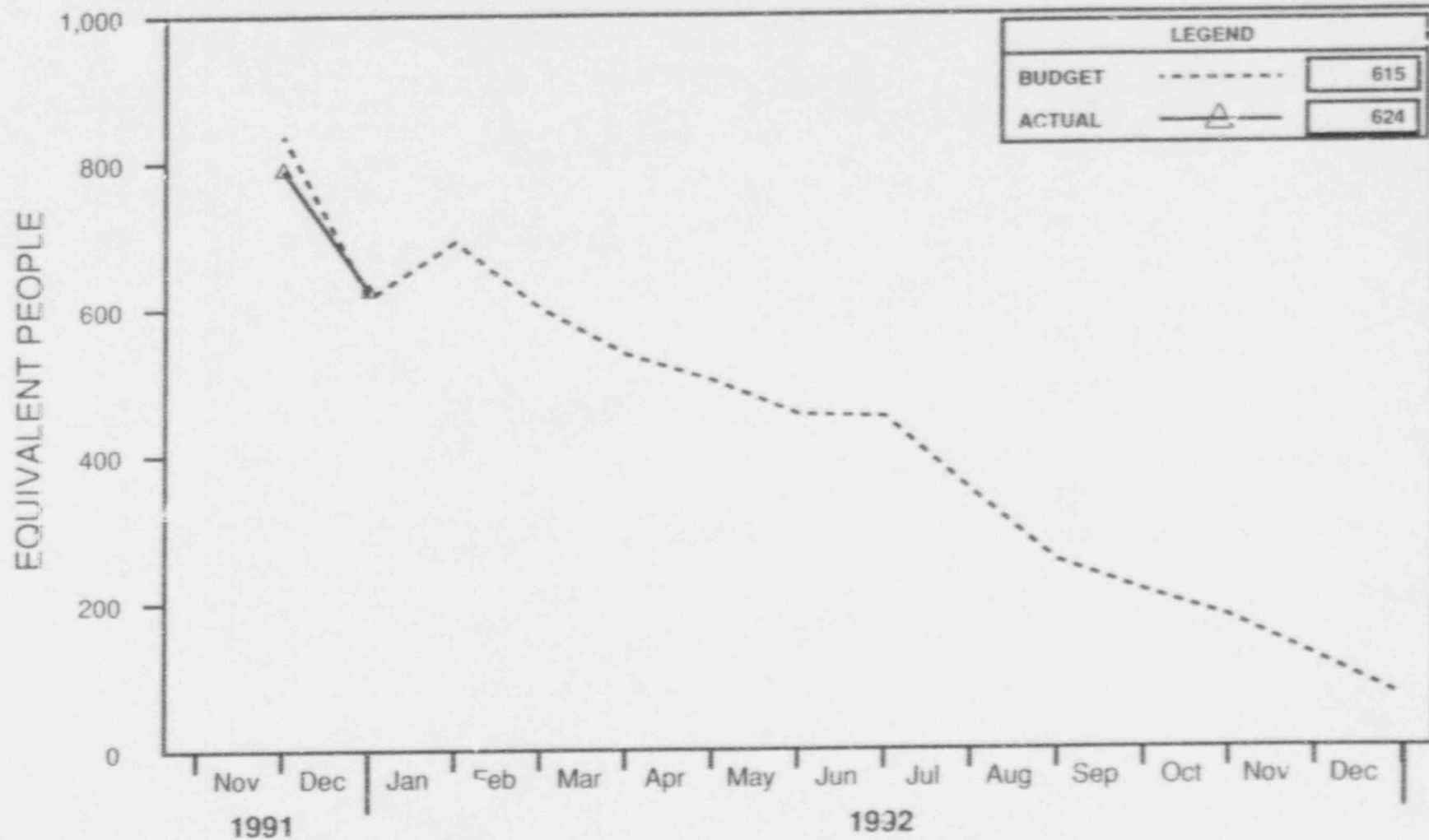


## ENGINEERING CONTRACTORS

| SCOPE | DESCRIPTION                            | CONTRACTORS     |
|-------|--|-----------------|
| A     | Piping and Supports                    | Bechtel         |
| B     | Systems                                | Stone & Webster |
| C     | Suspended Systems and Civil/Structural | ABB Impell      |
| D     | NSSS                                   | Westinghouse    |
| E     | CAD and Miscellaneous Engineering      | TU Engineering  |



# COMANCHE PEAK STEAM ELECTRIC STATION ENGINEERING STAFFING



# COMANCHE PEAK STEAM ELECTRIC STATION ENGINEERING DEPARTMENT MAJOR ACTIVITY STATUS

STATUS AS OF 01/18/92

1991

1992

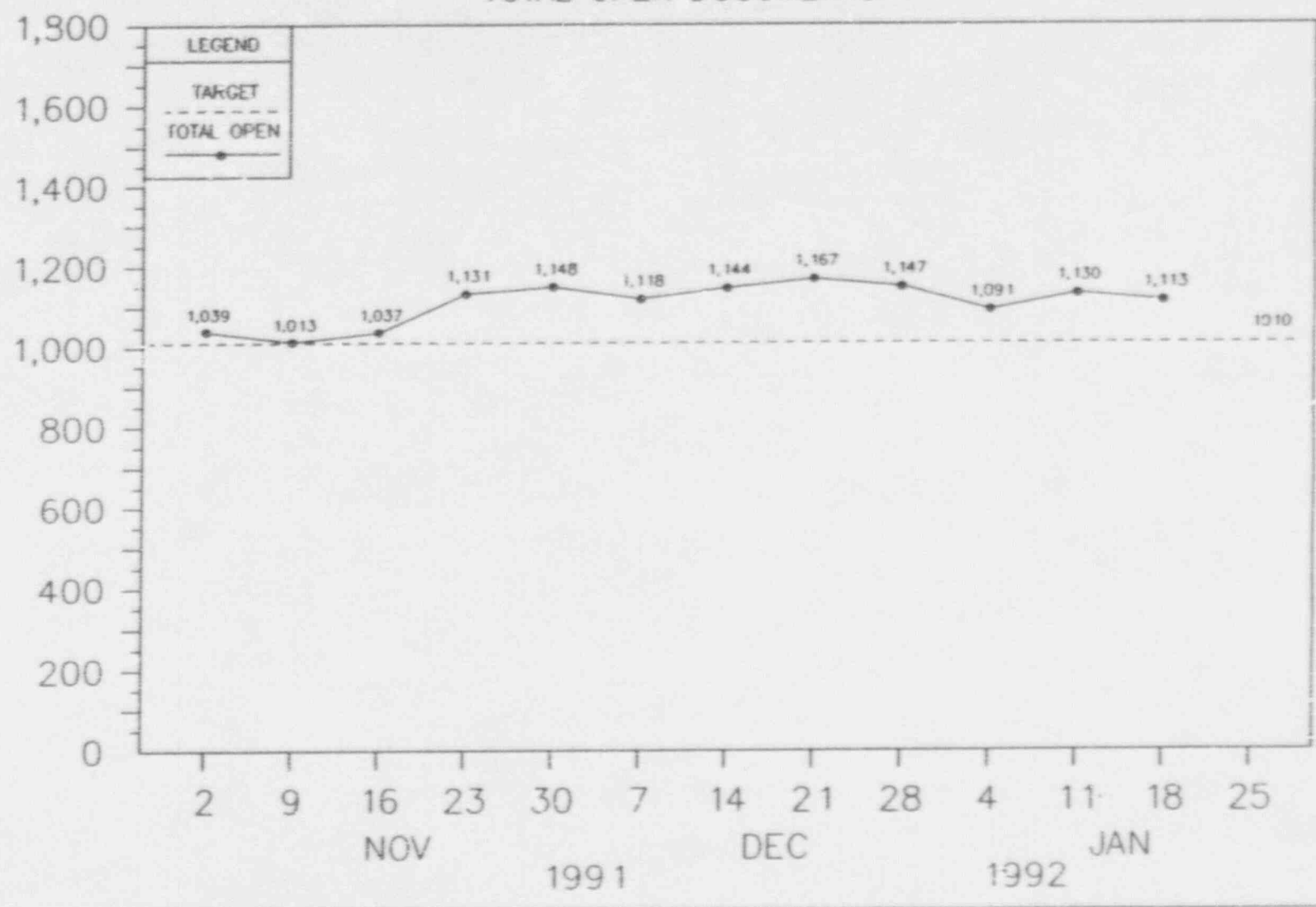
| SCOPE                 | ACTIVITY              | * | JUN      | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |  |  |
|-----------------------|-----------------------|---|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| A<br>BECHTEL          | STRESS CALCS          | S | COMPLETE |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | SUPPORT CALCS         | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | HANGFR DRAWINGS       | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | HANGER LOCATION DWGs  | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | FINAL RECONCILIATION  | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| B<br>SWEC             | MECHANICAL CALCS      | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | ECD DRAWINGS          | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | TUBING ISOMETRIC DWGs | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | SCALING CALCS         | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | FSSA                  | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | HEAT TRACING          | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | ACCESS/MEL UPDATE     | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | SETPOINT CALC         | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | PEN SEAL DETAILS      | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| C<br>IMPELL           | HVAC CAT II DWGs      | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | CONDUIT CALCS (DV)    | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | THERMOLAG CALCS       | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | ISO CALCS             | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | SEQ VALVES & EQUIP    | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| D<br>WESTING<br>HOUSE | STRESS CALCS          | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | HANGER DWGs           | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | MOMENT RESTRT DWGS    | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | EQUIPMENT WALKDOWNS   | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | SEQ BASIS             | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| E<br>TU ELECT         | FINAL RECONCILIATION  | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | ELECT. CALCS          | S |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | PLANT COMPUTER PH. 1  | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| ALL<br>SCOPES         | PLANT COMPUTER PH. 2  | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | INTERFACE DMs         | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | ROLLOVER DMs          | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|                       | COMMODITY CLEARANCE   | H |          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |

\* - SOFTWARE ITEM  
H - HARDWARE ITEM

Note 1: Majority of hardware items will be issued by January 1992.

FORMG007

COMANCHE PEAK STEAM ELECTRIC STATION  
UNIT 2 ENGINEERING  
TOTAL OPEN DOCUMENTS

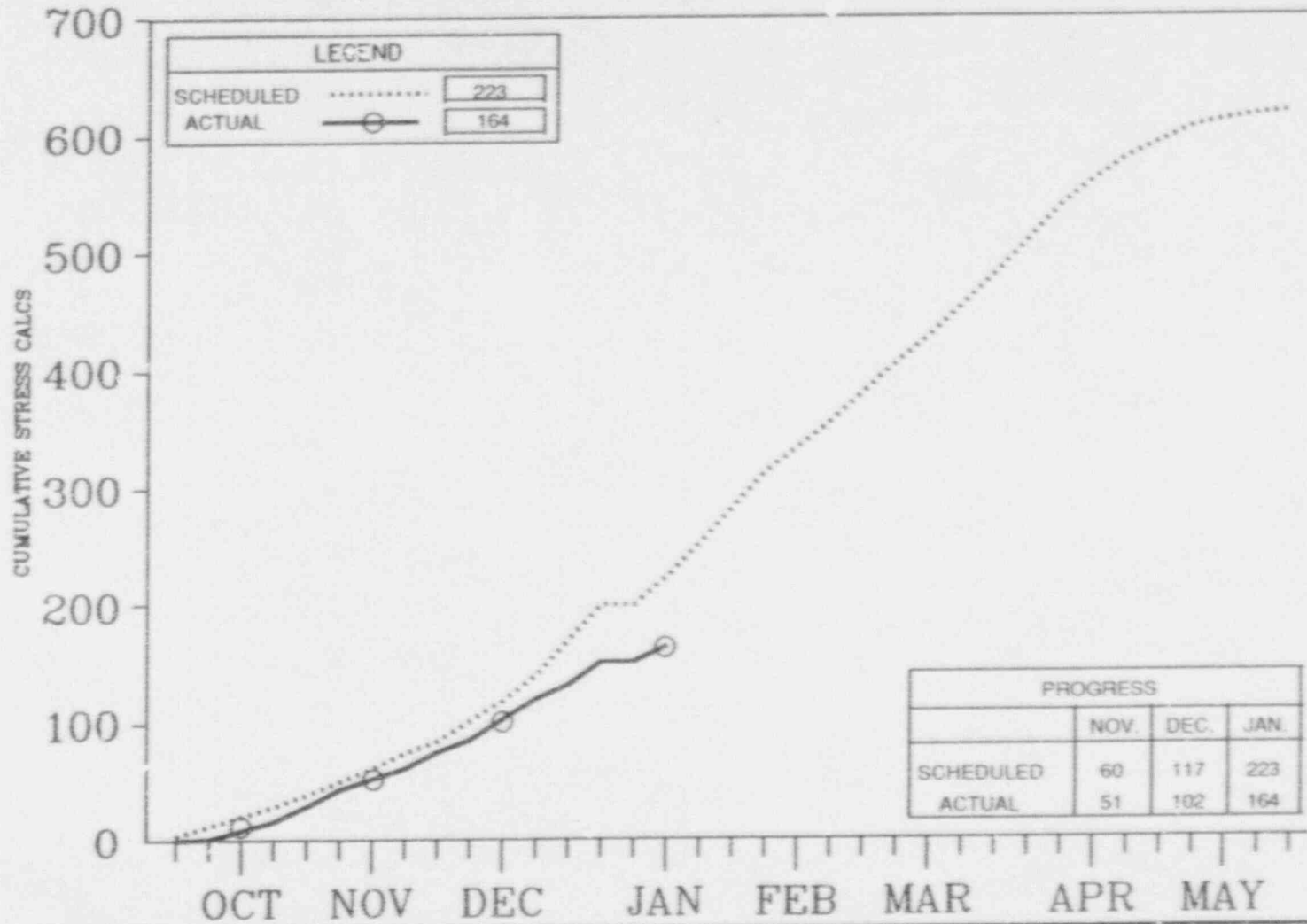


COMANCHE PEAK STEAM ELECTRIC STATION  
AS-BUILT RECONCILIATION PROGRAM  
COMPLETION STATUS

|   |      | OCT                     | NOV  | DEC | JAN | FEB | MAR | APR | MAY | JUN  | JUL  | AUG | SEP  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|------|-------------------------|------|-----|-----|-----|-----|-----|-----|------|------|-----|------|--|--|--|--|--|--|--|--|--|--|--|--|
| SCOPE A<br>COMPLETE<br>DESIGN   | S.P. | [Gantt bar: Oct to Jan] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
|   | HOR  | [Gantt bar: Oct to Jan] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| <table border="1"> <thead> <tr> <th>BCH</th> <th>ACT</th> <th>REQ</th> <th>TOT</th> </tr> </thead> <tbody> <tr> <td>448</td> <td>881</td> <td>441</td> <td>525</td> </tr> <tr> <td>5500</td> <td>5584</td> <td>N/A</td> <td>5887</td> </tr> </tbody> </table> |      | BCH                     | ACT  | REQ | TOT | 448 | 881 | 441 | 525 | 5500 | 5584 | N/A | 5887 |  |  |  |  |  |  |  |  |  |  |  |  |
| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 448   | 881  | 441                     | 525  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 5500  | 5584 | N/A                     | 5887 |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| CONST<br>COMPLETE<br>STRESS PROB  | S.P. | [Gantt bar: Oct to Apr] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
|   | HOR  | [Gantt bar: Oct to Apr] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
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| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 292   | 218  | 140                     | 802  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| QC 78.14<br>COMPLETE<br>STRESS PROB   | S.P. | [Gantt bar: Oct to Apr] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
|   | HOR  | [Gantt bar: Oct to Apr] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
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| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 252   | 181  | 140                     | 838  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| SCOPE B<br>FINAL<br>STRESS PKG  | S.P. | [Gantt bar: Oct to May] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
|   | HOR  | [Gantt bar: Oct to May] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| <table border="1"> <thead> <tr> <th>BCH</th> <th>ACT</th> <th>REQ</th> <th>TOT</th> </tr> </thead> <tbody> <tr> <td>208</td> <td>118</td> <td>85</td> <td>538</td> </tr> </tbody> </table>  |      | BCH                     | ACT  | REQ | TOT | 208 | 118 | 85  | 538 |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 208   | 118  | 85                      | 538  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| ADMIN<br>PACKAGES TO<br>SCOPE A/D   | S.P. | [Gantt bar: Oct to Jun] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
|   | HOR  | [Gantt bar: Oct to Jun] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
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| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 112   | 74   | 38                      | 802  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| SCOPE A<br>COMPLETE<br>RECON  | S.P. | [Gantt bar: Oct to Sep] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
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| <table border="1"> <thead> <tr> <th>BCH</th> <th>ACT</th> <th>REQ</th> <th>TOT</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>17</td> <td>9</td> <td>528</td> </tr> <tr> <td>88</td> <td>84</td> <td>19</td> <td>8887</td> </tr> </tbody> </table>          |      | BCH                     | ACT  | REQ | TOT | 25  | 17  | 9   | 528 | 88   | 84   | 19  | 8887 |  |  |  |  |  |  |  |  |  |  |  |  |
| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 25  | 17   | 9                       | 528  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 88  | 84   | 19                      | 8887 |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| SCOPE D<br>COMPLETE<br>RECON  | S.P. | [Gantt bar: Oct to Jun] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
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| <table border="1"> <thead> <tr> <th>BCH</th> <th>ACT</th> <th>REQ</th> <th>TOT</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>2</td> <td>0</td> <td>73</td> </tr> <tr> <td>182</td> <td>8</td> <td>0</td> <td>1378</td> </tr> </tbody> </table>             |      | BCH                     | ACT  | REQ | TOT | 13  | 2   | 0   | 73  | 182  | 8    | 0   | 1378 |  |  |  |  |  |  |  |  |  |  |  |  |
| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 13  | 2    | 0                       | 73   |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 182   | 8    | 0                       | 1378 |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| SCOPE A/D<br>ISSUE N5<br>LETTER   | S.P. | [Gantt bar: Jan to Sep] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
|   | HOR  | [Gantt bar: Jan to Sep] |      |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
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| BCH   | ACT  | REQ                     | TOT  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |
| 0   | 0    | 0                       | 808  |     |     |     |     |     |     |      |      |     |      |  |  |  |  |  |  |  |  |  |  |  |  |

ADMATREX

COMANCHE PEAK STEAM ELECTRIC STATION  
 UNIT 2 - MECHANICAL  
 QC COMPLETE BY STRESS CALC - TO GO



# ENGINEERING

## HIGHLIGHTS

- Completion of Class 2 and 3 Hanger Drawings Ahead of Schedule. Class 1 Hanger Drawings Complete
- Completion of Drawings for Tubing Isometrics
- ACCESS/MEL Validation Complete
- Interface and Rollover DM's on Schedule
- Electrical Connection Diagrams Complete
- Engineering Transitioned to Construction/Startup Support Mode
- Unit 1 Interface
- Engineering Punchlist Workoff
- Quality Level
- CMI Strengths

## ENGINEERING

### CHALLENGES

- Supporting Construction and Startup Completion Program
- ~~MOV Testing Program~~
- ~~Rollover Design Modifications~~
- ~~Room and Area Completion Program~~
- ~~ERF/Plant Computer Upgrade~~
- As Built Reconciliation
- Destaffing
- CMI Findings
- Transition to Dual Unit Engineering Organization

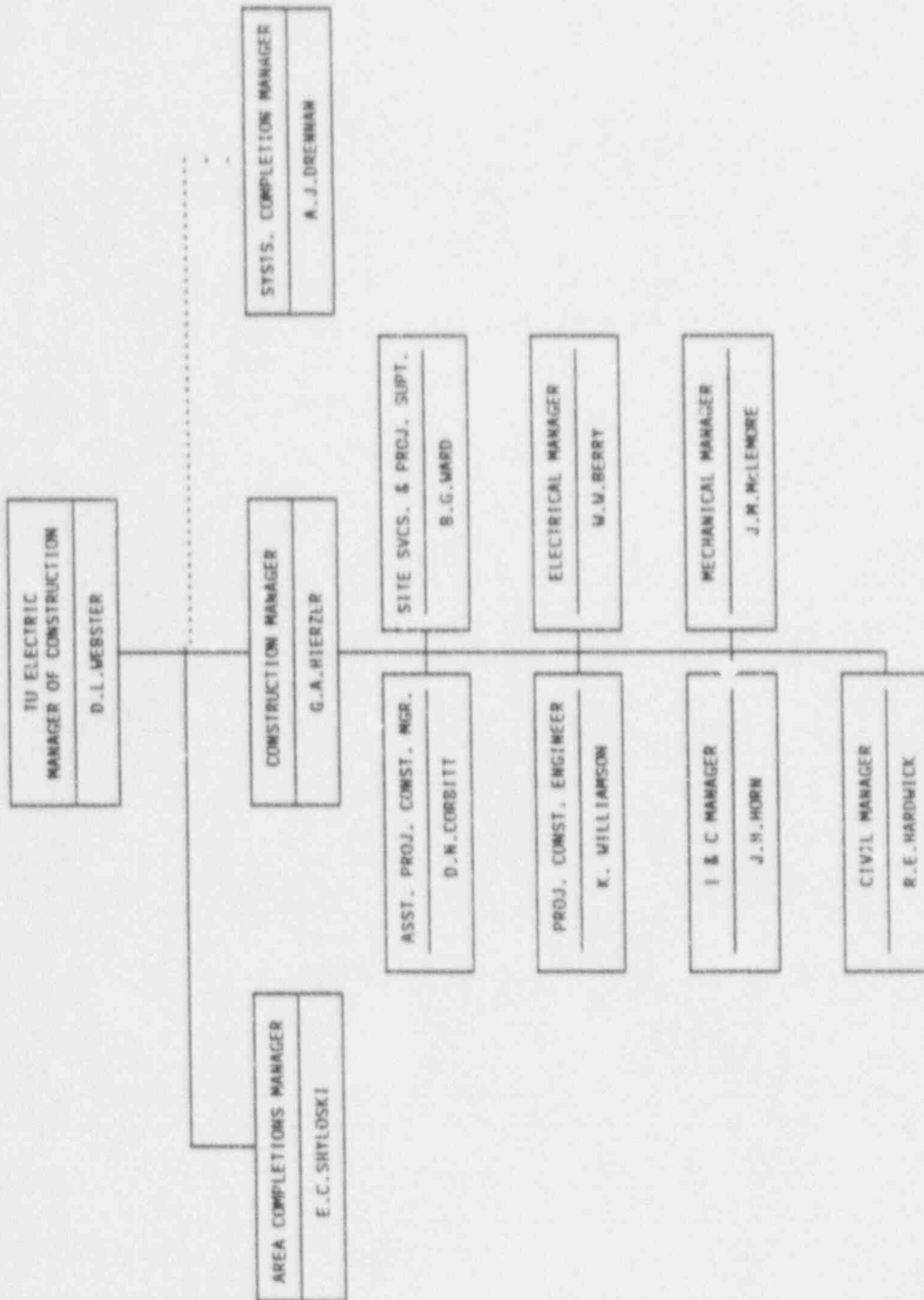


TUELECTRIC

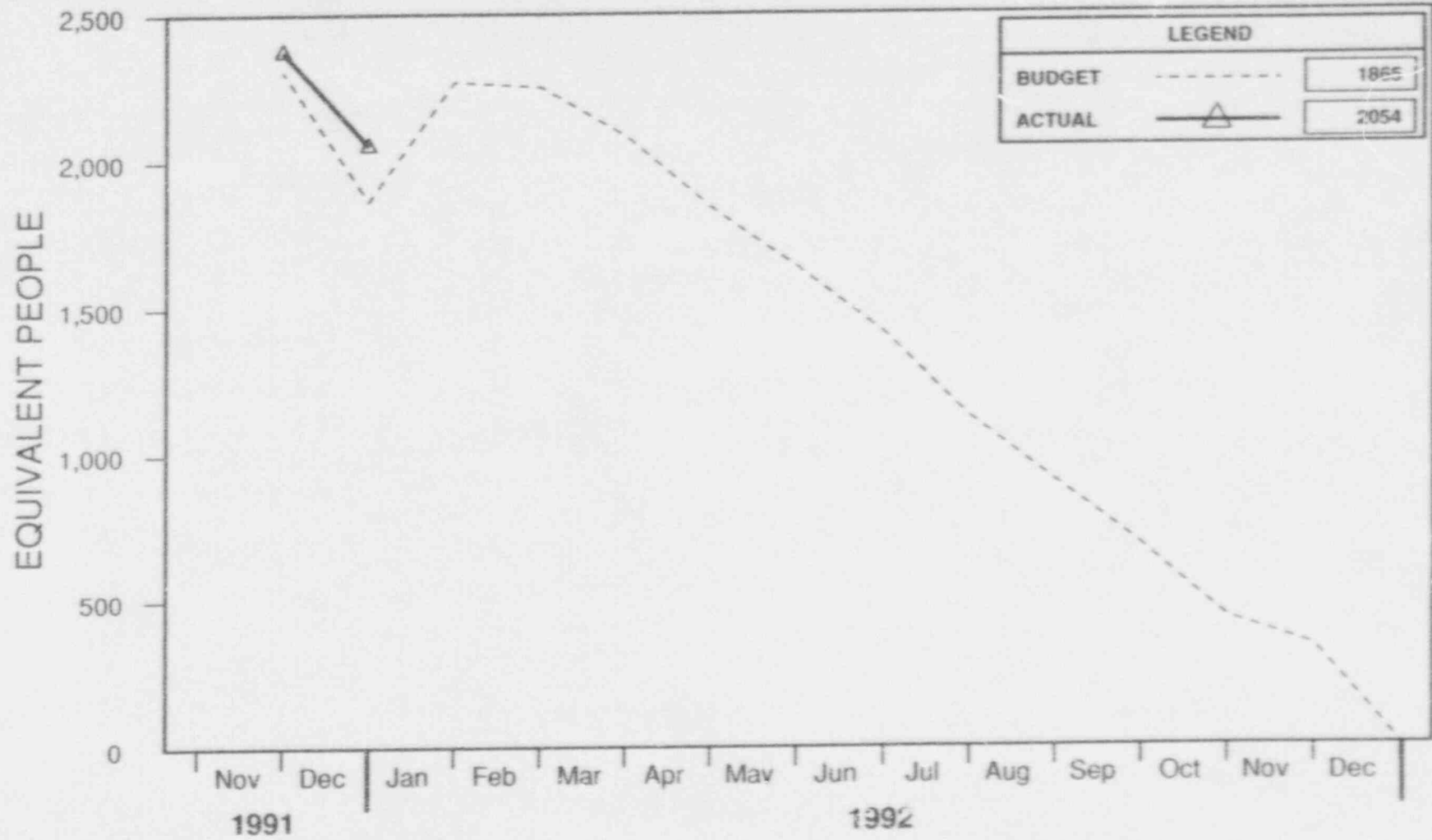
# ***CONSTRUCTION STATUS***



CPSES UNIT 2  
CONSTRUCTION & COMPLETIONS

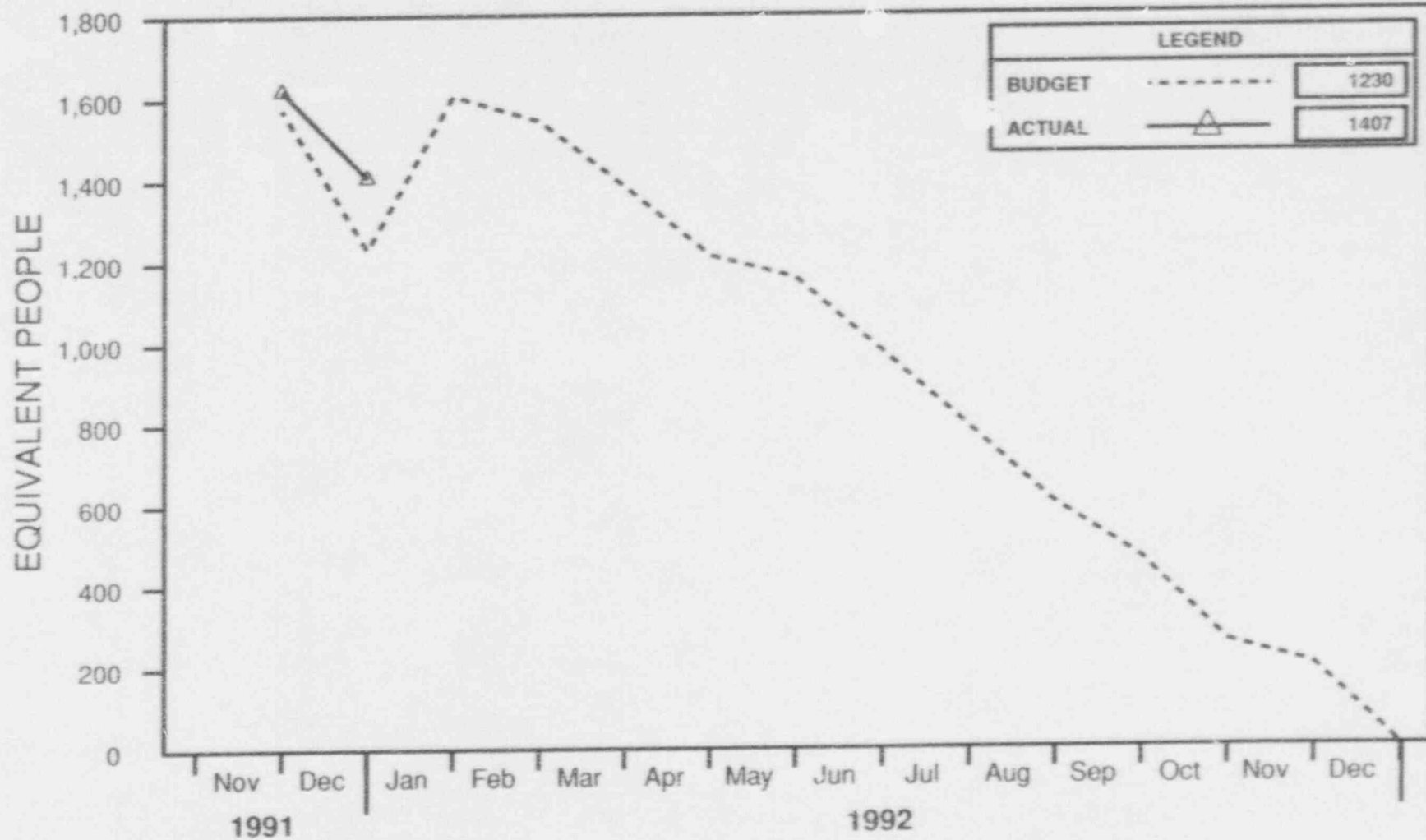


# COMANCHE PEAK STEAM ELECTRIC STATION CONSTRUCTION STAFFING



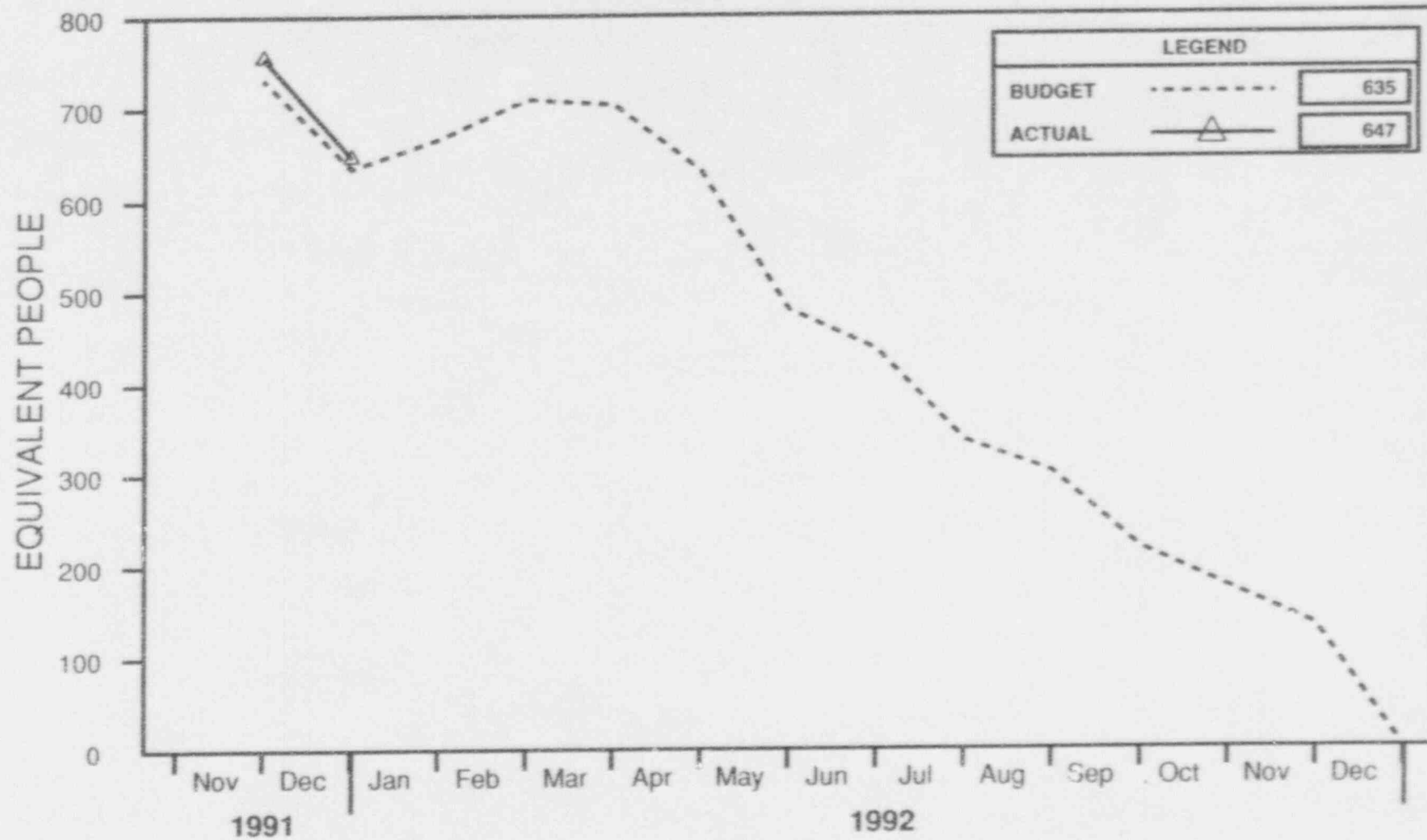
# COMANCHE PEAK STEAM ELECTRIC STATION

## CONSTRUCTION STAFFING - MANUAL



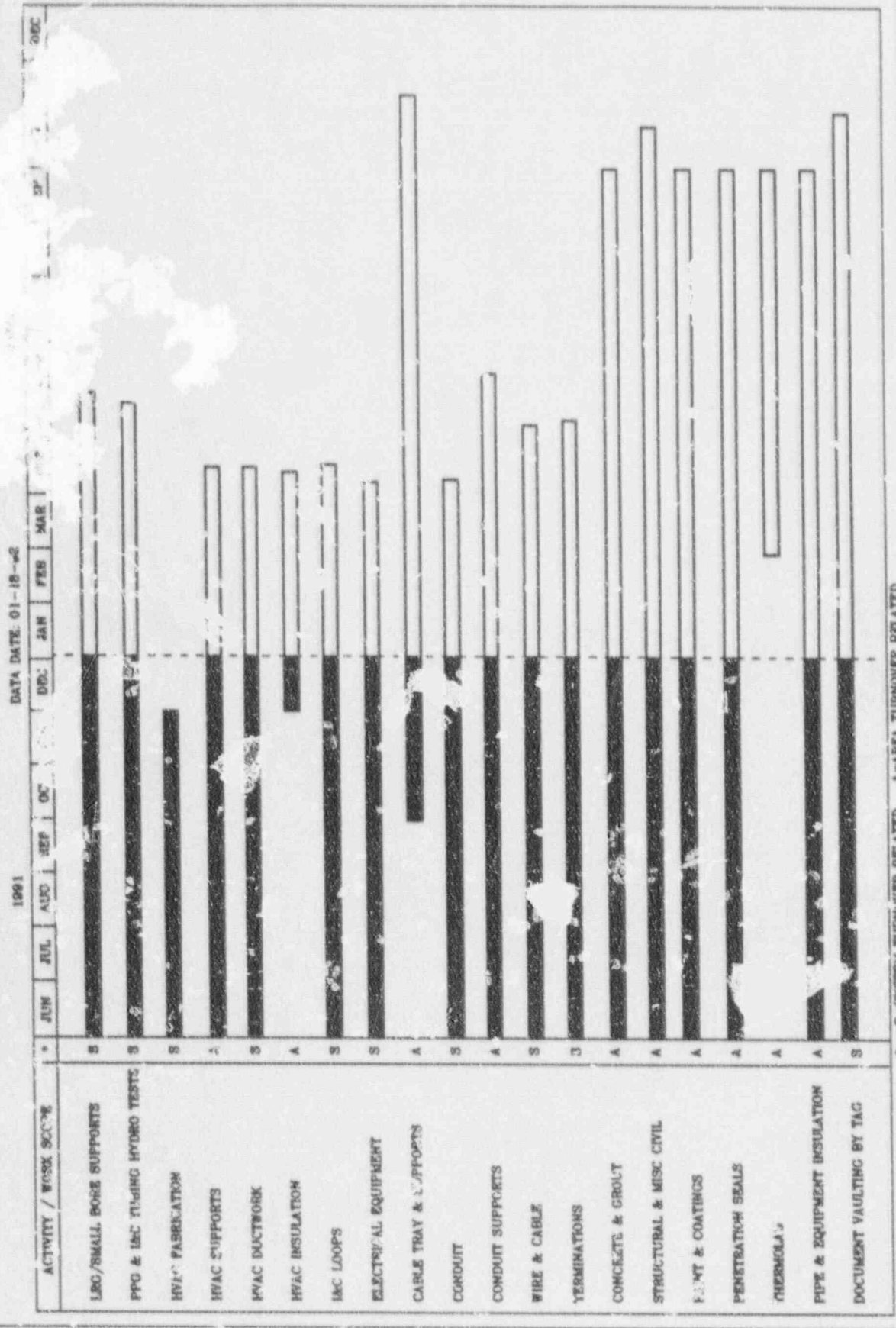
# COMANCHE PEAK STEAM ELECTRIC STATION

## CONSTRUCTION STAFFING - NON-MANUAL



# COMANCHE PEAK STEAM ELECTRIC STATION

## CONSTRUCTION DEPARTMENT - MARCH 1991

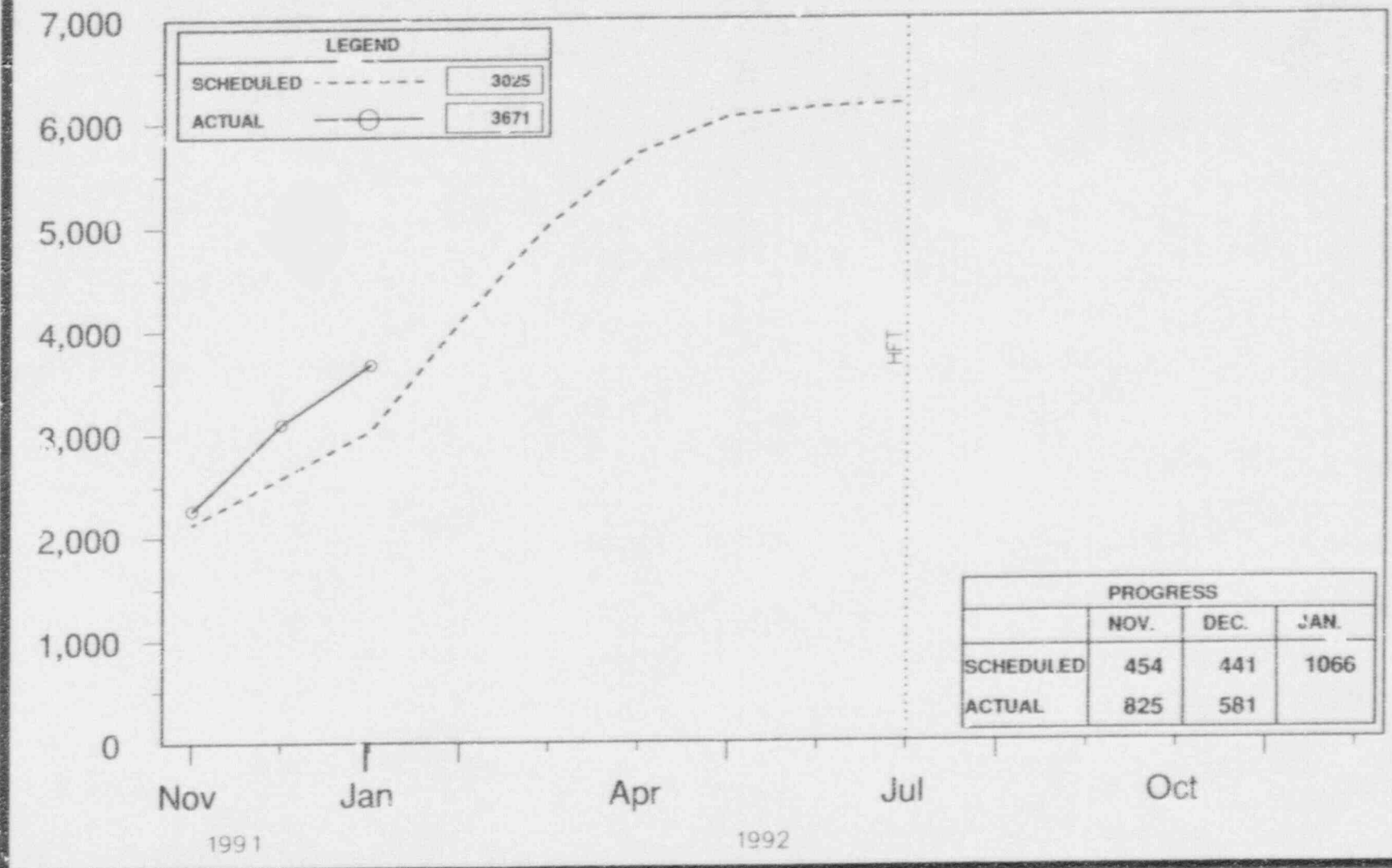


S - SYSTEM TURNOVER RELATED    A - AREA TURNOVER RELATED

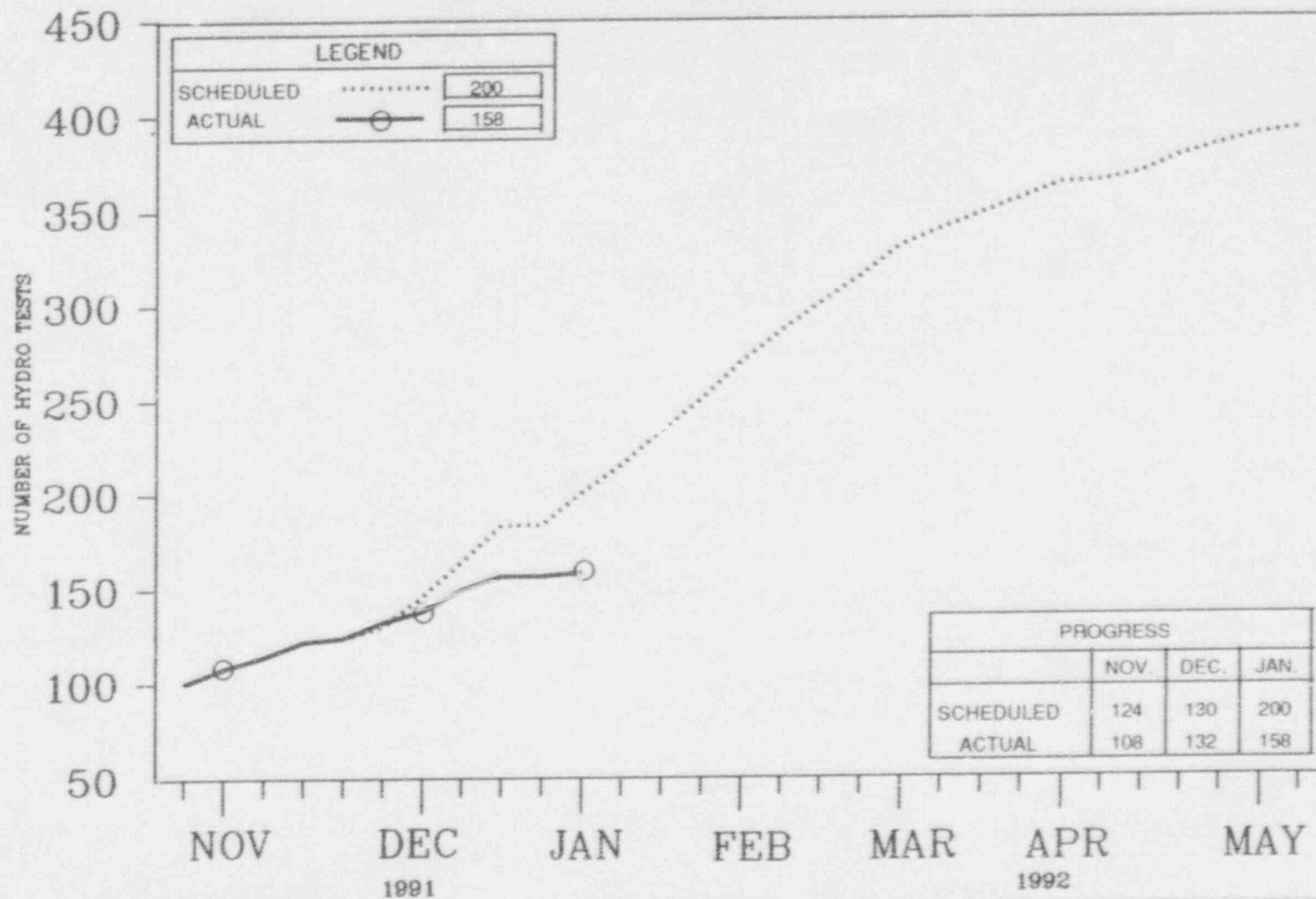
44-00000

# COMANCHE PEAK STEAM ELECTRIC STATION

## UNIT 2 CABLE TAGS

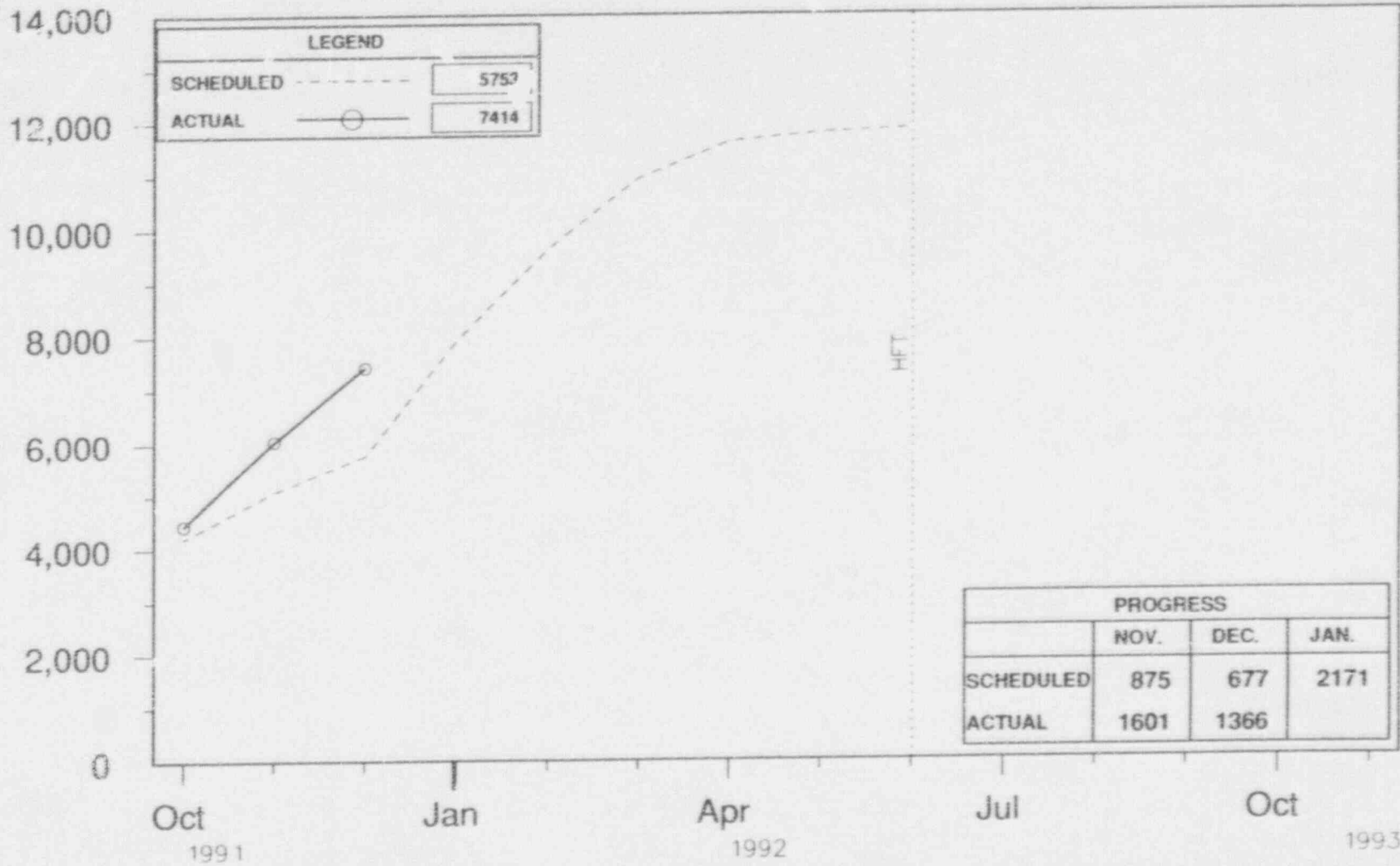


COMANCHE PEAK STEAM ELECTRIC STATION  
 UNIT 2 - I&C  
 INSTRUMENT TUBING HYDROS



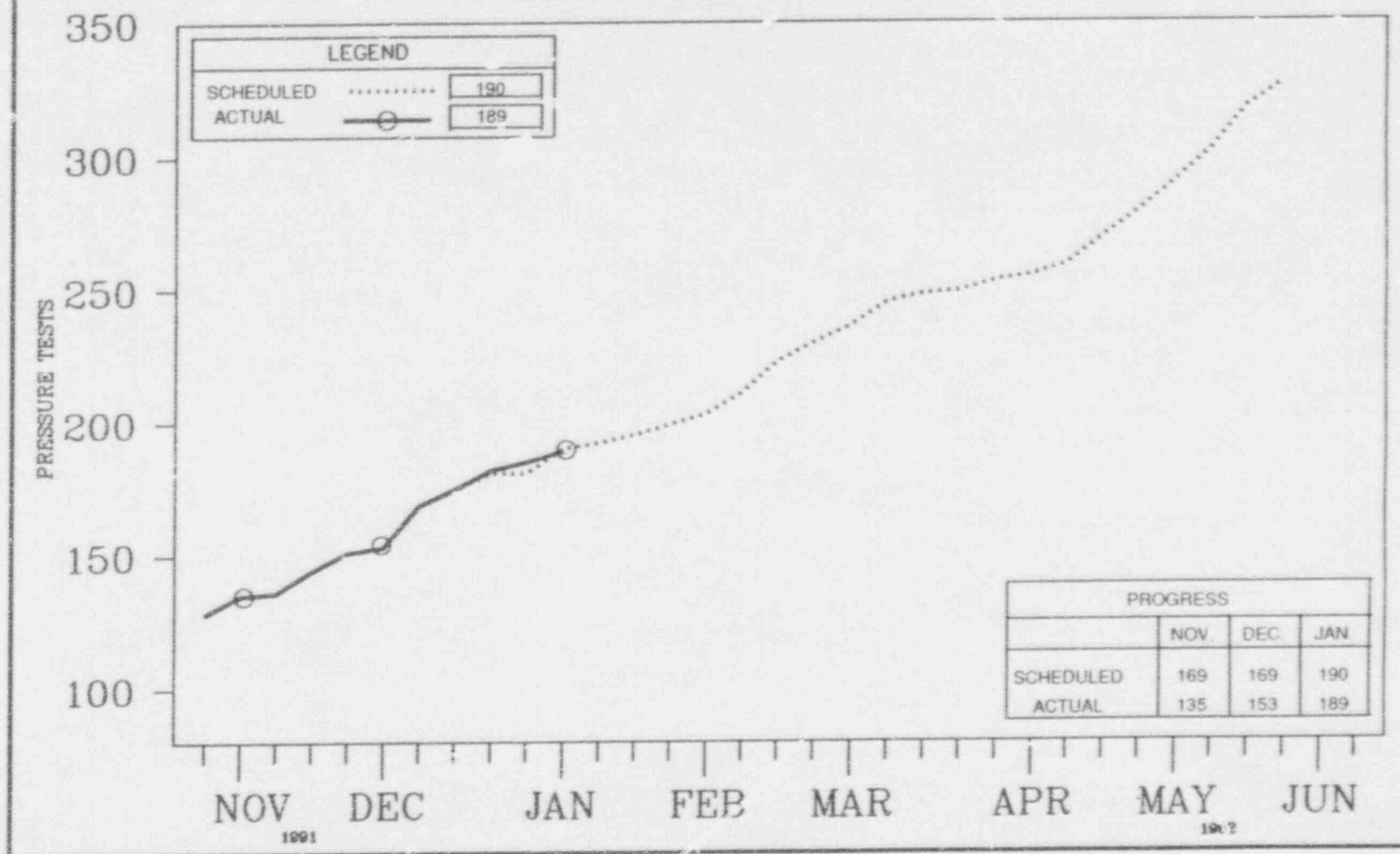
# COMANCHE PEAK STEAM ELECTRIC STATION

## UNIT 2 TERMINATION TAGS





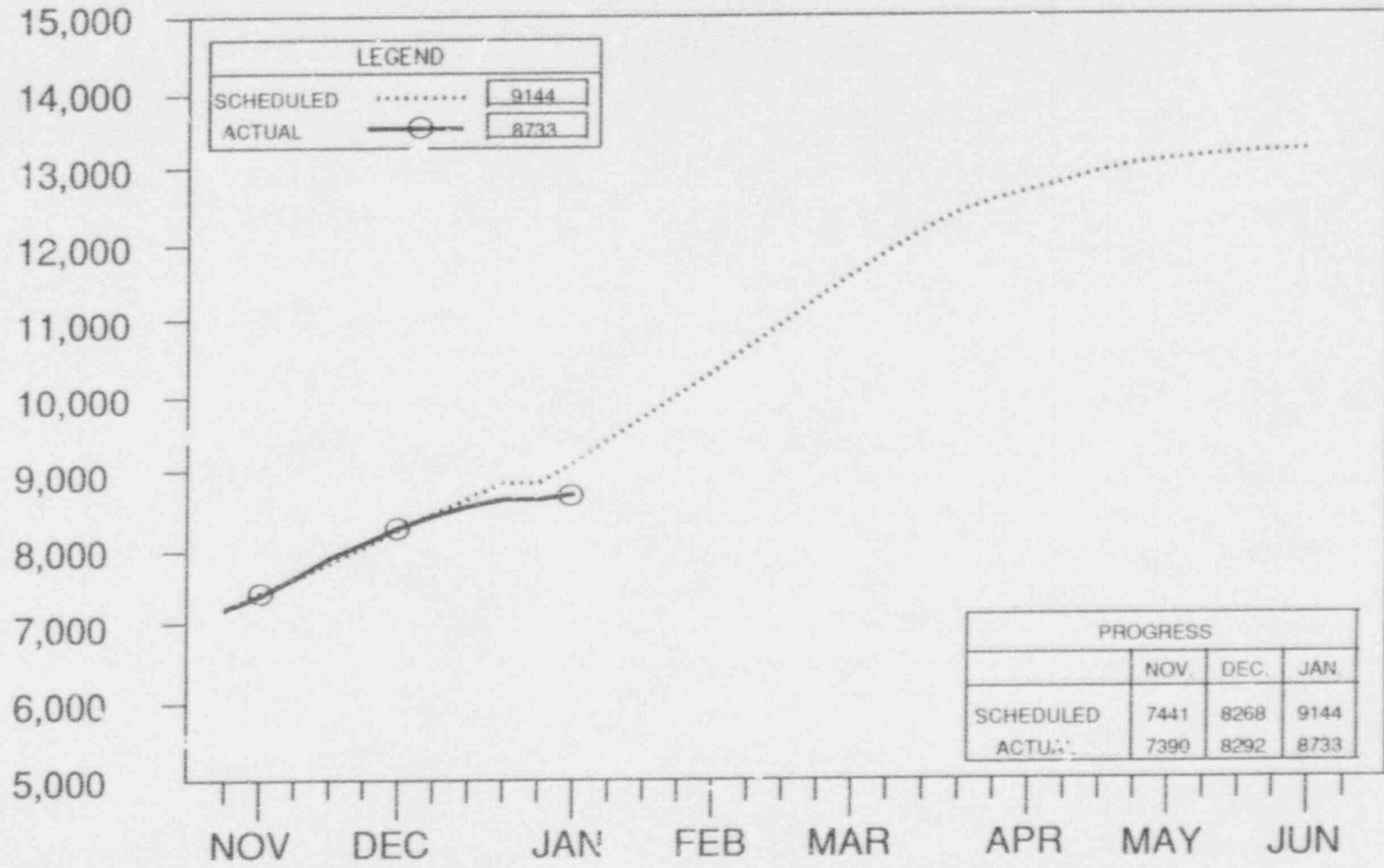
# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 - MECHANICAL PIPING PRESSURE TESTS



# COMANCHE PEAK STEAM ELECTRIC STATION

## UNIT 2 - MECHANICAL

### PIPE SUPPORT COMPLETION



## CONSTRUCTION

### HIGHLIGHTS

- On Schedule with System/Subsystem Turnovers and Flush Releases
- Penetration Seal Program Currently Ahead of Schedule
- 12 Rooms Under Access Control
- HVAC Ahead of Schedule - 3 Subsystems to Startup
- Diesel Generator
  - Under Access Control
  - "A" Bay in Testing and Under Startup Control
- Commencement of Insulation
- Detailed Tracking and Status Method for P.E.T.S. and Required Equipment

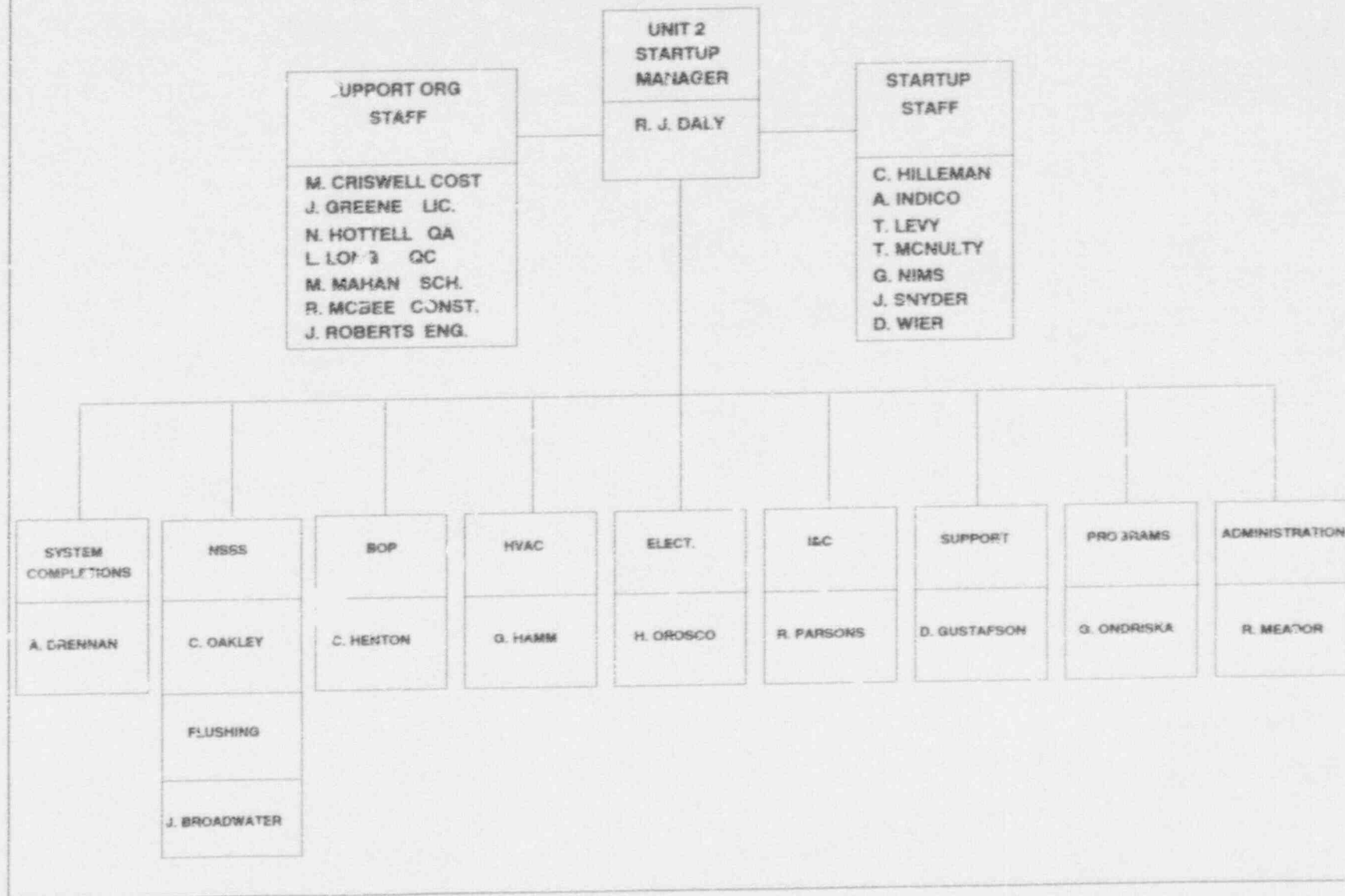
## CONSTRUCTION CHALLENGES

- Continue to Maintain High Quality Work
- Closure of Construction Work Documents
- ~~Plan for Room/Area Turnover (i.e., Diesel Generator Building)~~
- Maintain System Turnover Schedule
- Support c.c. Startup
- Turnover Exception Workoff to Support 802 Process
- Completion of Rooms and Areas
- Continue to Improve Plant Housekeeping Conditions
- Support of Primary and Secondary Hydro's

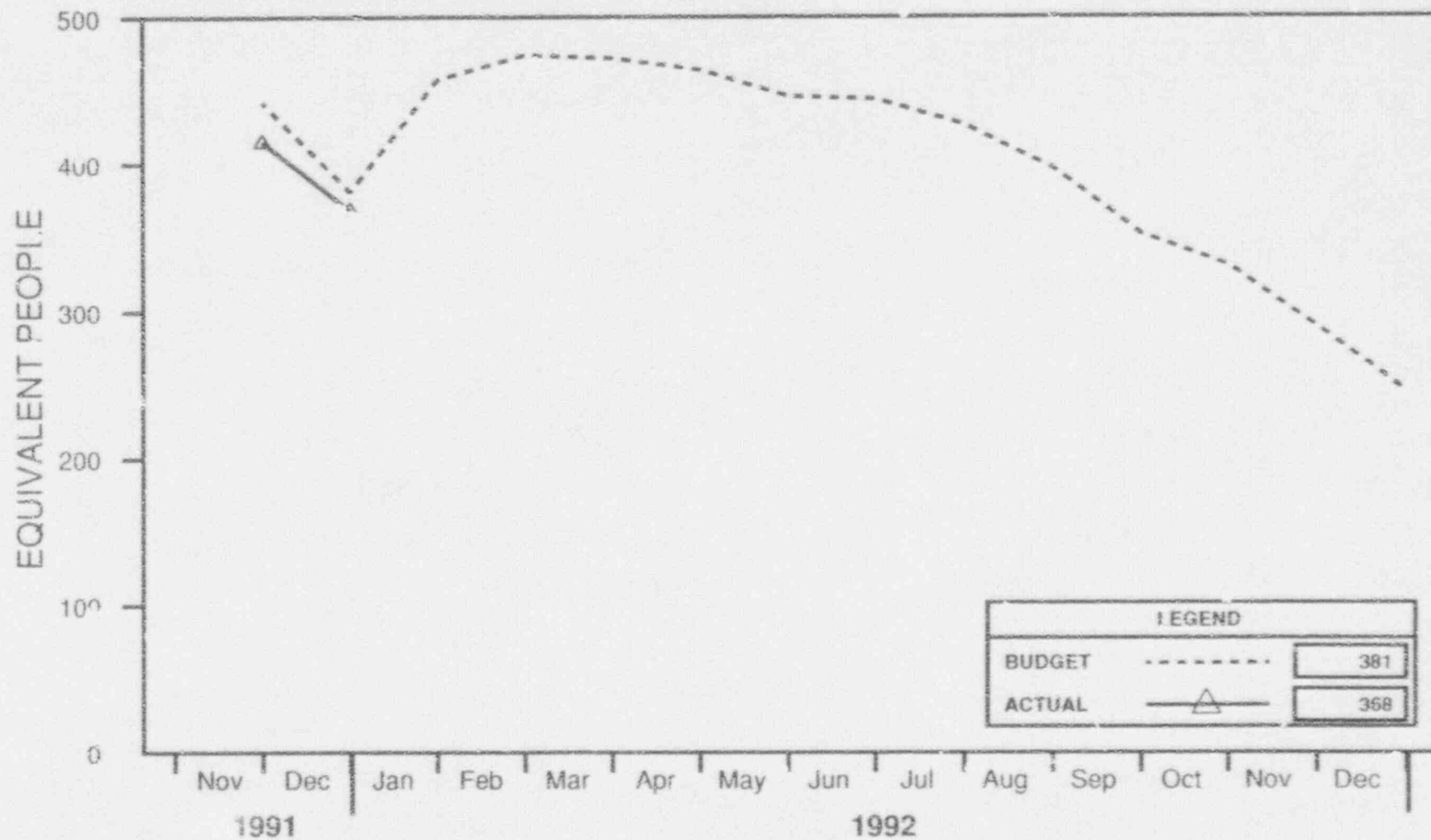


***STARTUP  
PROGRAM  
STATUS***

## UNIT 2 STARTUP ORGANIZATION



# COMANCHE PEAK STEAM ELECTRIC STATION STARTUP STAFFING

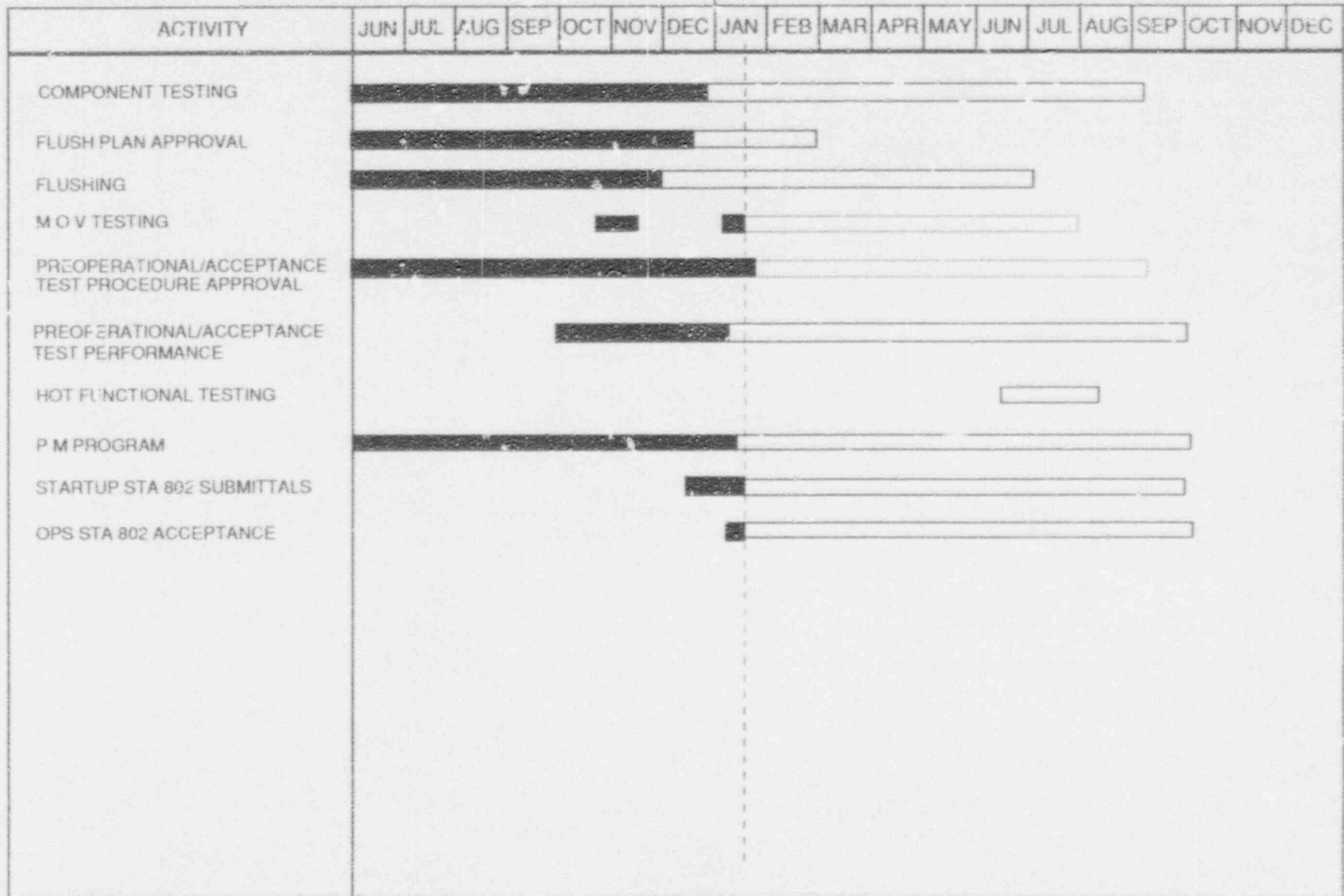


# COMANCHE PEAK STEAM ELECTRIC STATION STARTUP DEPARTMENT MAJOR ACTIVITY STATUS

STATUS AS OF 01/18/92

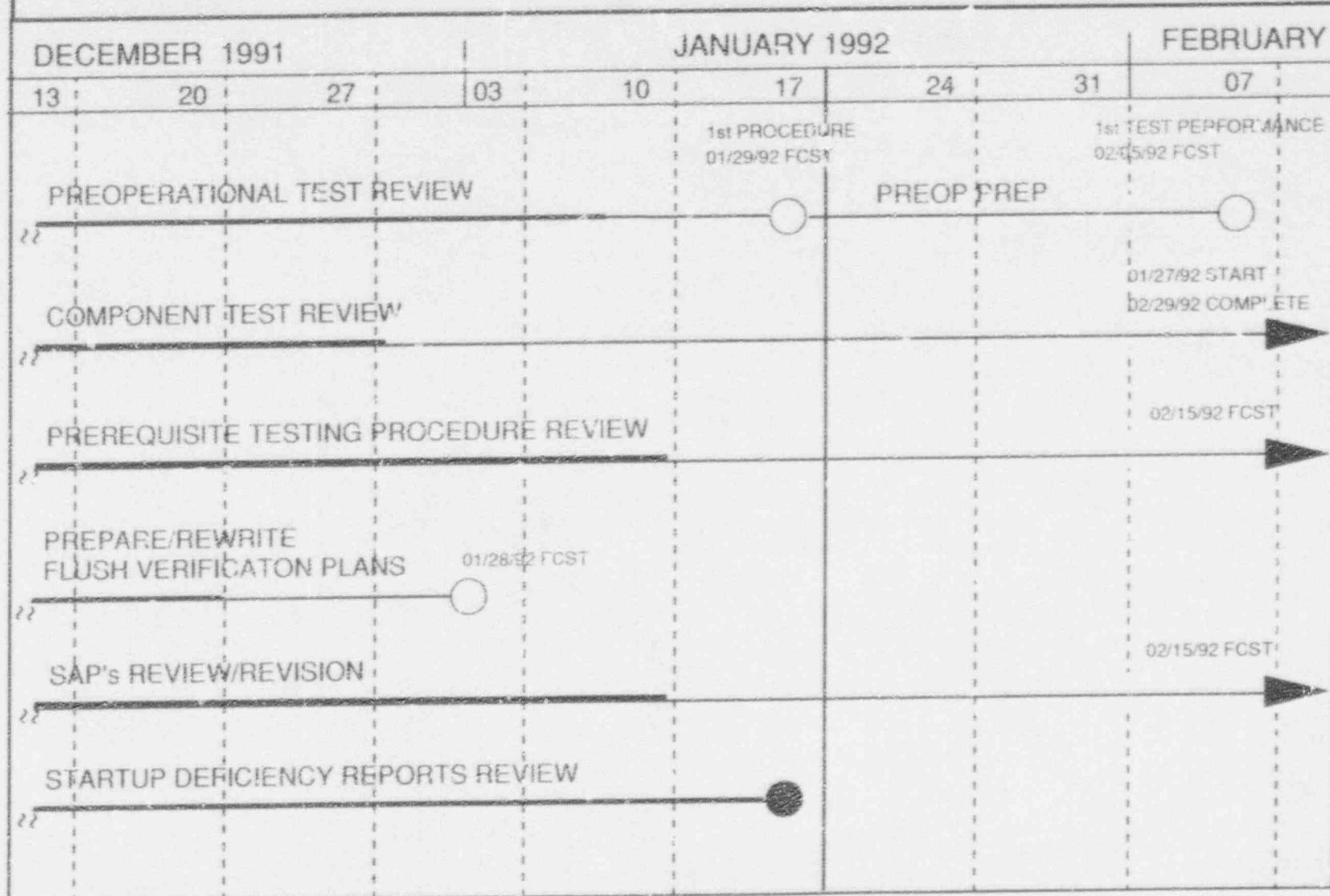
1991

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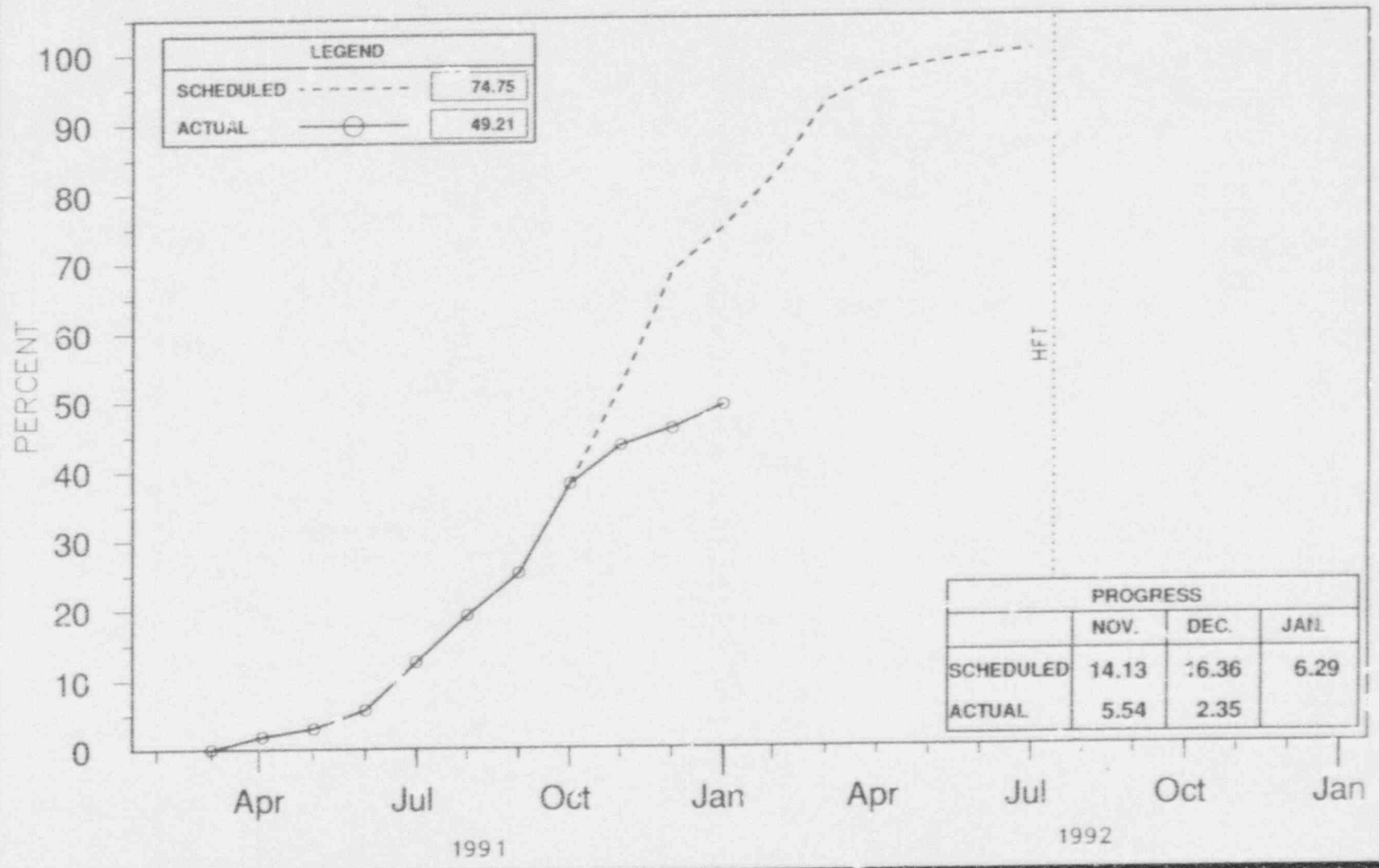




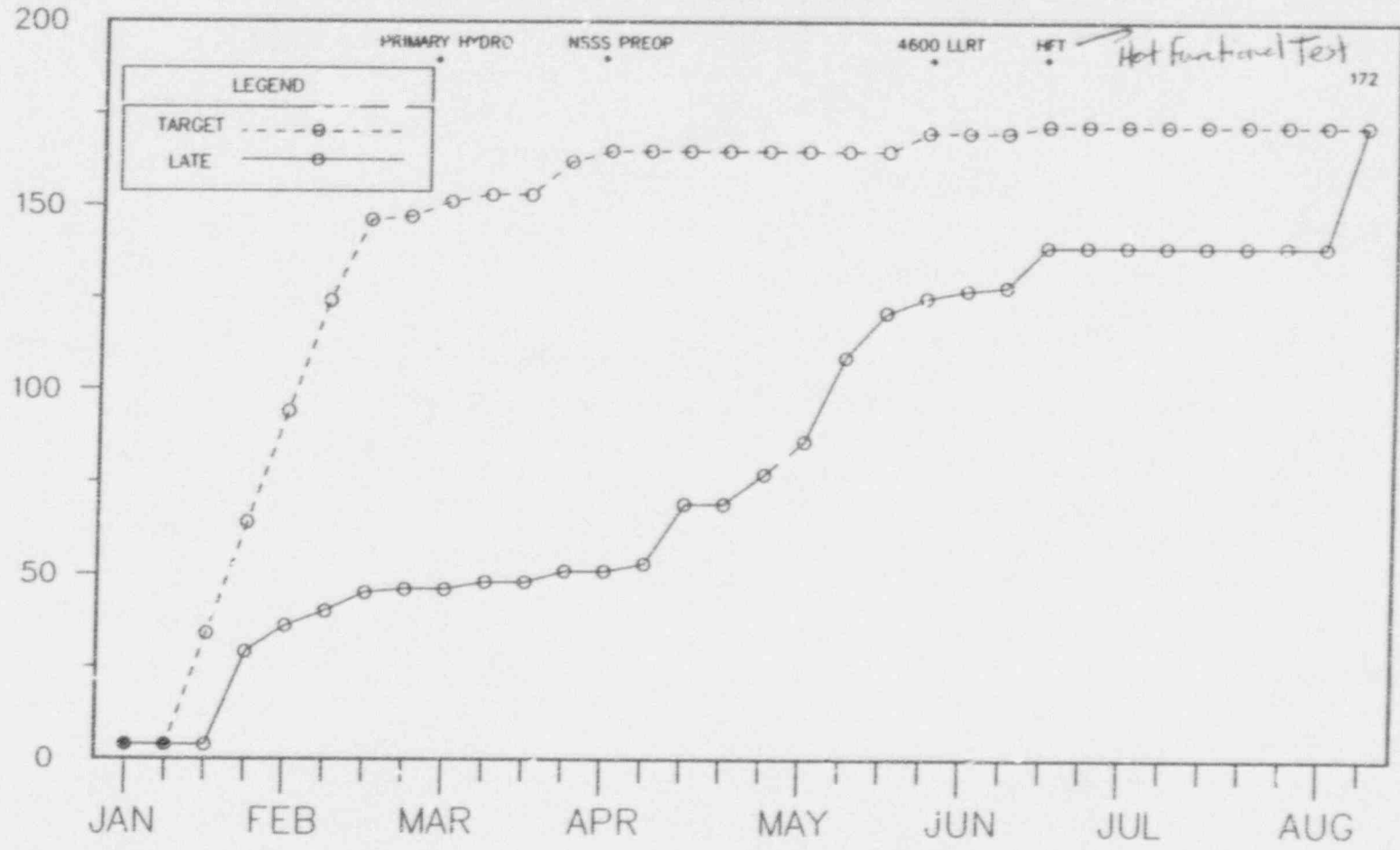
# STARTUP PROGRAM ENHANCEMENTS



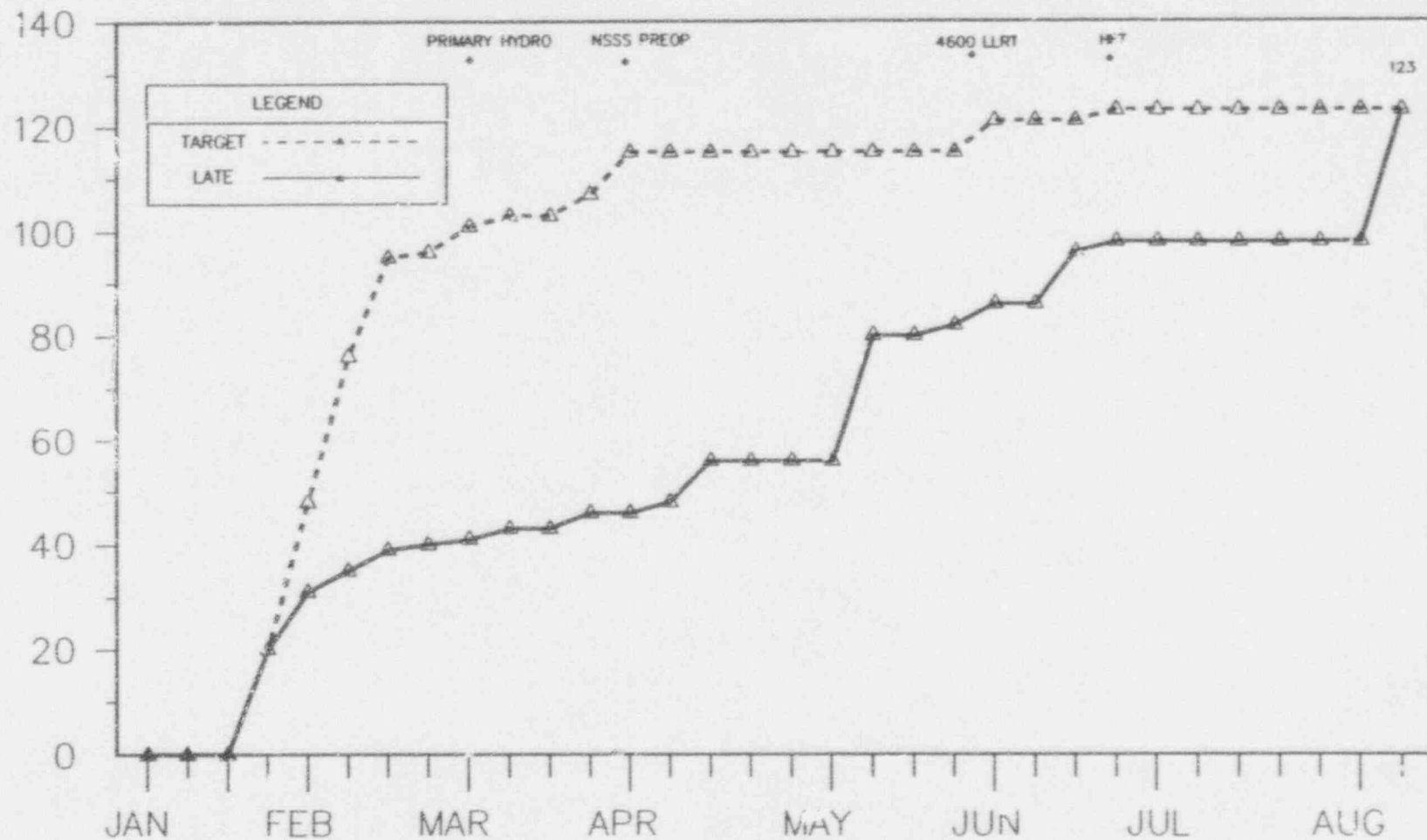
# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 FLUSHING



# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 MOV STATIC TEST PROGRAM

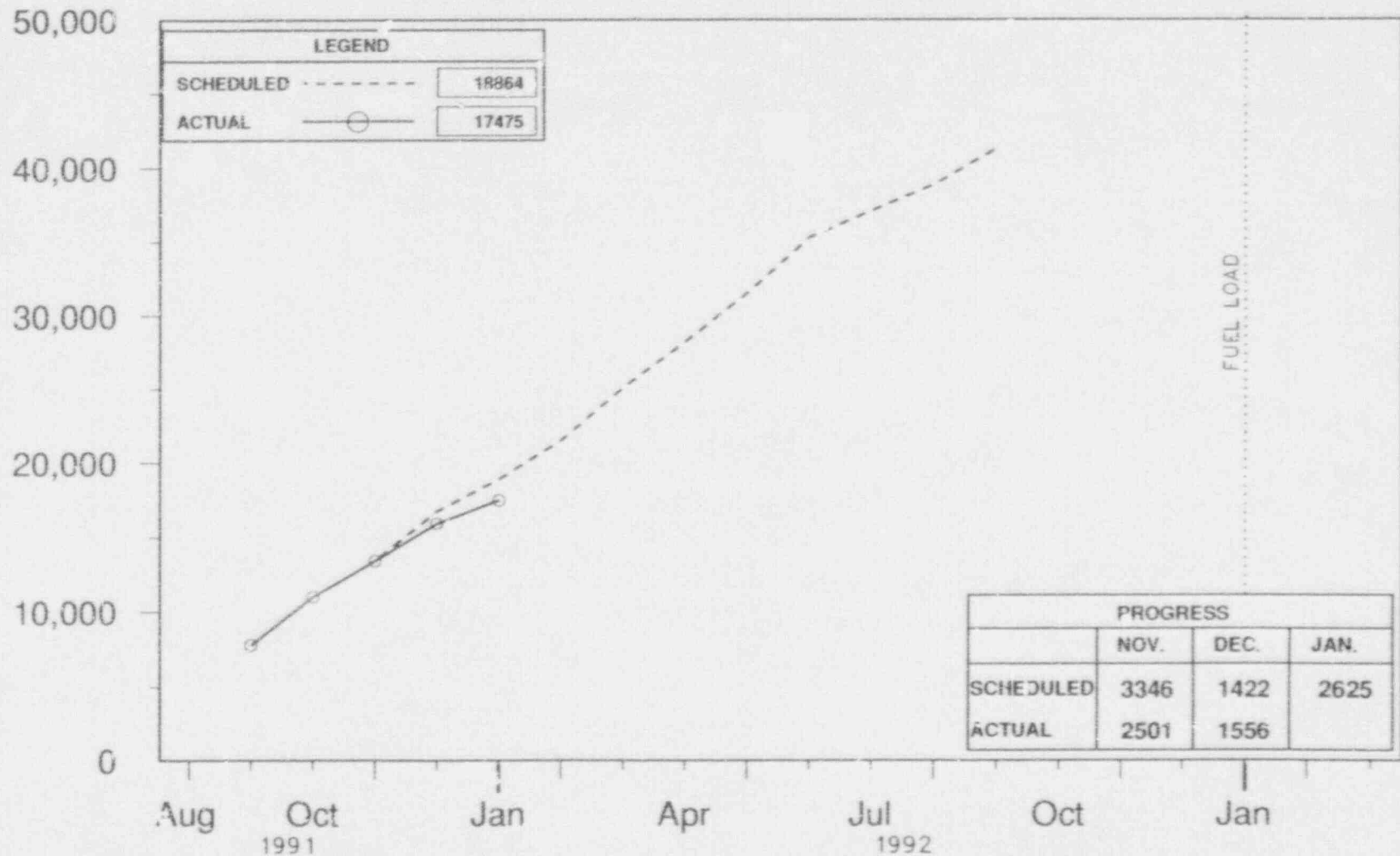


# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 MOV DYNAMIC TEST PROGRAM



# COMANCHE PEAK STEAM ELECTRIC STATION

## UNIT 2 COMPONENT TESTING



## **STARTUP HIGHLIGHTS**

- Completed Initial RCP Motor Runs
- Completed 44% of Total Expected Component Testing
- Completed All Initial 6.9Kv Pump Motor Runs (Excluding Heater Drain System)
- Completed 52% of Initial System Flushing
  - Completed Turbine Generator Lube Oil Flush
  - Completed Condensate Flush
  - Completed Integrated Safety Injection/Residual Heat Removal Proof Flush
- Completed 90% of Flush Verification Plan Development
- Commenced MOV Static/Dynamic Testing Program
- Commenced RCP Seal Installation
- Implemented Comprehensive Startup Program Enhancement Effort
- Completed Startup Deficiency Report Review
- Commenced Preparations for Secondary Hydrostatic Testing Activities
- Initiated Submittal/Approval of System STA 802 Acceptance Program
- Commenced Preop Testing

## STARTUP

### CHALLENGES

- Support Upcoming Mechanical Diesel Engine Runs
- Construction System Completion and Turnover to Achieve Startup Schedule
- Achieve Component Testing Rate
- Complete Flushing to Meet Preoperational Test Schedules
- Complete Development of Preoperational/Acceptance Test Procedures.
- Complete Unit 1 Turbine Generator Rotor Upgrade/Delivery to Support Preoperational Test Schedule

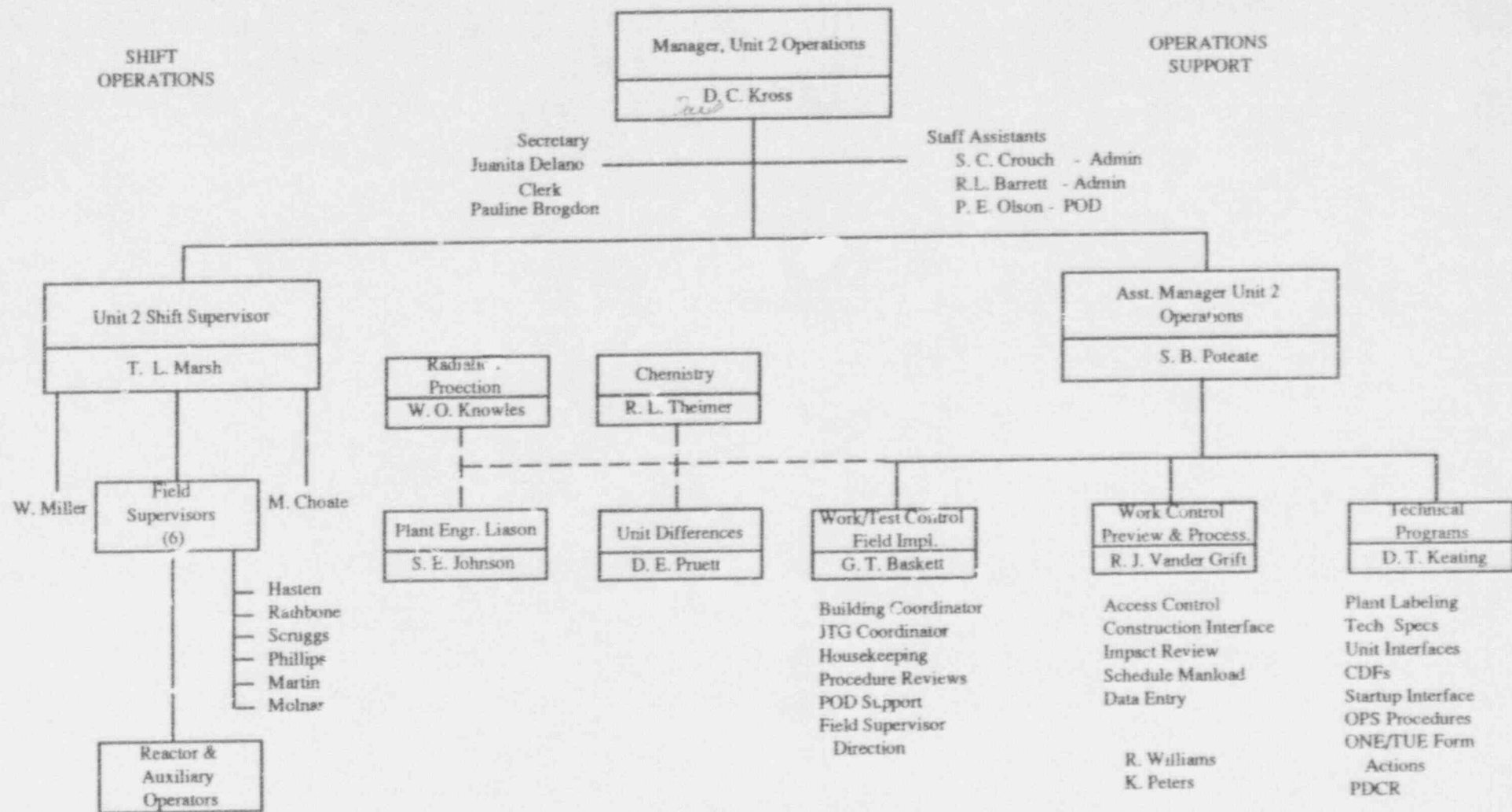


***OPERATIONS  
PROGRAM  
STATUS***

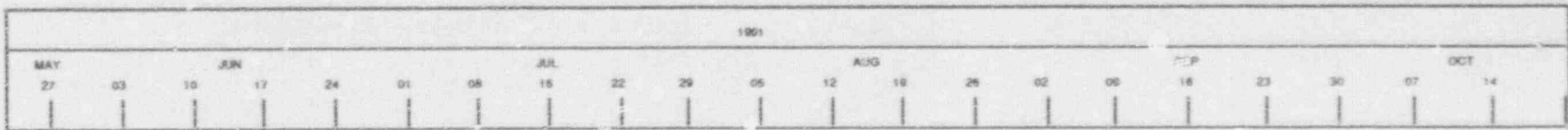


SHIFT  
OPERATIONS

OPERATIONS  
SUPPORT

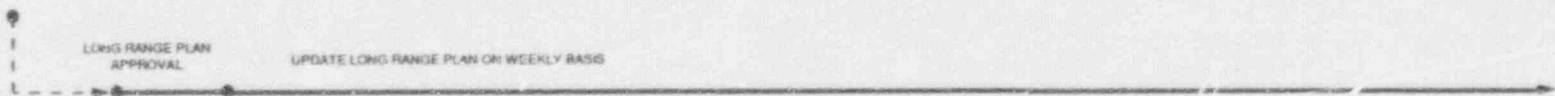


- POD Implementation
- Plant Equipment Operation
- Personnel Qualification
- Clearance Preparation and Implementation

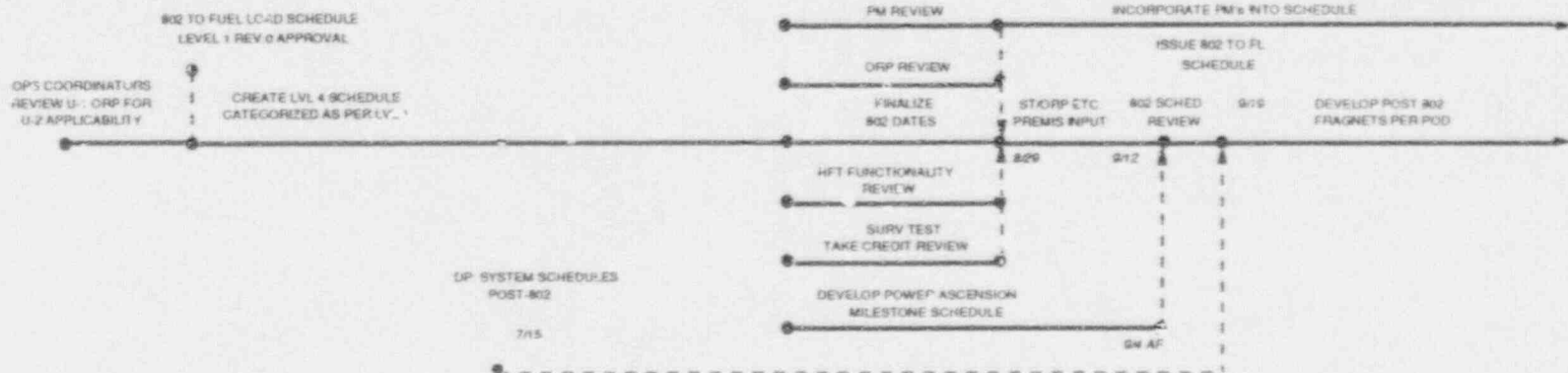


### OPERATIONS LONG RANGE PLAN

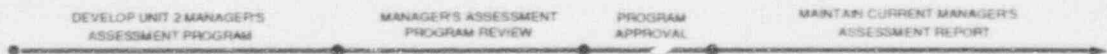
PLAN OF THE PLAN APPROVAL



### PROJECT 802 TO FL SCHEDULE



### MANAGER'S ASSESSMENT



|                 |            |
|-----------------|------------|
| DPS MANAGER     | D. KRISSE  |
| COSTRICHED MGR  | J. HOLLETT |
| PROJECT MANAGER | C. RAU     |

**TU ELECTRIC CPSES UNIT 2**

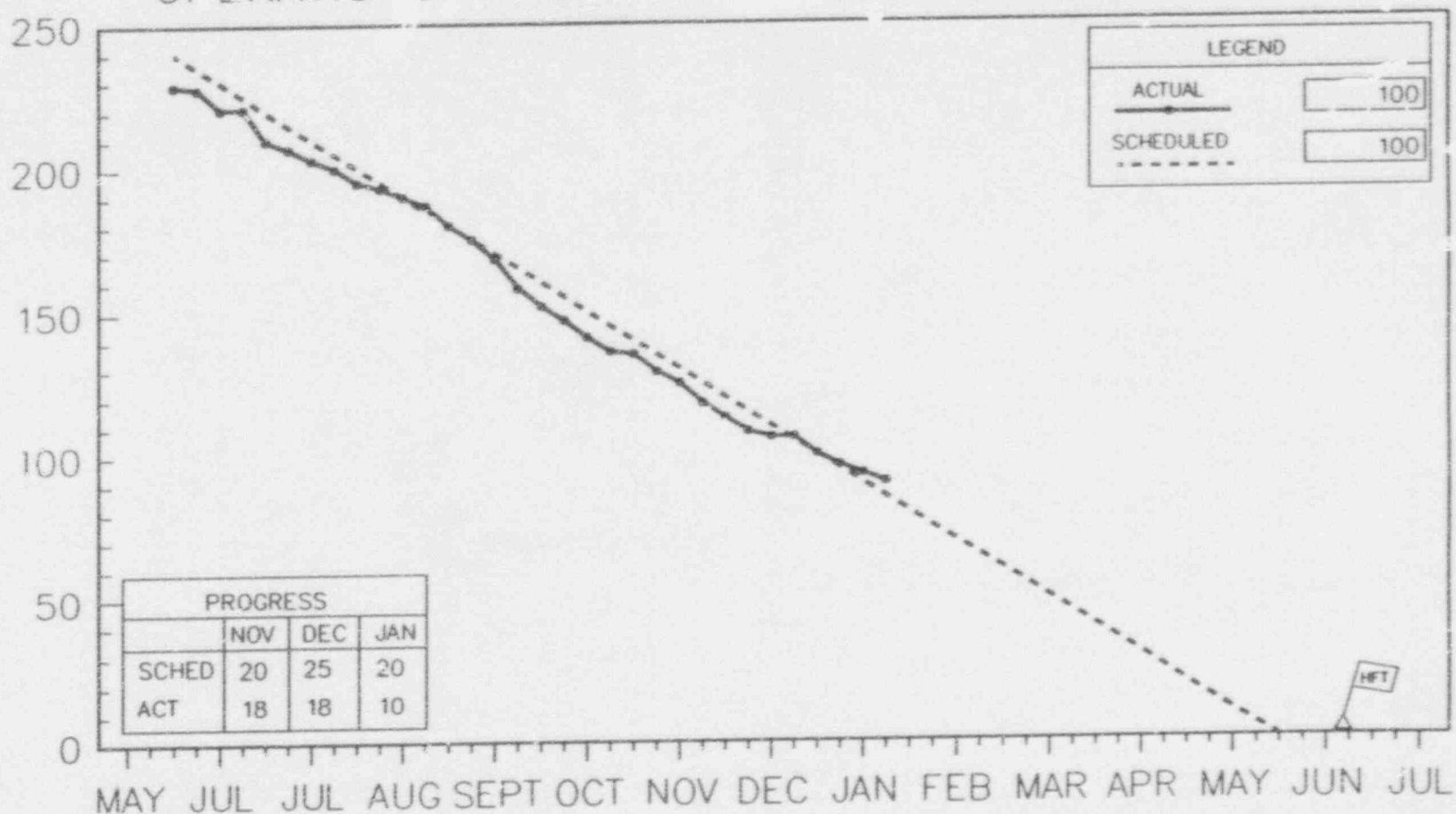
OPERATIONS  
PLAN OF THE PLAN  
SCHEDULE

| DRAWN | DATE | REV |
|-------|------|-----|
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| MR    | 8/12 | 2   |

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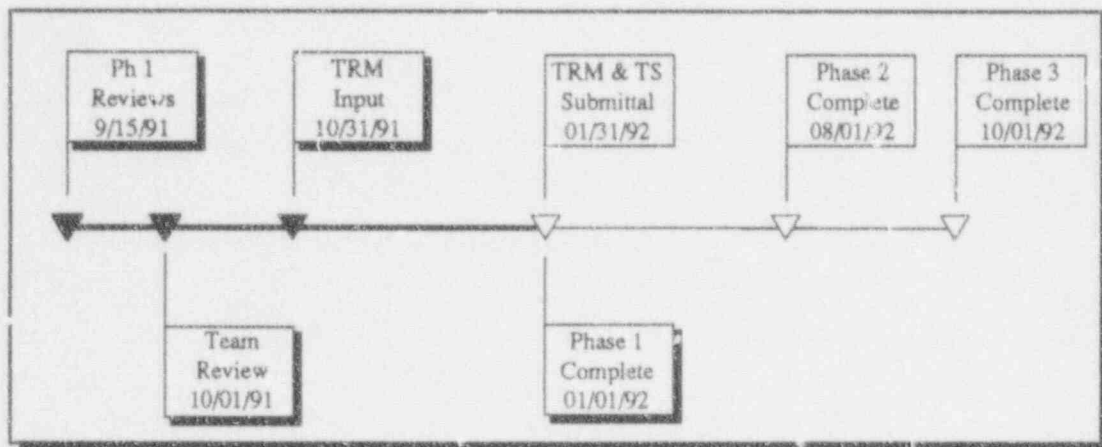
# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

## OPERATIONS PROCEDURE DEVELOPMENT FOR HFT

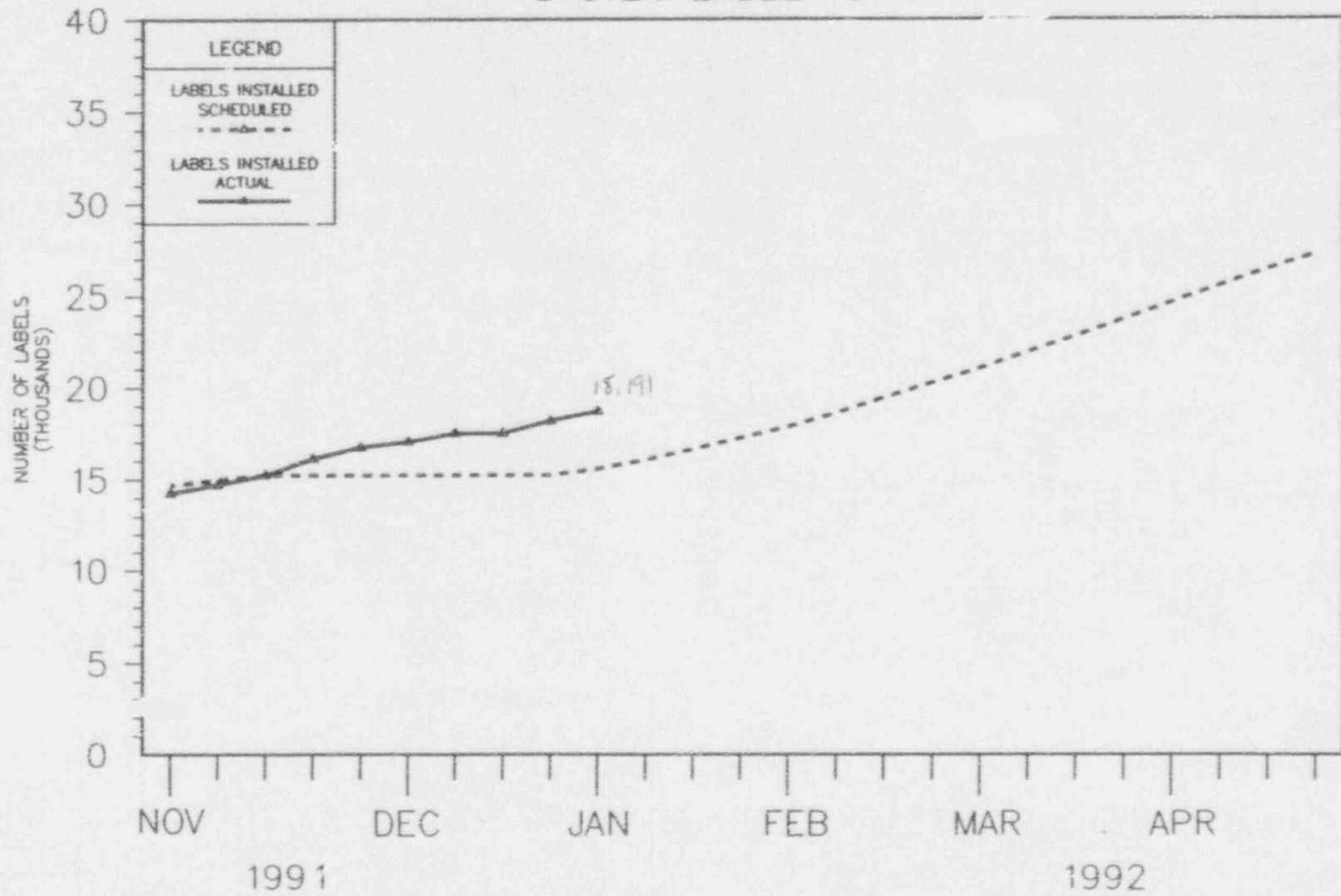


## UNIT 2 TECHNICAL SPECIFICATION DEVELOPMENT STATUS

- ALL PHASE 1 REVIEWS COMPLETE AS OF 09/15/91
- ALL TECHNICAL SPECIFICATION DEVELOPMENT TEAM REVIEWS COMPLETE AS OF 10/01/91
- TECHNICAL SPECIFICATION WAS SUBMITTED AND PHASE 1 WAS COMPLETED AS SCHEDULED ON 01/02/92
- INPUT TO THE TECHNICAL REQUIREMENTS MANUAL IS NOW COMPLETE
- TECHNICAL REQUIREMENTS MANUAL IS SCHEDULED FOR SUBMITTAL BY 01/31/92
- PHASE 2 ACTION ITEMS IDENTIFIED TO CONFIRM TECHNICAL SPECIFICATION COMPLIANCE (78 ITEMS)
- PHASE 2 IS SCHEDULED FOR COMPLETION ON 08/01/92
- PHASE 3 WILL COMMENCE ON APPROX 09/01/92 WITH A SCHEDULED COMPLETION OF 10/01/92

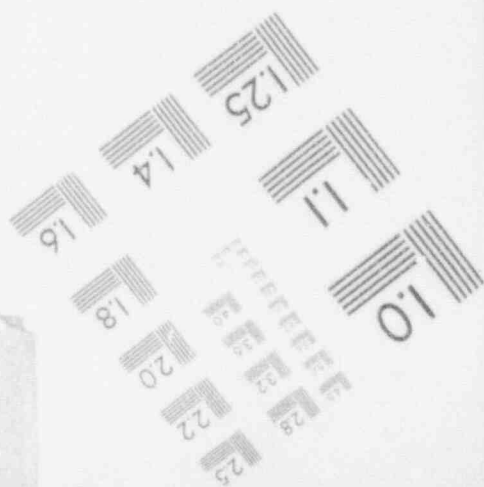
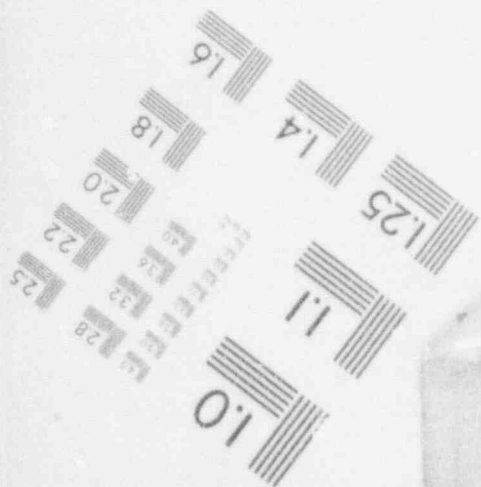
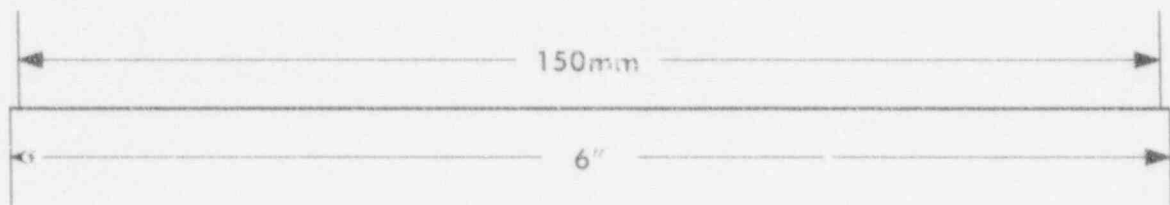
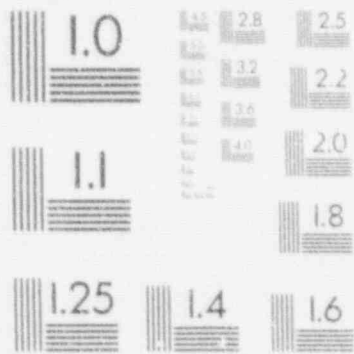
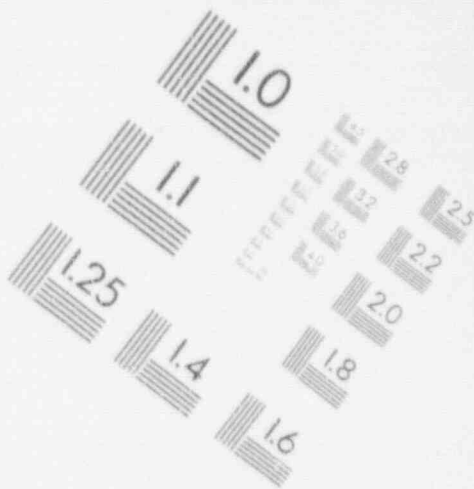
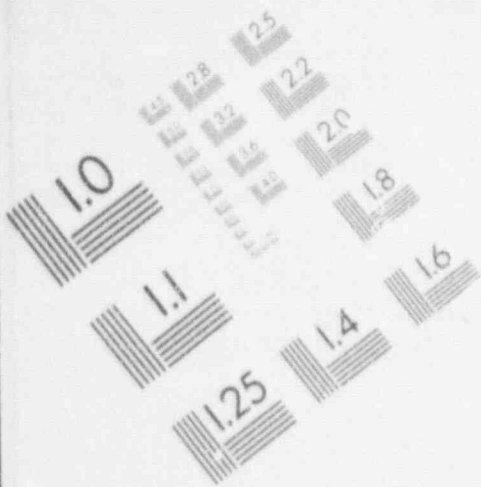


# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 SYSTEM LABELING



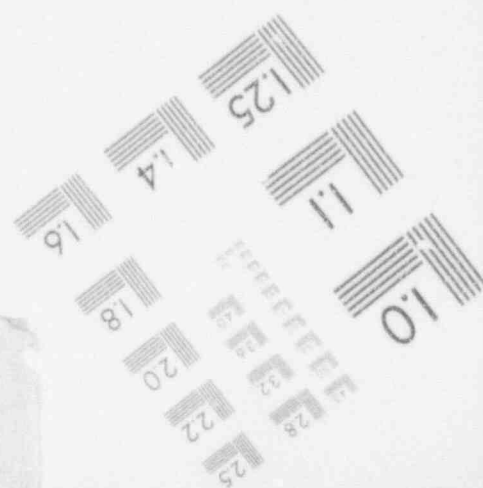
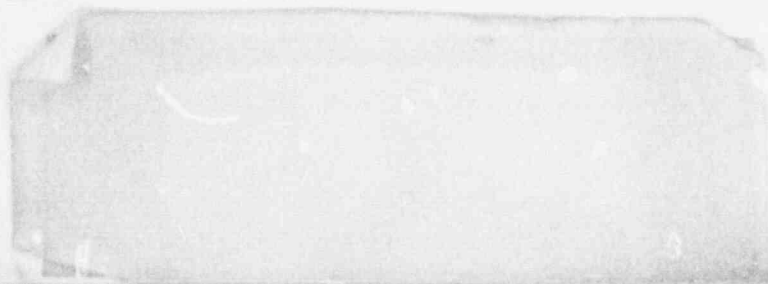
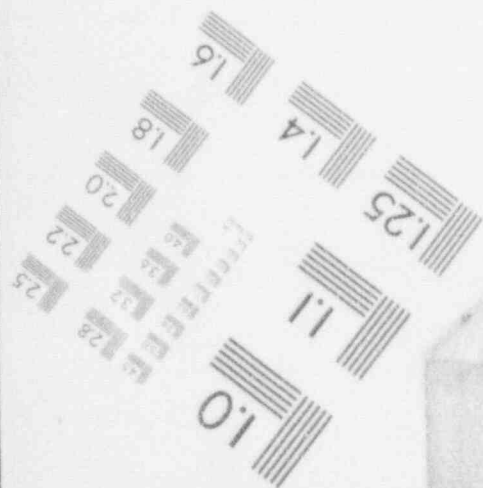
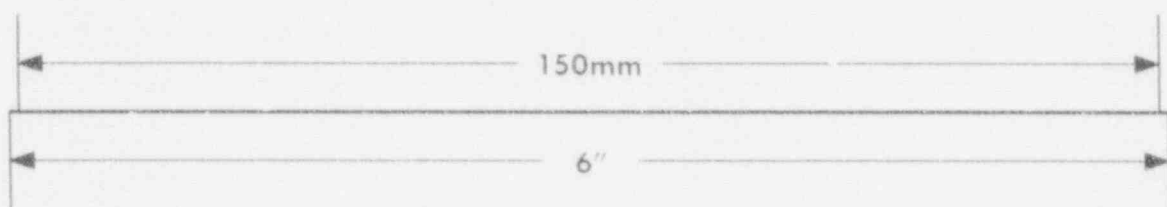
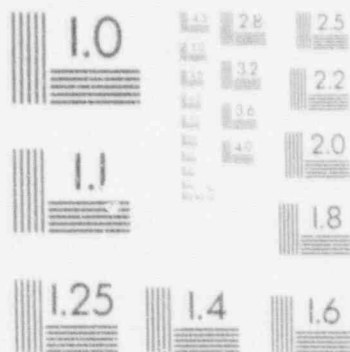
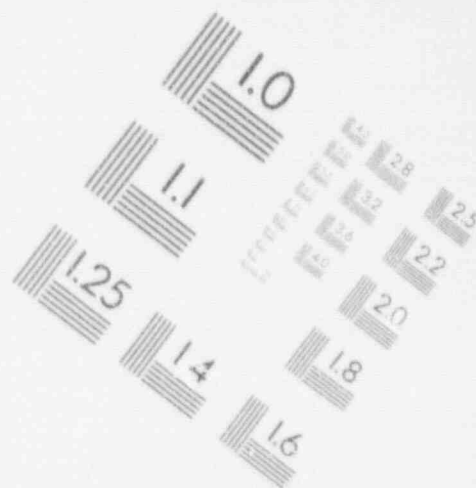
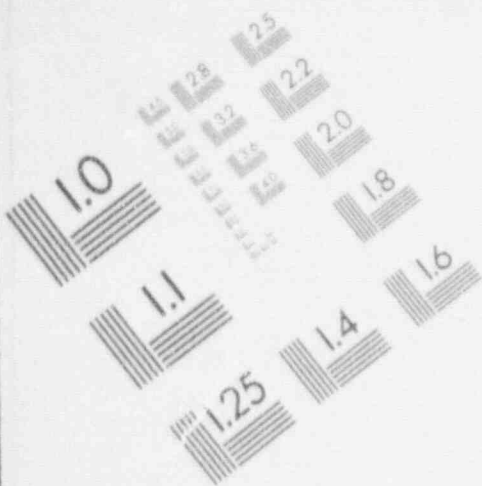
# 1

## IMAGE EVALUATION TEST TARGET (MT-3)



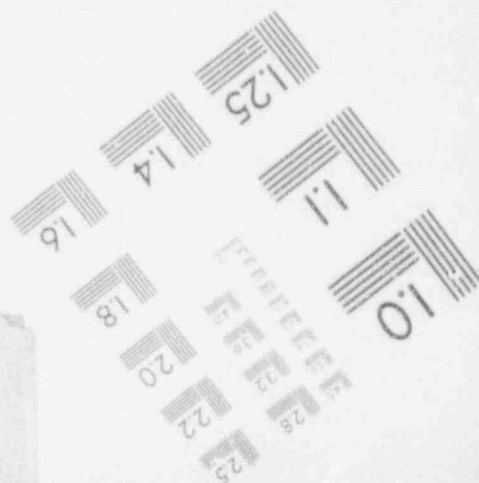
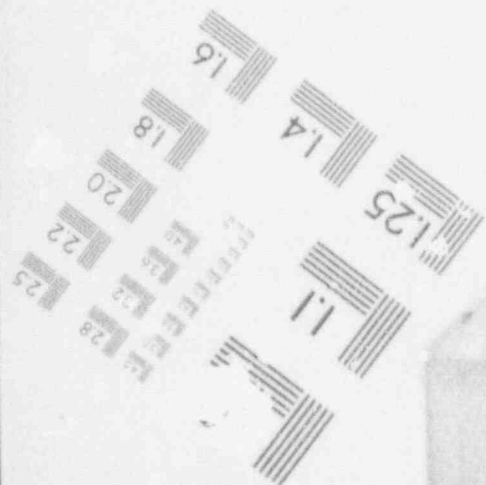
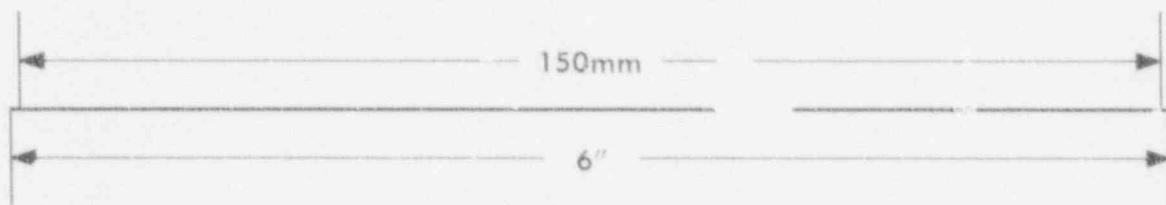
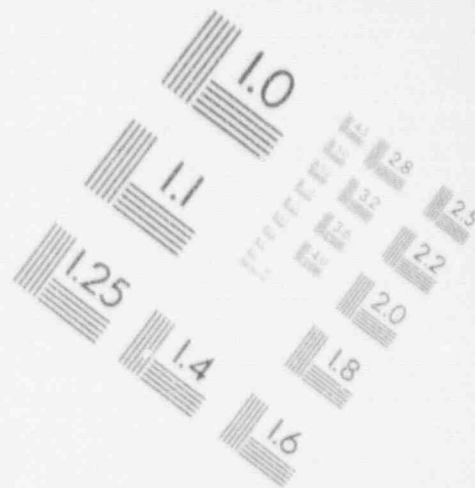
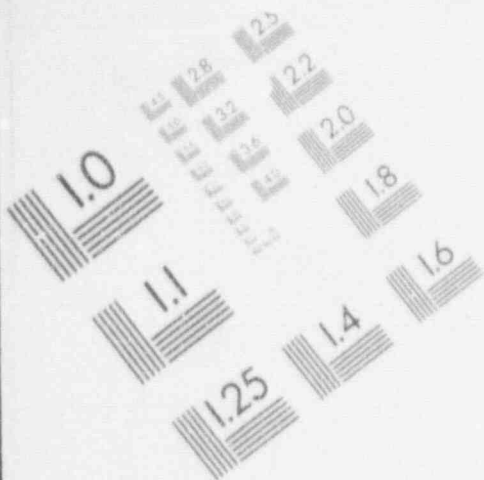
# 1

## IMAGE EVALUATION TEST TARGET (MT-3)



# 1

## IMAGE EVALUATION TEST TARGET (MT-3)





OPERATOR STAFFING REQUIREMENTS  
(PER SHIFT, 6 SHIFTS)

|                         | FOR SINGLE<br>UNIT<br>(UNIT 1) | CURRENT | FOR DUAL<br>UNIT<br>(UNIT 1 & 2) |
|-------------------------|--------------------------------|---------|----------------------------------|
| SHIFT SUPERVISOR        | 1                              | 1       | 1                                |
| UNIT SUPERVISOR         | 1                              | 2       | 2                                |
| SHIFT TECHNICAL ADVISOR | 1                              | 1       | 1                                |
| REACTOR OPERATOR        | 3                              | 4*      | 5                                |
| AUXILIARY OPERATOR      | 5                              | 12      | 10                               |

DUAL LICENSE APPROVAL KEY TO STAFFING

REACTOR OPERATOR TRAINING  
(LC7 - GRADUATE 6/92)

14 CANDIDATES  
\*(NEED 8 RO's)

SENIOR REACTOR OPERATOR UPGRADE  
(SL2 - GRADUATE 11/91)

4 CANDIDATES  
(NONE REQD)

## OPERATIONS

### VALVE NUMBERING

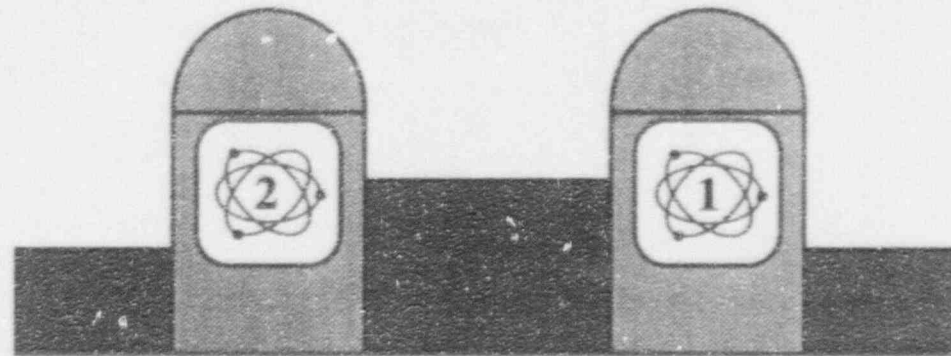
- Major Process Flow Valves are Numbered Identically Between Units (Prefix Number Designates Unit)
- Typically Component Vents and Drains are Numbered Identically
- High Point Vents/Low Point Drains May Not Have the Same Number
- Newly Added Components Will Start With the Next Sequential Number
- Handwheel Identification

Unit 1 - Blue

Unit 2 - Yellow

Common - White

# COMANCHE PEAK STEAM ELECTRIC STATION



## UNIT DIFFERENCES

(STA-820)

### STATUS

|                               |    |
|-------------------------------|----|
| U/D's IDENTIFIED TO DATE -    | 54 |
| U/D's REVIEWED BY DMRG -      | 54 |
| U/D's APPROVED BY SORC -      | 48 |
| U/D's PENDING SORC APPROVAL - | 6  |
| U/D's CLOSED TO DATE -        | 6  |

### CATEGORY

|   |    |
|---|----|
| U/D's IDENTIFIED TO DATE -                            | 54 |
| CATEGORY 1 U/D'S -<br>(OPERATOR TRAINING REQ'D)       | 2  |
| CATEGORY 2 U/D'S -<br>(DESIGN IMPLEMENTATION PENDING) | 28 |
| CATEGORY 3 U/D'S -<br>(PROCEDURE CHANGES, ETC.)       | 18 |
| U/D's PENDING CATEGORY -                              | 6  |

## OPERATIONS

### VALVE NUMBERING

- Major Process Flow Valves are Numbered Identically Between Units (Prefix Number Designates Unit)
- Typically Component Vents and Drains are Numbered Identically
- High Point Vents/Low Point Drains May Not Have the Same Number
- Newly Added Components Will Start With the Next Sequential Number
- Handwheel Identification

Unit 1 - Blue

Unit 2 - Yellow

Common - White

## OPERATIONS

### AUXILIARY STEAM ISOLATION VALVE REPAIR

- Unit 2 Tie in Requires Flange Removal
- Flange Cannot be Removed Since Isolation Valve is Leaking
- Aux Steam Cannot be Isolated with Unit 1 in Operation

## OPERATIONS

### AUXILIARY STEAM ACTIVITIES

- System Construction Complete
- Component and Acceptance Test Complete
- Punchlist Items Worked Off
- Turnover to Nuclear Operations Custody (STA-802)
- Operations Department Walkdowns
- Installation of Startup Temporary Modification
- Interface Control Changes
- System Operation to Support Project Activities

## OPERATIONS

### AUX STEAM 802

- Only Two Punchlist Items
  - In Service Leak Test
  - Hot Alignment of Hangers
- Walkdowns by Ops Orgs
  - Shift Operations
  - Maintenance Disciplines
  - System Engineering
- Walkdowns Identified Minor Items
- Aux Steam was First System to 802
  - Will Study Process to Incorporate Potential Lessons Learned

# OPERATIONS

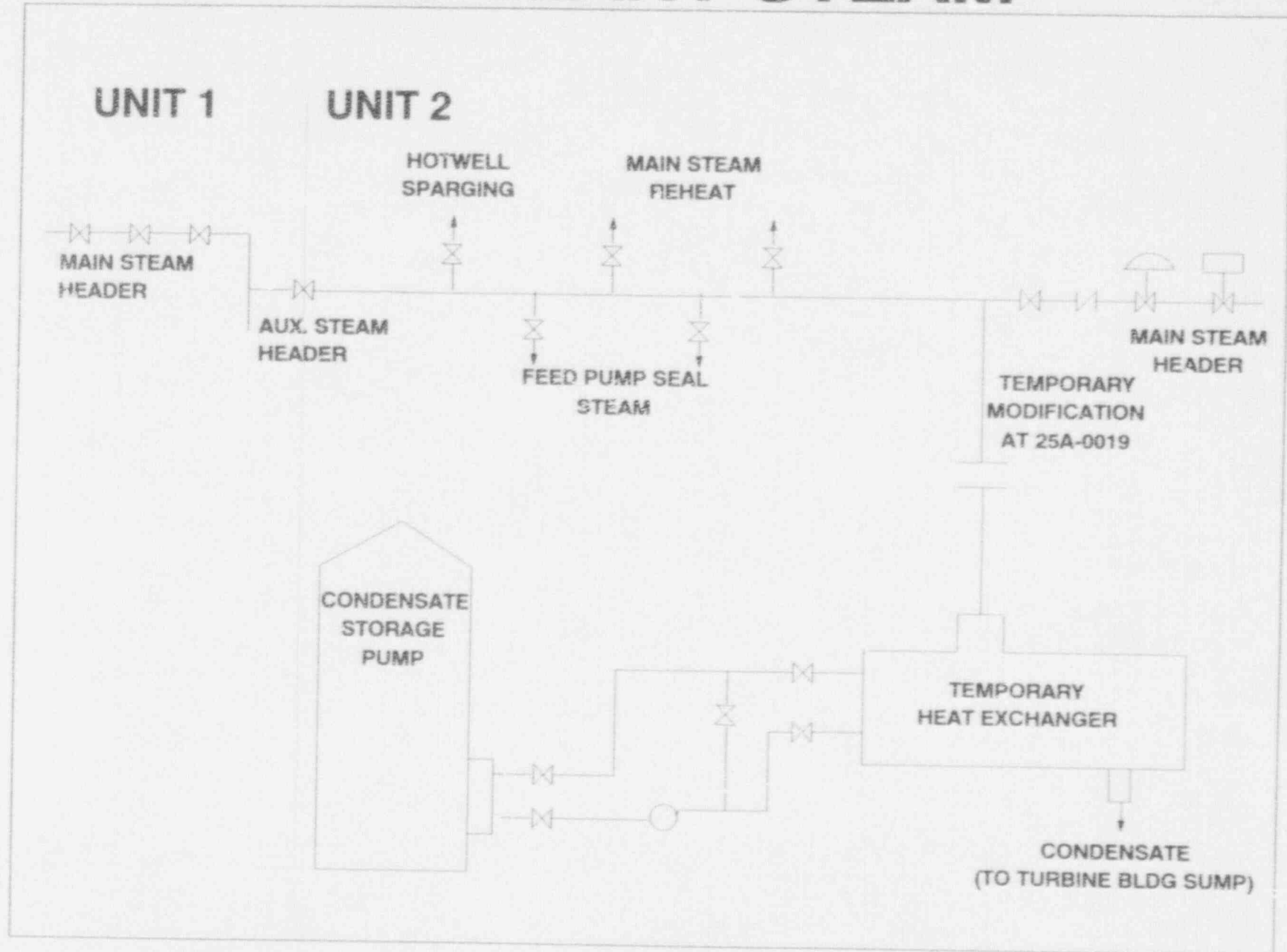
## STA 802 SYSTEM

### TURNOVER PROCESS HIGHLIGHTS

- Construction Complete
- Work Packages Reviewed and Vaulted
- Startup Test Results JTG Approved and Vaulted
- Design and Deficiency Documents Closed
- Preventative Maintenance Program Current
- Unit Differences Clearly Identified
- Vital Station Drawings Complete
- System Components Labeled



# AUXILIARY STEAM



## OPERATIONS

### HIGHLIGHTS

- Motor/Pump Runs SW, COND, AFW, CIRC, RHR, SI, CCP, CEV, and RCP Runs
- Unit Differences
- Technical Specification Development and Submittal to NRC
- Strong Interface with Startup
- Ready to Support Upcoming Milestones
- Issuance of Operations Master Plan
- Finalization of the 802 (System Turnover to Ops) Schedule
- Began Acceptance of Systems from Startup

## OPERATIONS

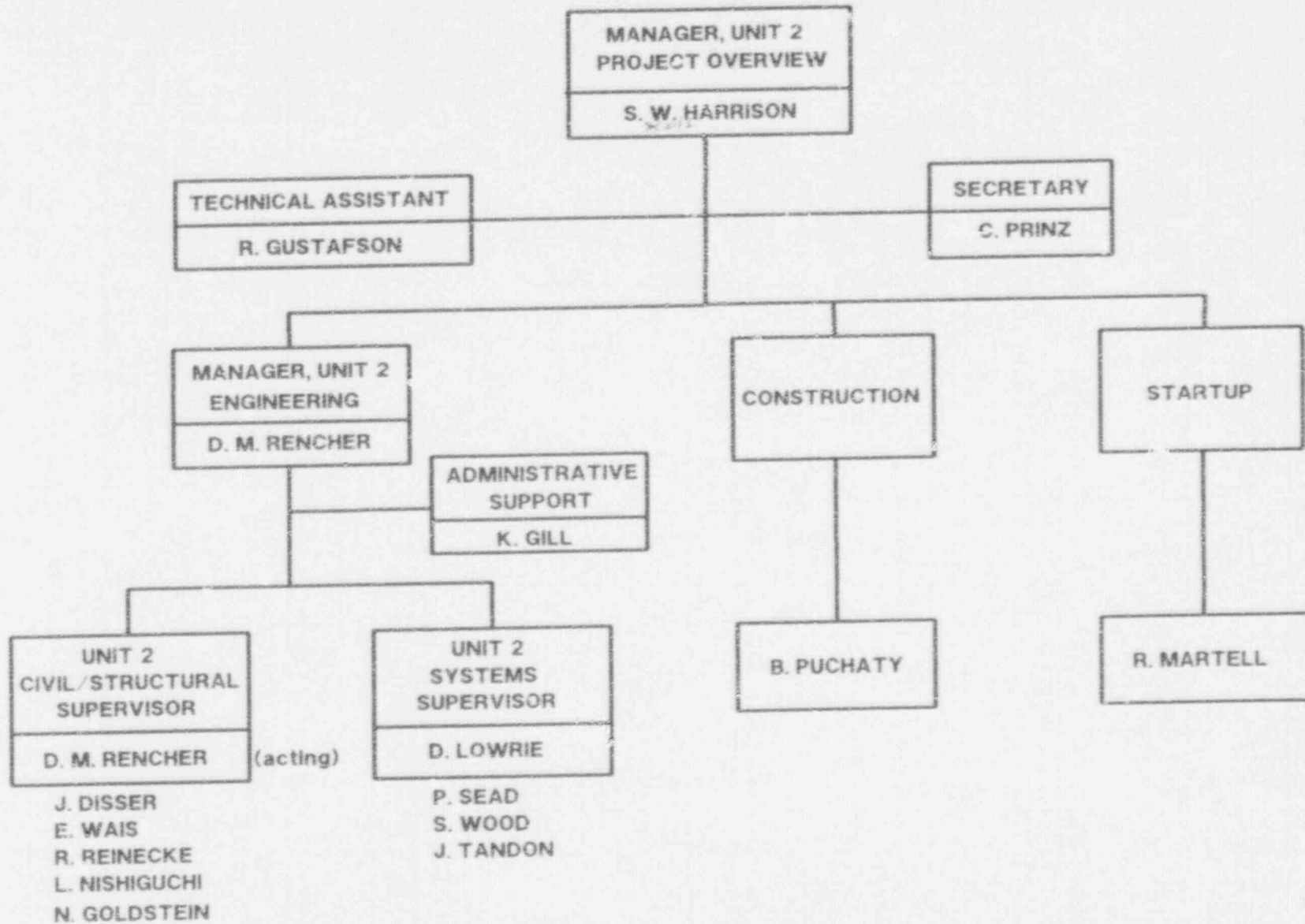
### CHALLENGES

- Support Flushes/Preop (Staffing/Controls/Unit 1 Impact)
- Control Room Activities
- Communications
- Lessons Learned Continued Challenges  
(System, Startup, Power Ascension, and Milestone)
- Reviews of Preop Procedures and JTG Support
- 802 Schedule



# ***OVERVIEW ACTIVITIES***

## UNIT 2 PROJECT OVERVIEW ORGANIZATION



## TU ENGINEERING TECHNICAL OVERVIEW

The following assessments were performed in the period from October 1, 1991 to December 31, 1991.

Scope A - Bechtel No Assessments\*

Scope B - Stone & Webster 5 Assessments

- Subjects
  - PRDPs/SIDs
  - HVAC (Mechanical Calculations)
  - I&C Calculations
- Results
  - 2 Discrepancies
  - 3 Observations

Scope C - ABB Impell No Assessments\*

Scope D - Westinghouse No Assessments\*

\* In Scopes A, C, and D, no assessments were performed for the quarter as Technical Overview resources were devoted to closing out open assessments, assisting in Project Management review of Forecast II, and streamlining the ABR program. No large scale ABR production activities were conducted this quarter. A substantial vertical slice assessment of ABR is scheduled for February, 1992.

# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

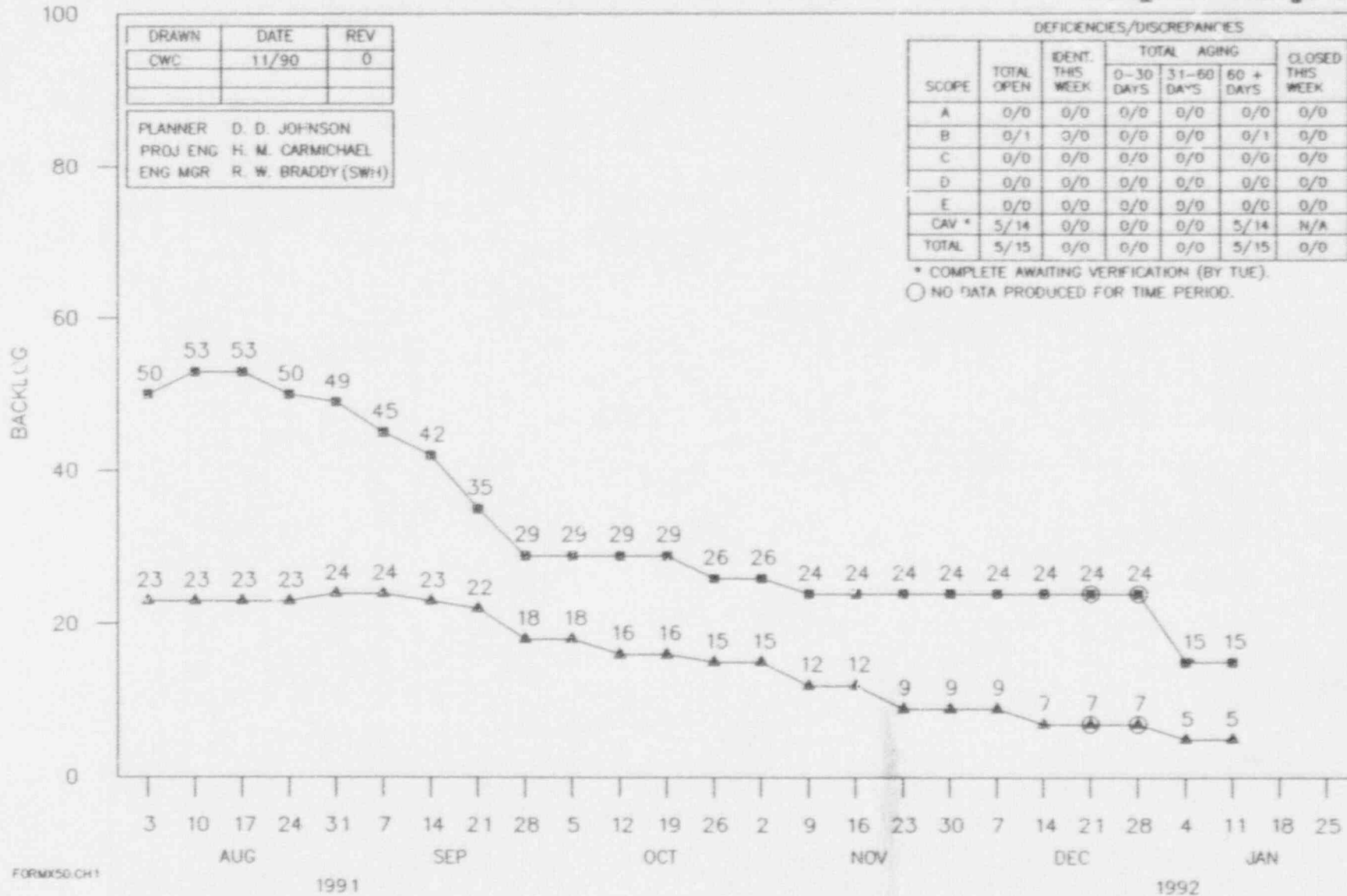
## ENGINEERING EVALUATIONS PROGRAM

DEFICIENCIES      DISCREPANCIES

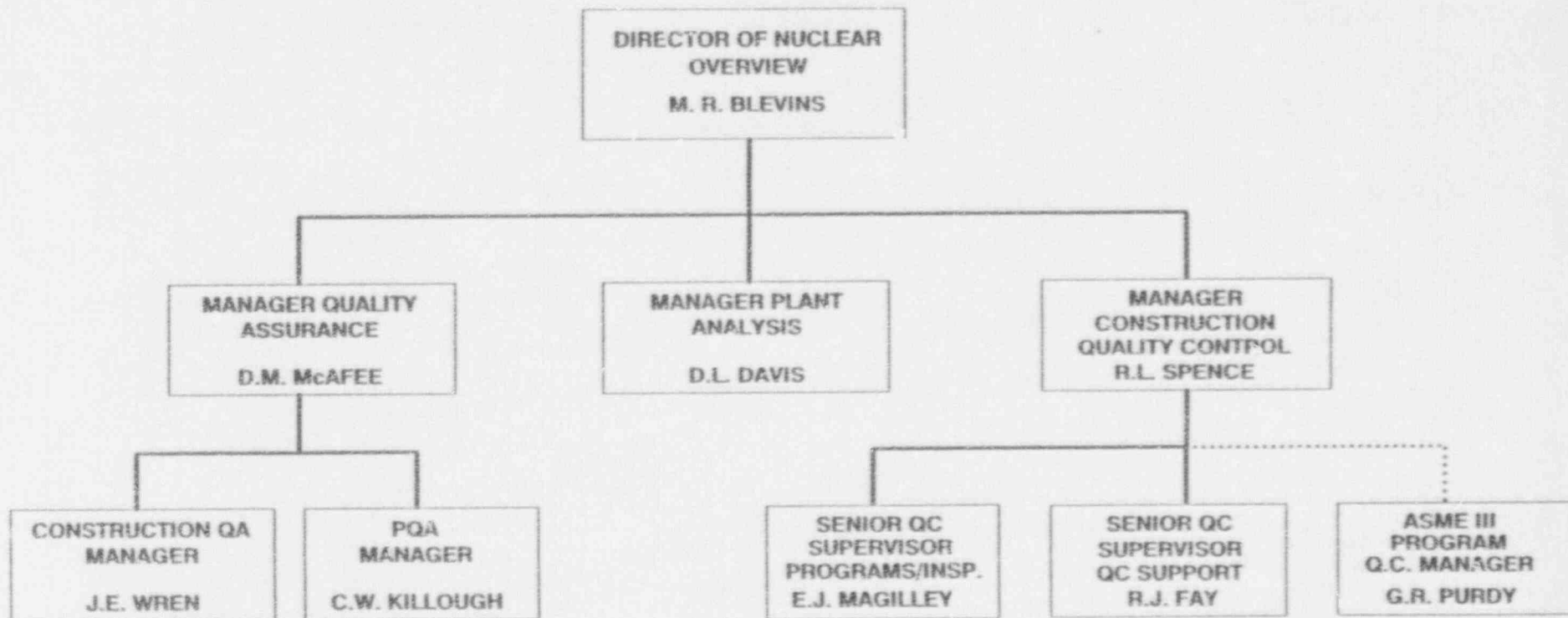
|                           |       |     |
|---------------------------|-------|-----|
| DRAWN                     | DATE  | REV |
| CWC                       | 11/90 | 0   |
|                           |       |     |
|                           |       |     |
| PLANNER D. D. JOHNSON     |       |     |
| PROJ ENG H. M. CARMICHAEL |       |     |
| ENG MGR R. W. BRADY (SWH) |       |     |

| SCOPE | TOTAL OPEN | IDENT. THIS WEEK | TOTAL AGING |            |          | CLOSED THIS WEEK |
|-------|------------|------------------|-------------|------------|----------|------------------|
|       |            |                  | 0-30 DAYS   | 31-60 DAYS | 60+ DAYS |                  |
| A     | 0/0        | 0/0              | 0/0         | 0/0        | 0/0      | 0/0              |
| B     | 0/1        | 0/0              | 0/0         | 0/0        | 0/1      | 0/0              |
| C     | 0/0        | 0/0              | 0/0         | 0/0        | 0/0      | 0/0              |
| D     | 0/0        | 0/0              | 0/0         | 0/0        | 0/0      | 0/0              |
| E     | 0/0        | 0/0              | 0/0         | 0/0        | 0/0      | 0/0              |
| CAV * | 5/14       | 0/0              | 0/0         | 0/0        | 5/14     | N/A              |
| TOTAL | 5/15       | 0/0              | 0/0         | 0/0        | 5/15     | 0/0              |

\* COMPLETE AWAITING VERIFICATION (BY TUE).  
 ○ NO DATA PRODUCED FOR TIME PERIOD.

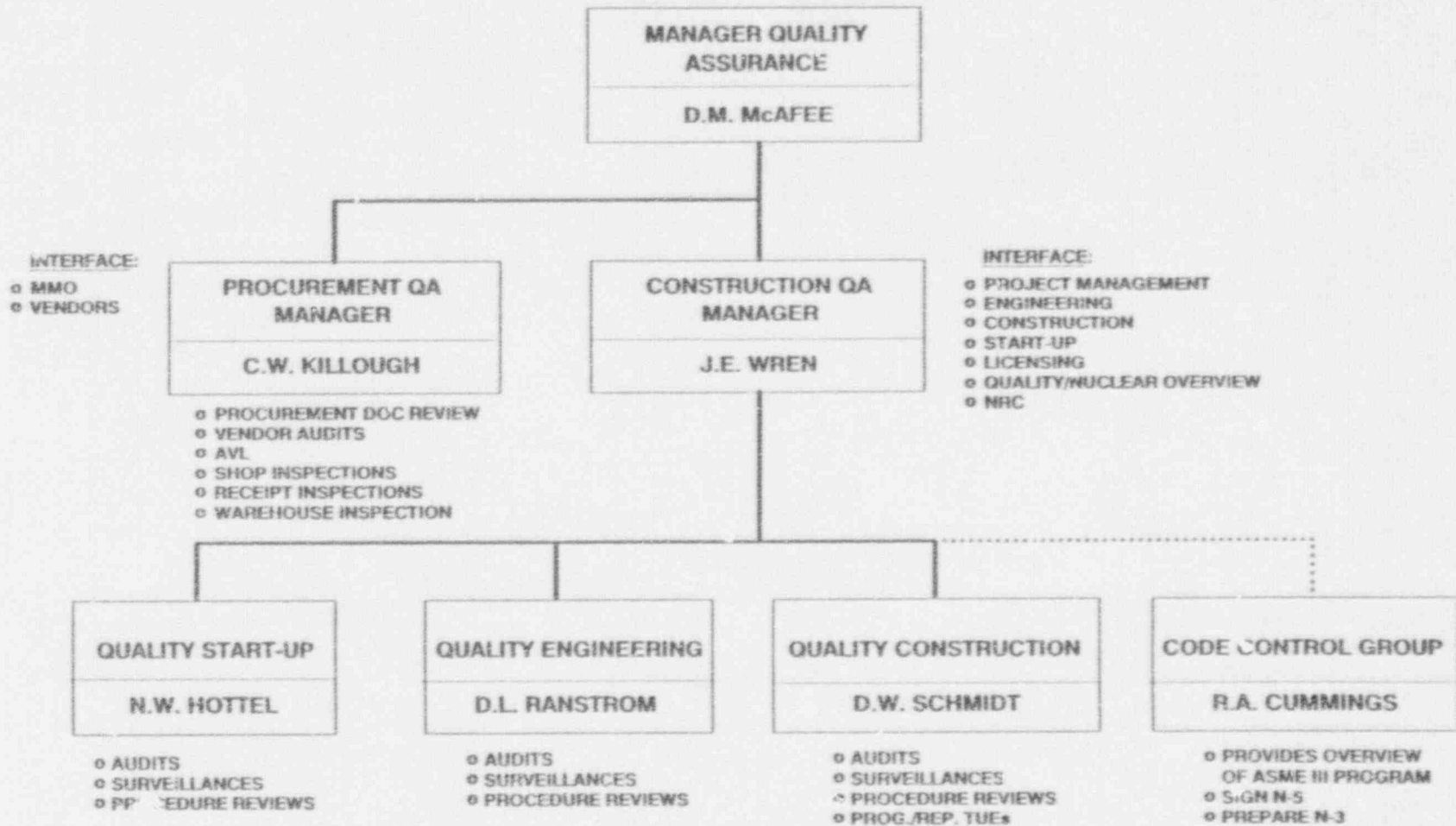


# NUCLEAR OVERVIEW DEPARTMENT





# QUALITY ASSURANCE



## AUDITS CONDUCTED FOURTH QUARTER 1991 ENGINEERING

- Scope A - Bechtel - PSAS  
Results: Generally Satisfactory
- Scope B - Stone & Webster - Mechanical/Nuclear  
Technology  
Pipe Rupture and Document Control  
Results: Generally Satisfactory
- Scope C - ABB Impell - Civil Structural Activities  
Results: Satisfactory
- Scope C - ABB Impell (EQE) - CAT. II/I  
Results: Generally Satisfactory

## AUDITS CONDUCTED FOURTH QUARTER 1991 CONSTRUCTION

- Electrical and I&C  
Results: Satisfactory
  
- Penetration Seal Installation  
Results: Generally Satisfactory
  
- Code Control Program  
Results: Satisfactory
  
- Fire Protection Program  
Results: Satisfactory
  
- Material Control, Housekeeping, Rigging and Consumables  
Results: Generally Satisfactory
  
- Training  
Results: Satisfactory

## AUDITS CONDUCTED FOURTH QUARTER 1991 STARTUP

- Unit 2 Startup

Results: Unsatisfactory

## UPCOMING AUDITS ENGINEERING

- Scope C - Seismic Equipment Qualification January
- Scope C - Pipe Rupture January\*
- Scope B and E - Control Room/Human Factors and Setpoint Control January
- Scope E - INDMS Enhancements February\*
- Scope C - Civil/Structural Design Validation February
- Scope A - PSAS Final Reconciliation February
- Scopes B, C, & D - MOVATS and Fire Protection March
- Scope C - HVAC Structural & Raceways March

## UPCOMING AUDITS CONSTRUCTION AND STARTUP

- CONSTRUCTION
  - HVAC January
  - Electrical and I&C February
  - Nonconformances March
  
- STARTUP
  - Startup Activities March

## SURVEILLANCES CONDUCTED IN FOURTH QUARTER 1991

|   |              |    |
|---|--------------|----|
| • | ENGINEERING  | 16 |
| • | CONSTRUCTION | 56 |
| • | STARTUP      | 13 |

# AUDIT PREVENTIVE ACTIONS IMPLEMENTED

[2 RESPONSE > 30 DAYS]  
(1 Scope B -TUE-91-2985  
1 Construction - QAA-91-234-1)

32 RESPONSES RECEIVED OF 56 TOTAL DEFICIENCIES

51 PREVENTIVE ACTIONS IMPLEMENTED OF 32 RESPONSES

----- DEFICIENCIES AWAITING PREVENTIVE ACTION -----

| <u>TUE# / ISSUE DATE</u> | <u>RESPONSIBILITY</u> | <u>DESCRIPTION OF P/A</u>     | <u>ECD</u> |
|--------------------------|-----------------------|-------------------------------|------------|
| 91-2417/10-11-91         | Startup               | Revise CP-SAPs 7, 8, 11, & 21 | 1-15-92    |

# SURVEILLANCE PREVENTIVE ACTIONS IMPLEMENTED

[2 RESPONSES > 30 DAYS]  
(2 Startup - TUE-91-2802, -2860)

16 RESPONSES RECEIVED OF 39 TOTAL DEFICIENCIES

14 PREVENTIVE ACTIONS IMPLEMENTED OF 16 RESPONSES

----- DEFICIENCIES AWAITING PREVENTIVE ACTION -----

| <u>TUE# / ISSUE DATE</u> | <u>RESPONSIBILITY</u> | <u>DESCRIPTION OF P/A</u>   | <u>ECD</u> |
|--------------------------|-----------------------|---|------------|
| 91-2264 / 10-1-91        | Startup               | Retrain personnel in "Attention to Detail"  | 1-9-92     |
| 91-2699 / 10-31-91       | MMO                   | - Develop guidance in MMO 8.01<br>- Training/required reading to MMO 8.01<br>- Revise MMO 4.09, 5.02, 8.01 to address interface requirements to MMO 4.09<br>- Replace hex nuts on SW-2-AB-028 | 1-17-92    |

\* Extension request letter received



COMANCHE PEAK STEAM ELECTRIC STATION  
UNIT 2  
PROGRAMATIC / REPETITIVE TUE'S  
1991 FOURTH QUARTER SUMMARY

| TUE #            | SUBJECT   | RESP. ORG.<br>RESP. PERSON | STATUS<br>E/C/D               |          |
|------------------|---|----------------------------|-------------------------------|----------|
| 90-276           | PIPE STRESS AND PIPE SUPPORT CALCULATIONS               | QA<br>(WREN)               | CLOSED<br>12/20/91            |          |
| 91-993           | HILTI BOLT CORROSION                                    | PROJ. MGT.<br>(BRADDY)     | IMPLEMENT ACTIONS<br>01/24/92 | 5/9/91   |
| 91-1043<br>REV 2 | SAFETY RELATED MATERIAL PROCURED AS NON-SAFETY RELATED  | QA<br>(WREN)               | CLOSED<br>01/14/92            | 6/5/91   |
| 91-1274          | ADVERSE TREND IN THE QUALITY OF NON-SAFETY WORK (I & C) | QA<br>(WREN)               | CLOSED<br>10/11/91            | 6/5/91   |
| 91-2659          | CONFIGURATION CONTROL OF NON Q MATERIAL                 | QA<br>(WREN)               | REVIEWING DISPO.<br>01/22/92  | 10/31/91 |
| 91-2679          | START-UP INDOCTRINATION, TRAINING QUALIFICATION         | START-UP<br>(DALY)         | IMPLEMENT ACTIONS<br>02/05/92 | 10/31/91 |
| 91-2699          | UNCONTROLLED MATERIAL TRANSFER                          | MMO<br>(REDICAN)           | IMPLEMENT ACTIONS<br>1/17/92  | 10/31/91 |
| 91-2776          | DEFICIENCIES IN UNIT 2 FLUSHING ACTIVITIES              | START-UP<br>(DALY)         | IMPLEMENT ACTIONS<br>1/31/92  | 11/08/91 |
| 91-3001          | REMOVAL OF SUPPORTS WITH OUT AUTHORIZATION              | CONST.<br>(HIERZER)        | IMPLEMENT ACTIONS<br>01/15/92 | 11/27/91 |
| 91-3291          | TORQUING OF CABLES IN MCC'S                             | PROJ. MGT.<br>(BRADDY)     | AWAITING DISPO.<br>01/20/92   | 12/20/91 |

TOTAL OPEN = 8  
TARGET = 5

QTR. SUMMARY :

ISSUED = 6  
CLOSED = 3

# COMANCHE PEAK STEAM ELECTRIC STATION AUDIT FINDINGS

ISSUED

CLOSED

OPEN AUDIT FINDINGS

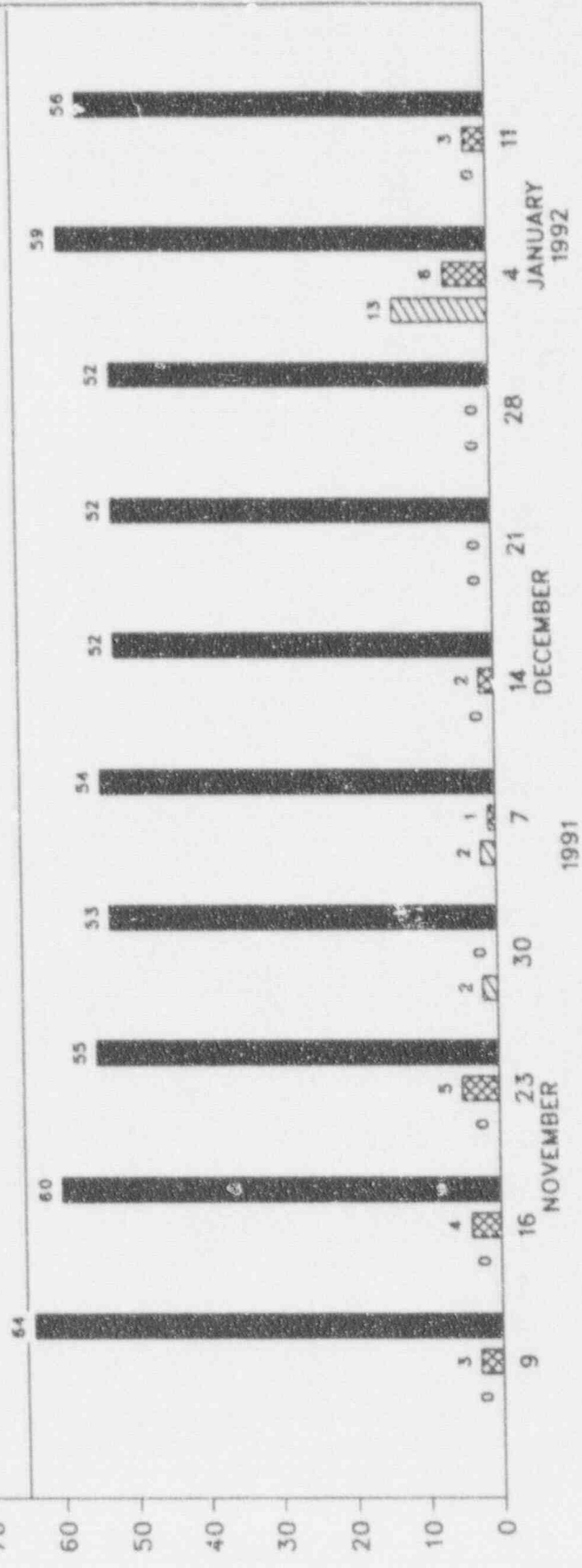
R = RESPONSE  
E = EVALUATION  
C = CORRECTIVE ACTION  
V = VERIFICATION

|                      |   |
|----------------------|---|
| RESPONSES (>30 DAYS) |   |
| SCOPE R              | 1 |
| CONSTRUCTION         | 1 |
| TOTAL                | 2 |

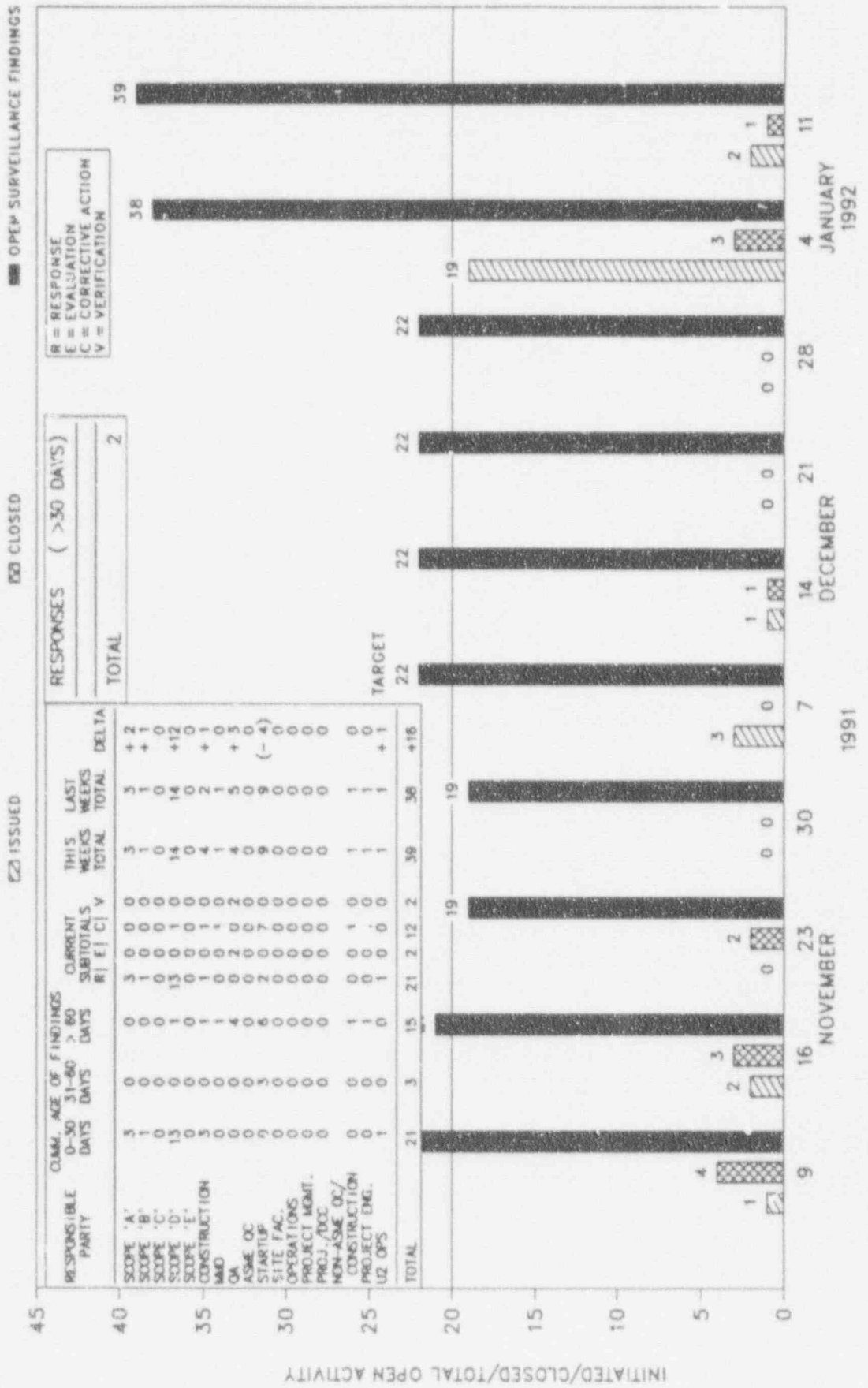
| RESPONSIBLE PARTY | CUMULATIVE AGE OF FINDINGS |            | CURRENT |       | LAST WEEKS TOTAL | DELTA |   |    |    |      |
|-------------------|----------------------------|------------|---------|-------|------------------|-------|---|----|----|------|
|                   | 0-30 DAYS                  | 31-60 DAYS | R       | E C V |                  |       |   |    |    |      |
| SCOPE 'A'         | 0                          | 1          | 0       | 0     | 0                | 0     |   |    |    |      |
| SCOPE 'B'         | 1                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| SCOPE 'C'         | 2                          | 0          | 2       | 0     | 0                | 0     |   |    |    |      |
| SCOPE 'D'         | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| SCOPE 'E'         | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| CONSTRUCTION      | 4                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| IMD               | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| OK                | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| NON-ASB OC        | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| STARTUP           | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| PROJECT ENG       | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| LICENSING         | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| ENG. ASSURANCE    | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| PROJECT MGMT      | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| UNIT 2 OPS        | 0                          | 0          | 0       | 0     | 0                | 0     |   |    |    |      |
| TOTAL             | 12                         | 2          | 42      | 12    | 7                | 32    | 5 | 56 | 59 | (-3) |

TARGET = 65

INITIATED/CLOSED/TOTAL OPEN ACTIVITY



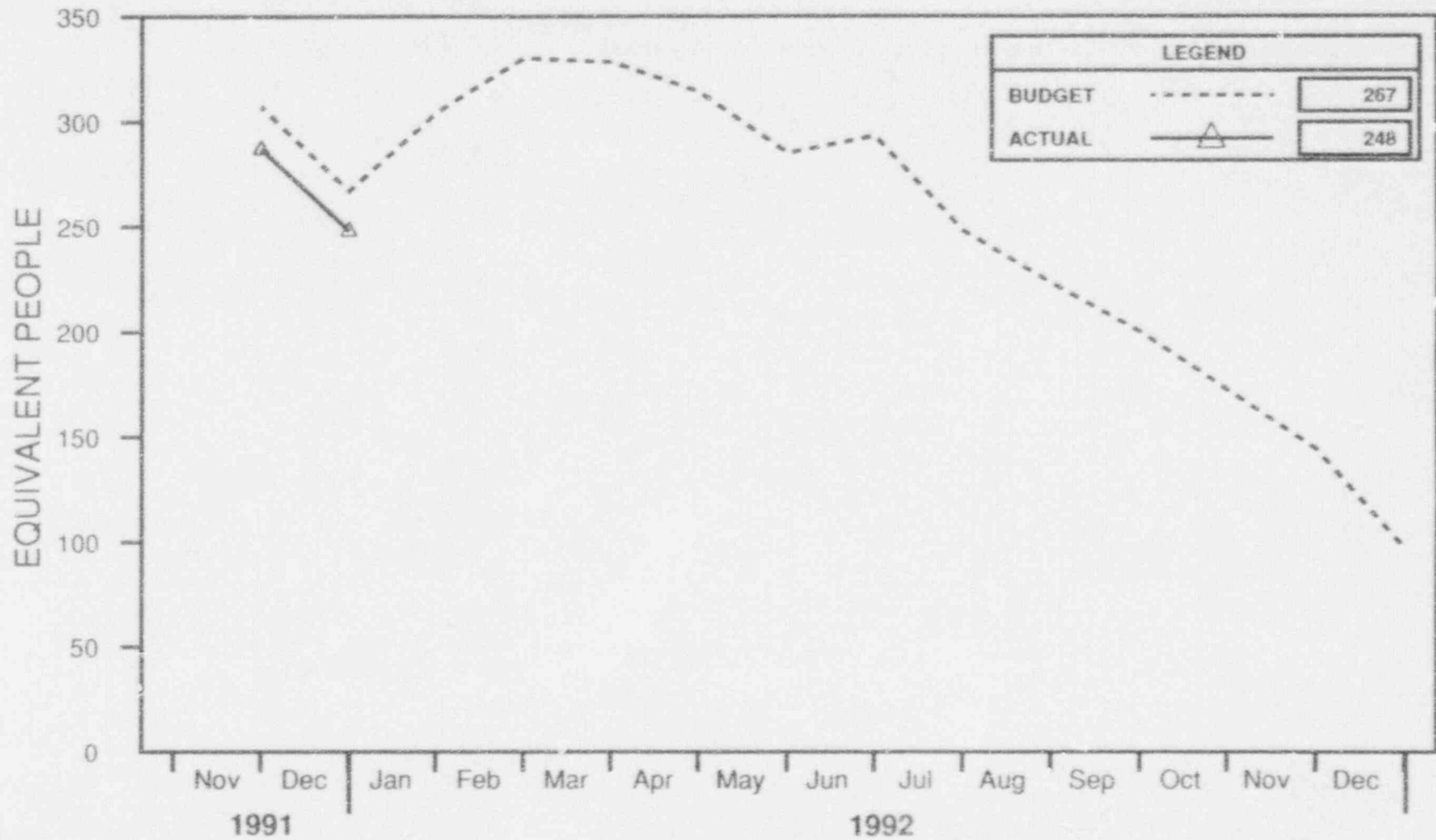
# COMANCHE PEAK STEAM ELECTRIC STATION SURVEILLANCE FINDINGS



TARGET TIME FRAME FROM ISSUANCE TO CLOSURE = 60 DAYS

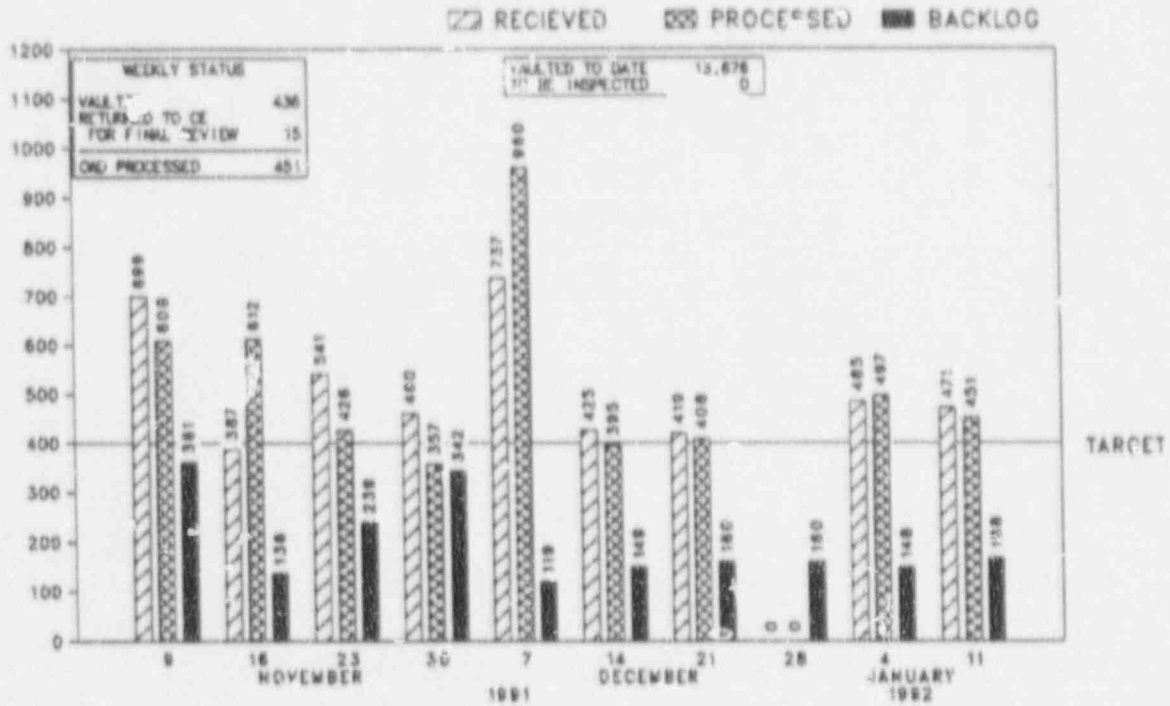
# COMANCHE PEAK STEAM ELECTRIC STATION

## QA/QC STAFFING

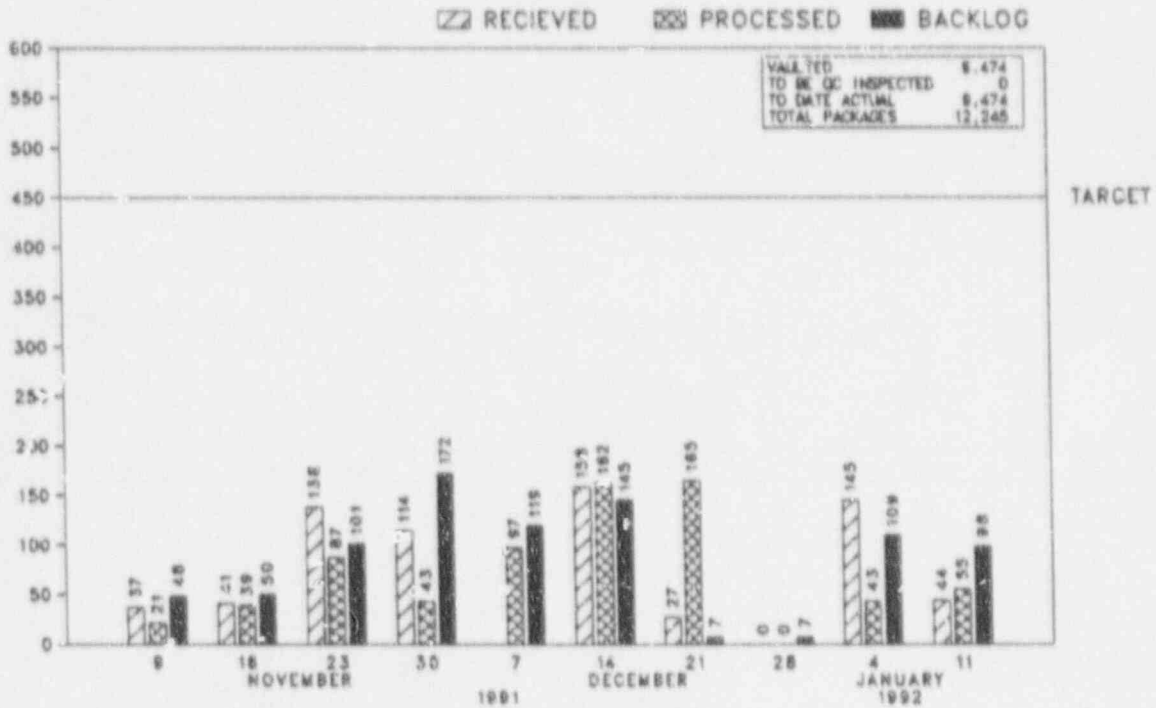


# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

## UNIT 2 - QC PHASE II CWD INSPECTION AND REVIEW

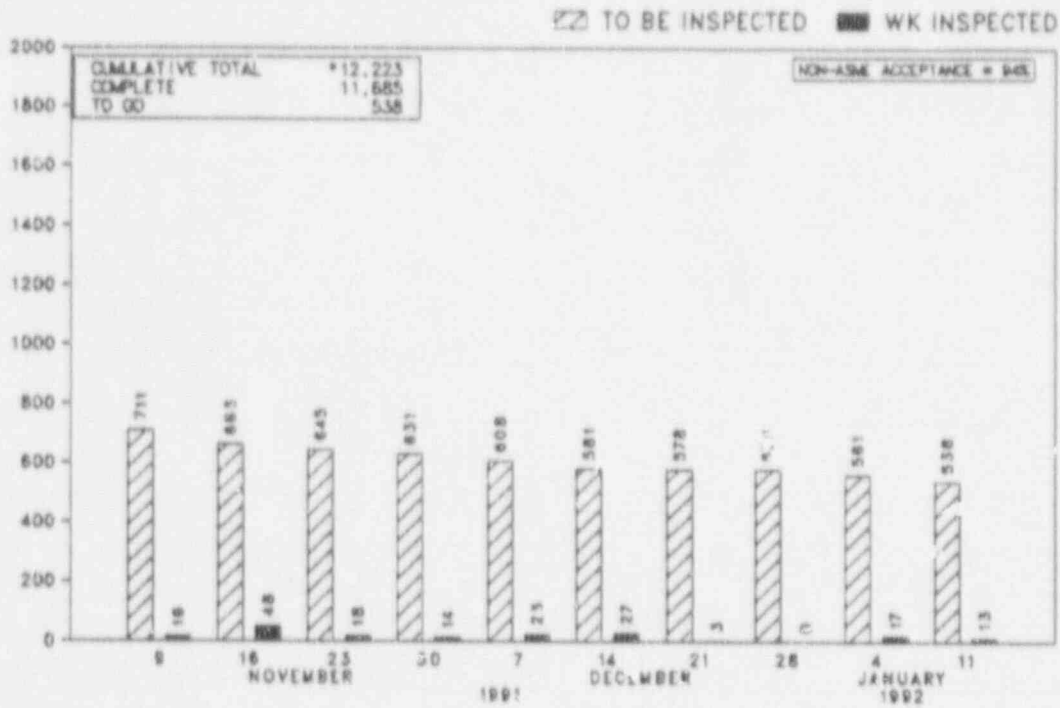


## UNIT 2 - QC NON-ASME CONSTRUCTION WORK PACKAGE REVIEWS

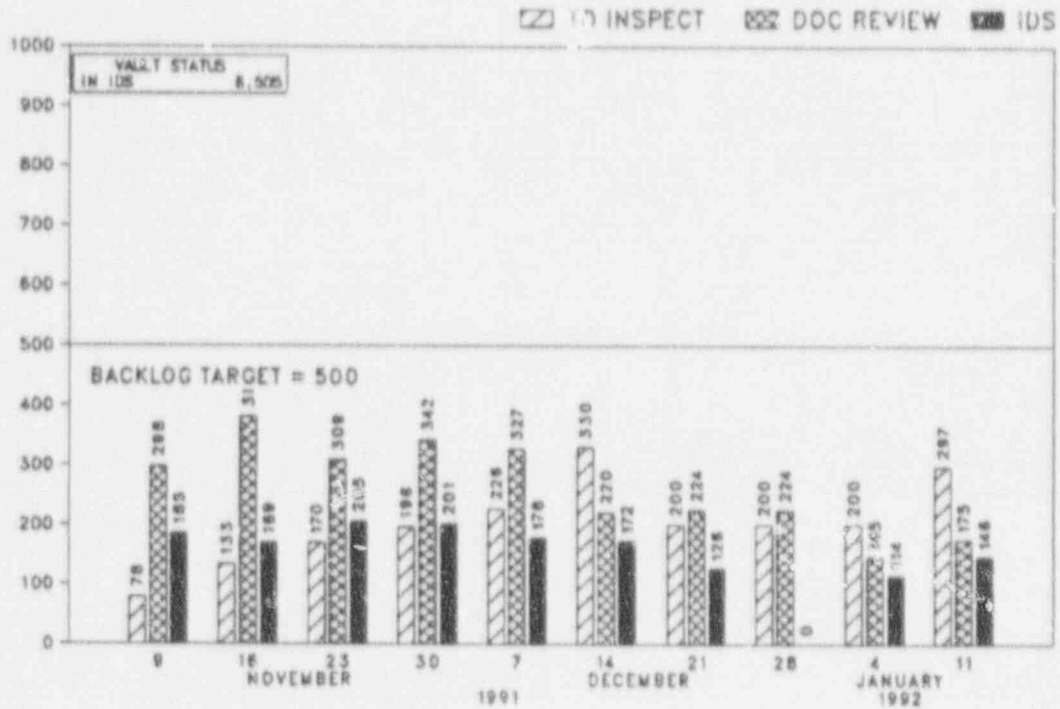


# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

## NON-ASME QC QC BACKFIT INSPECTIONS

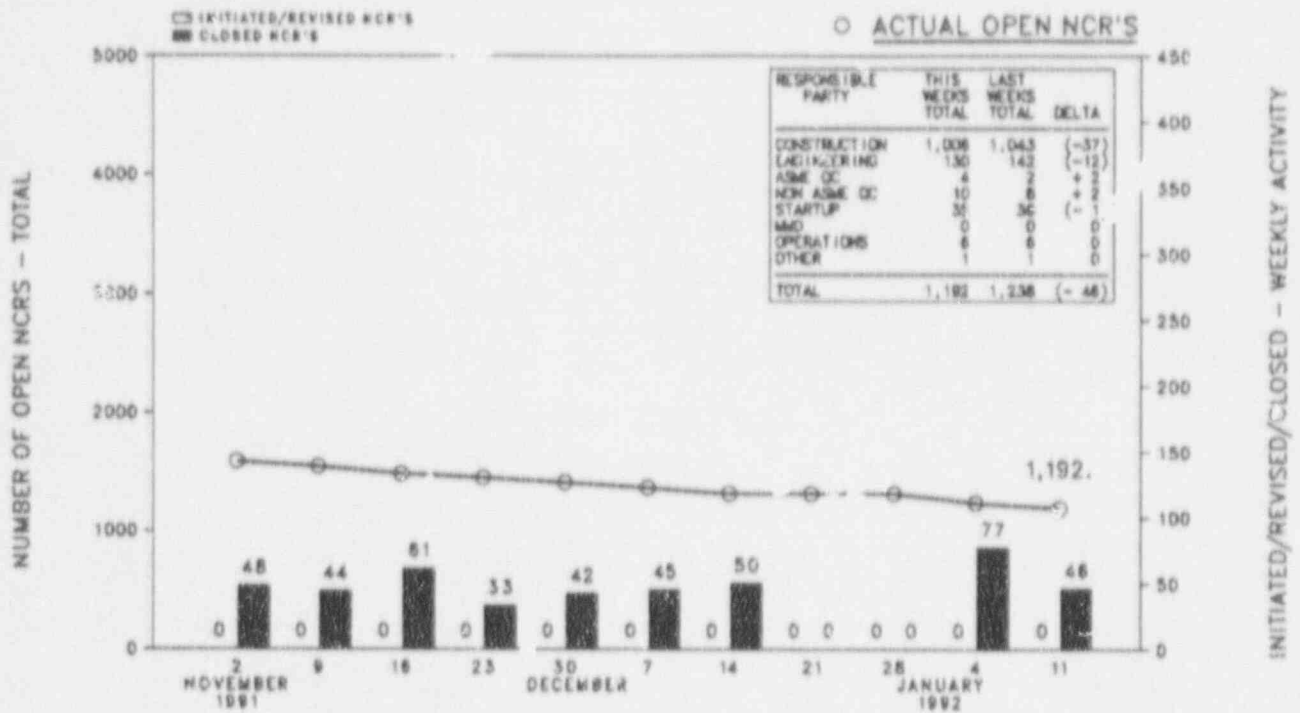


## ASME QC PIPE SUPPORT STATUS

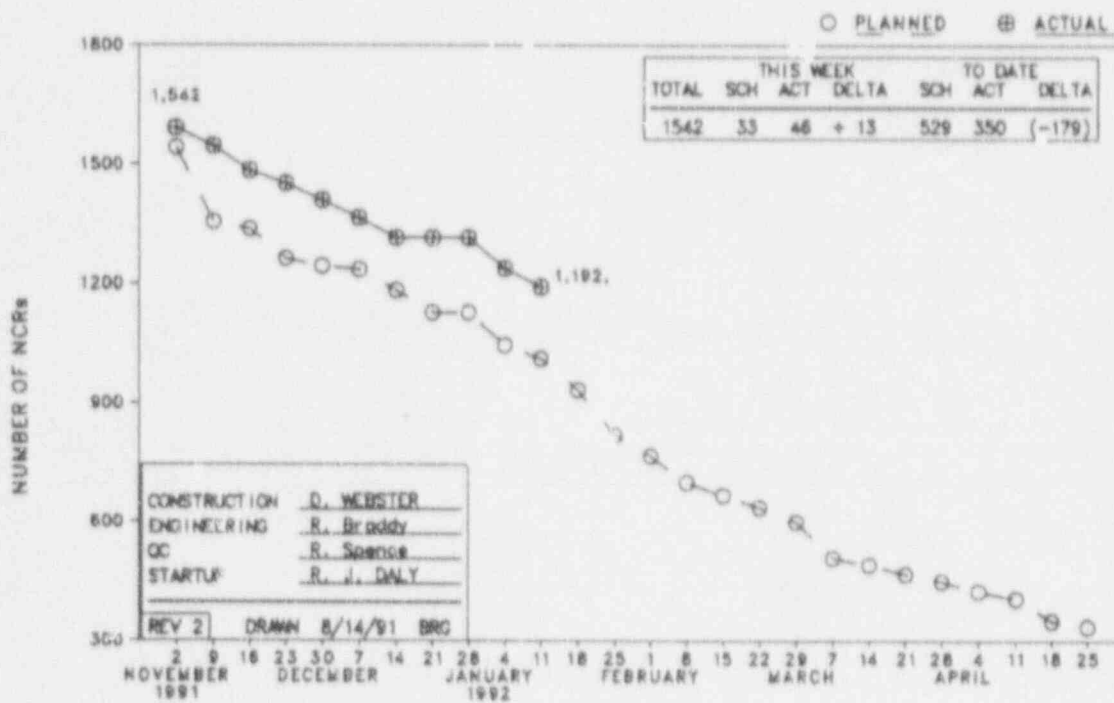


# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

## TOTAL PROJECT NCRs/CDRs



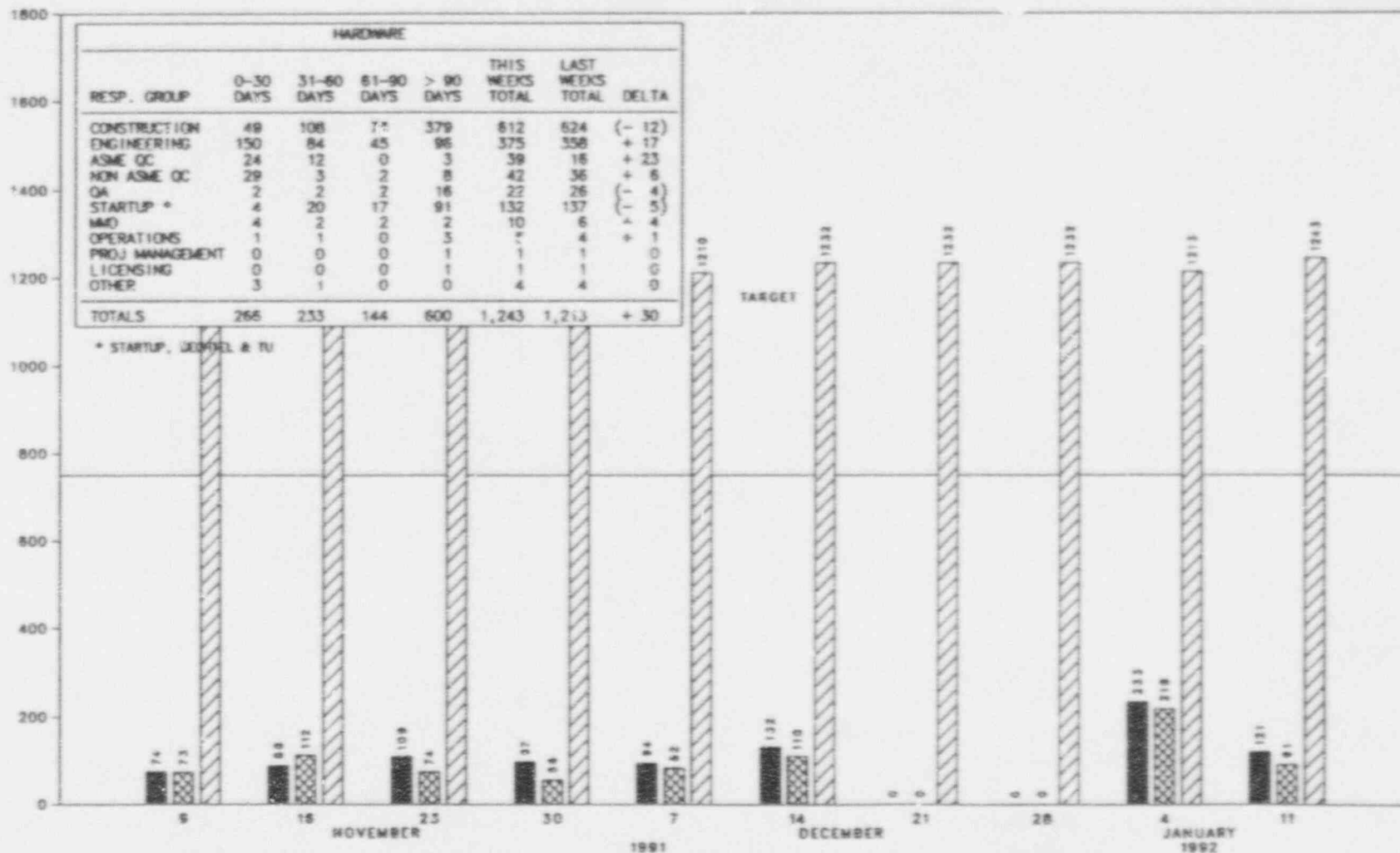
## NCR REDUCTION AND CLOSURE



INITIATED/REVISED/CLOSED - WEEKLY ACTIVITY

# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2 TOTAL PROJECT TU EVALUATION FORMS

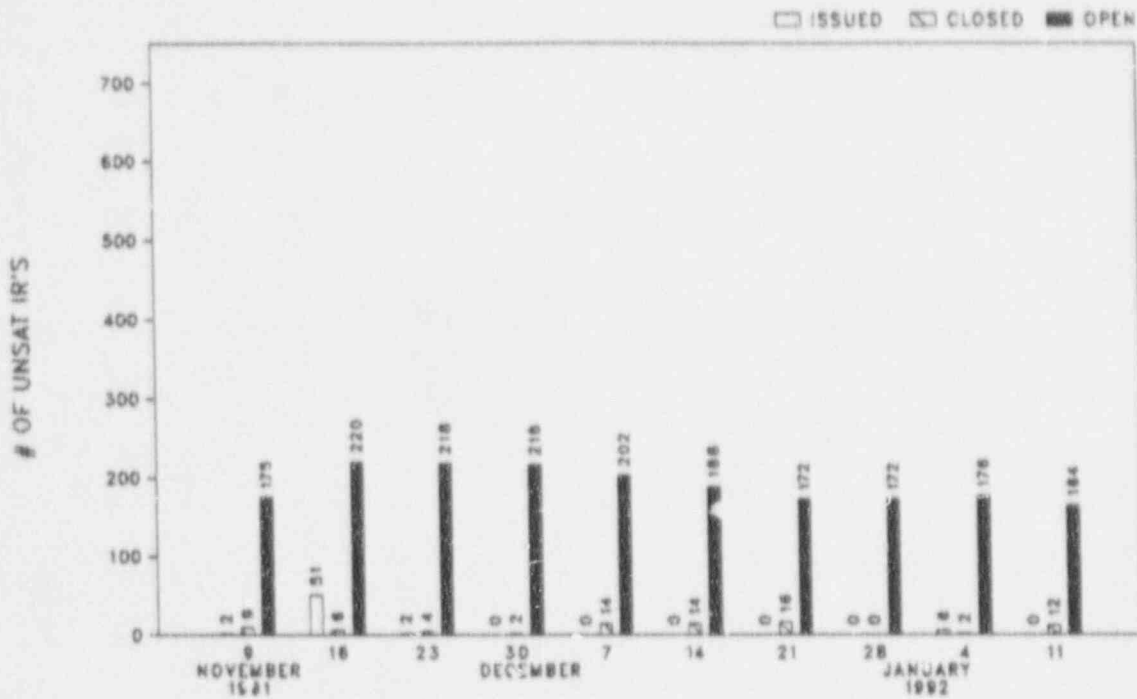
INITIATED/REVISED TUEs    
  CLOSED TUEs    
  CURRENT OPEN



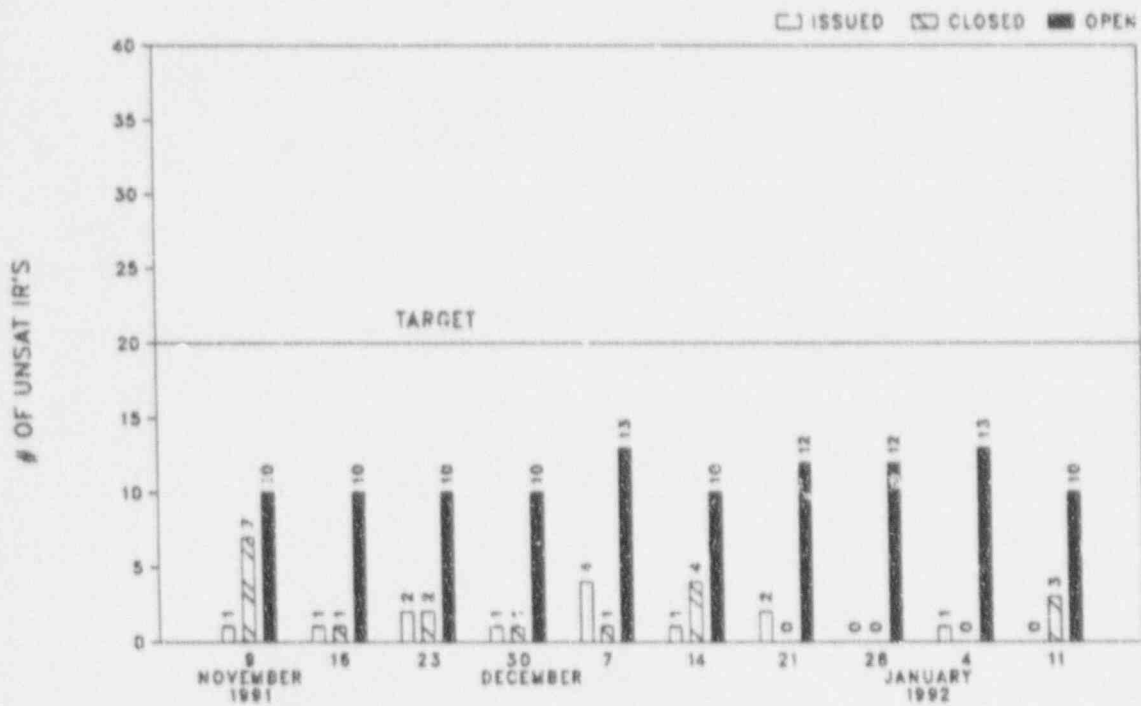


# COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

QC/ENGINEERING/BACKFIT  
OPEN UNSAT IR WORKOFF

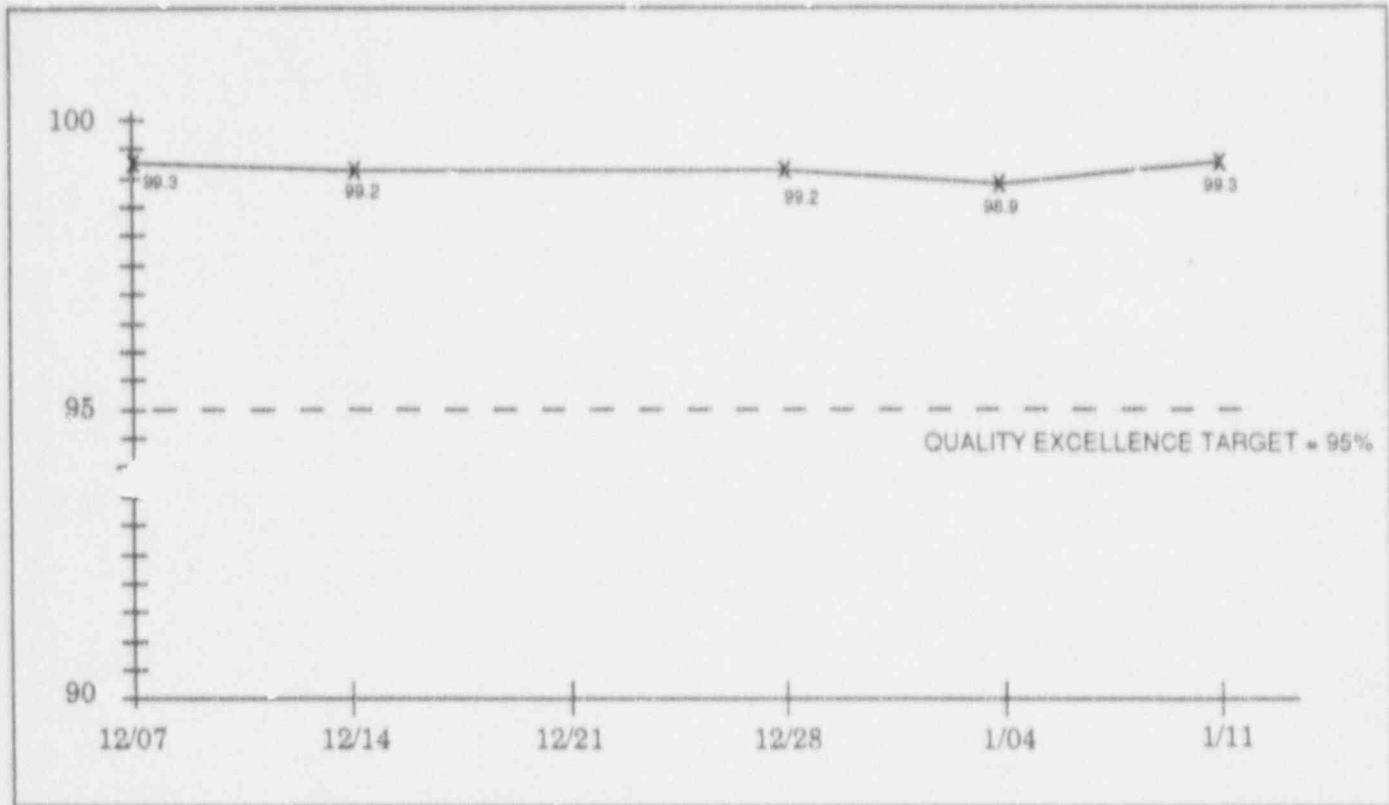


## QC PROGRAM'S UNSAT IR'S



# QUALITY ACCOUNTABILITY

## OVERALL UNIT 2 INSPECTION ACTIVITIES



| DISCIPLINE | WEEKLY QUALITY LEVELS |             |              |             |            | CURRENT WEEK'S TOTALS |      |     | * 6 WEEK SUMMARY |             | REMARKS |
|------------|-----------------------|-------------|--------------|-------------|------------|-----------------------|------|-----|------------------|-------------|---------|
|            | 12/07<br>QL           | 12/14<br>QL | 12/21<br>QL* | 12/28<br>QL | 1/04<br>QL | 1/11<br>QL            | INSP | REJ | AVG<br>%         | QL<br>TREND |         |
| ASME       | 99.6                  | 99.4        | 0.0          | 99.4        | 99.3       | 99.4                  | 6571 | 41  | 99.4             | -0.06       |         |
| STARTUP    | 100.0                 | 97.4        | 0.0          | 91.8        | 87.0       | 100.0                 | 82   | 0   | 97.3             | -1.05       |         |
| NON-ASME   | 98.0                  | 98.3        | 0.0          | 98.2        | 97.4       | 98.6                  | 1389 | 19  | 98.2             | 0.04        |         |
| TOTALS     | 99.3                  | 99.2        | 0.0          | 99.2        | 98.9       | 99.3                  | 8042 | 60  | 99.2             | -0.04       |         |

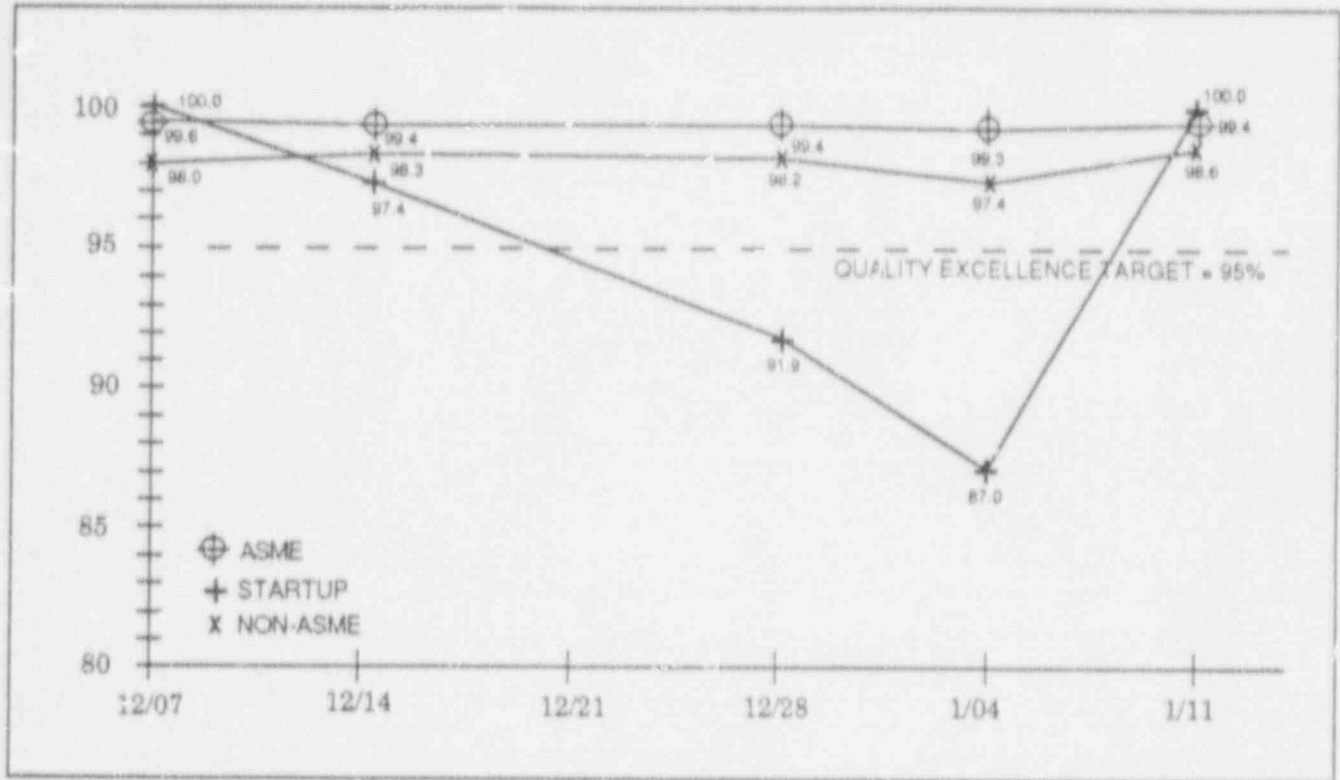
\* QL Trend provides an estimate of the average monthly Quality Level change over the past six weeks based upon a Least Squares estimate. A positive (+) change reflects improving quality levels and a negative (-) change reflects declining quality level.

Housekeeping, Equipment PM, Commodity Verification (I/I) and Program Monitoring (Inspector Performance, Limited Frequency, etc.) is not included in trending statistics. Monitoring unsatisfactory Inspection Reports are reviewed under the Quality Accountability Program for recurring problems and tracked to ensure timely resolution. The following chart represents the last six weeks of Monitoring findings.

| MONITORING PROGRAM     | 12/07 | 12/14 | 12/21 | 12/28 | 1/04 | 1/11 |
|------------------------|-------|-------|-------|-------|------|------|
| Housekeeping           | 6     | 5     | 8     | 0     | 0    | 8    |
| Equipment (PM)         | 0     | 0     | 0     | 0     | 0    | 0    |
| Commodity Verification | 1     | 0     | 0     | 0     | 0    | 0    |
| Programs               | 0     | 0     | 0     | 0     | 0    | 0    |

NOTE: This area is reserved for discussions related to those areas not meeting the quality level, all areas meet the quality level for the current week.

# QUALITY ACCOUNTABILITY INSPECTION ACTIVITIES BY MAJOR ORGANIZATION AND DISCIPLINE

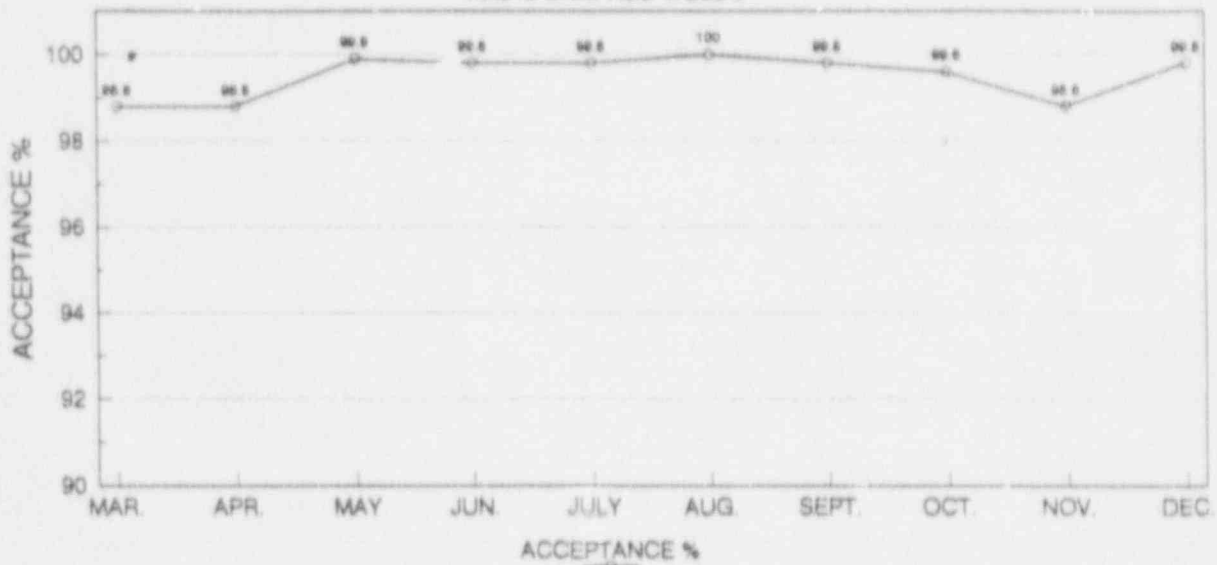


| DISCIPLINE       | WEEKLY QUALITY LEVELS |          |           |          |         | CURRENT WEEK'S TOTALS |      |      | 6 WEEK SUMMARY |          | REMARKS |
|------------------|-----------------------|----------|-----------|----------|---------|-----------------------|------|------|----------------|----------|---------|
|                  | 12/07 QL              | 12/14 QL | 12/21 QL* | 12/28 QL | 1/04 QL | 1/11 DL               | INSP | REJ  | AVG %          | QL TREND |         |
| <b>ASME</b>      | 99.6                  | 99.4     | 0.0       | 99.4     | 99.3    | 99.4                  | 5571 | 41   | 99.4           | -0.06    |         |
| <b>STARTUP</b>   |                       |          |           |          |         |                       |      |      |                |          |         |
| PM               | 100.0                 | 100.0    | 0.0       | 100.0    | 100.0   | 100.0                 |      | 5    | 100.0          | 0.00     |         |
| Mechanical       | 100.0                 | 100.0    | 0.0       | 98.3     | 100.0   | 100.0                 |      | 25   | 99.2           | 0.00     |         |
| Electrical       | 100.0                 | 95.3     | 0.0       | 77.8     | 66.7    | 100.0                 |      | 52   | 95.7           | -2.87    |         |
| I&C              | 100.0                 | 0.0      | 0.0       | 0.0      | 0.0     | 0.0                   |      | 0    | 100.0          | 0.00     |         |
| <b>TOTAL</b>     | 100.0                 | 97.4     | 0.0       | 91.9     | 87.0    | 100.0                 |      | 82   | 97.3           | -1.05    |         |
| <b>NON-ASME</b>  |                       |          |           |          |         |                       |      |      |                |          |         |
| Civil/Structural | 100.0                 | 99.0     | 0.0       | 100.0    | 98.8    | 98.9                  |      | 91   | 99.2           | -0.24    |         |
| Electrical       | 98.4                  | 98.1     | 0.0       | 98.7     | 98.1    | 99.7                  |      | 661  | 98.6           | 0.26     |         |
| Mechanical       | 97.7                  | 98.5     | 0.0       | 100.0    | 50.0    | 100.0                 |      | 52   | 95.3           | -4.39    |         |
| HVAC             | 100.0                 | 100.0    | 0.0       | 100.0    | 100.0   | 100.0                 |      | 38   | 0.0            | 0.00     |         |
| I&C              | 96.8                  | 98.3     | 0.0       | 97.2     | 97.5    | 97.1                  |      | 547  | 97.4           | -0.02    |         |
| <b>TOTAL</b>     | 98.0                  | 98.3     | 0.0       | 98.2     | 97.4    | 98.5                  |      | 1389 | 98.2           | 0.04     |         |
| <b>TOTALS</b>    | 99.3                  | 99.2     | 0.0       | 99.2     | 98.9    | 99.3                  |      | 8042 | 99.2           | -0.04    |         |

\* QL Trend provides an estimate of the average monthly Quality Level change over the past six weeks based upon a Least Squares estimate. A positive (+) change reflects improving quality levels and a negative (-) change reflects declining quality level.

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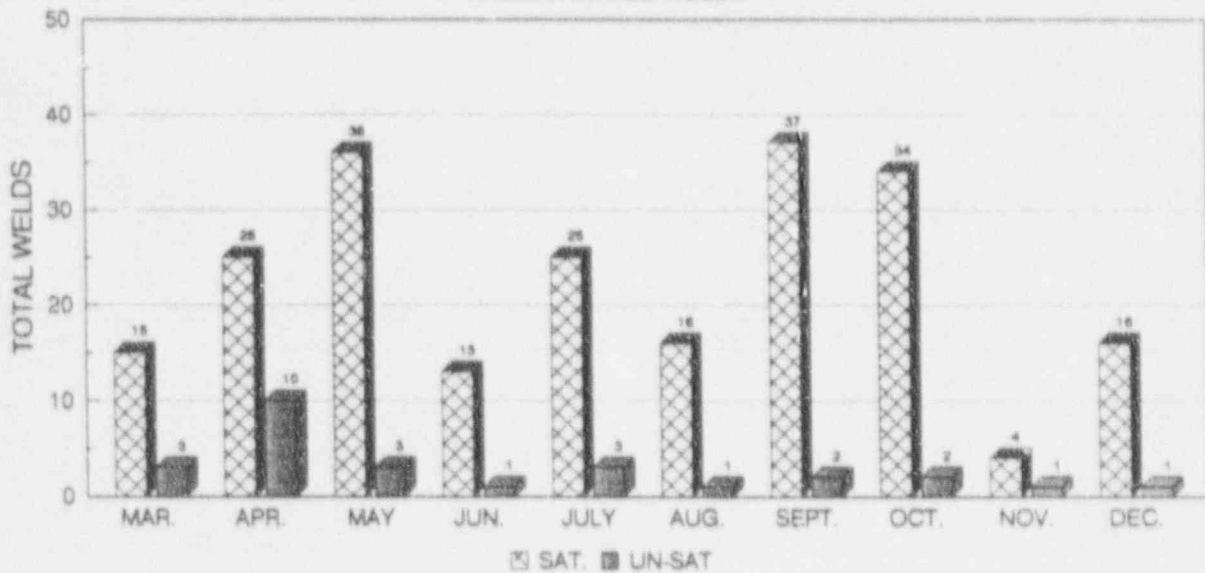
**COMANCHE PEAK STEAM ELECTRIC STATION  
UNIT 2 WELDING PERFORMANCE SUMMARY  
RADIOGRAPHED WELDS**



|                        | MAR.  | APR.  | MAY   | JUN.   | JULY   | AUG.   | SEPT.   | OCT.   | NOV.  | DEC.   |
|------------------------|-------|-------|-------|--------|--------|--------|---------|--------|-------|--------|
| LINEAR INCHES          | *     |       |       |        |        |        |         |        |       |        |
| RADIOGRAPHED           | 345.3 | 891.7 | 852.4 | 426.44 | 681.42 | 584.04 | 1414.57 | 406.77 | 58.52 | 286.06 |
| LINEAR INCHES REJECTED | 4.0   | 11    | 1.125 | 1.0    | 1.375  | .125   | 2.438   | 1.83   | .625  | .375   |

\* NOTE: INCLUDES JAN./ FEB. INSPECTIONS

**COMANCHE PEAK STEAM ELECTRIC STATION  
UNIT 2 WELDING PERFORMANCE SUMMARY  
RADIOGRAPHED WELDS**

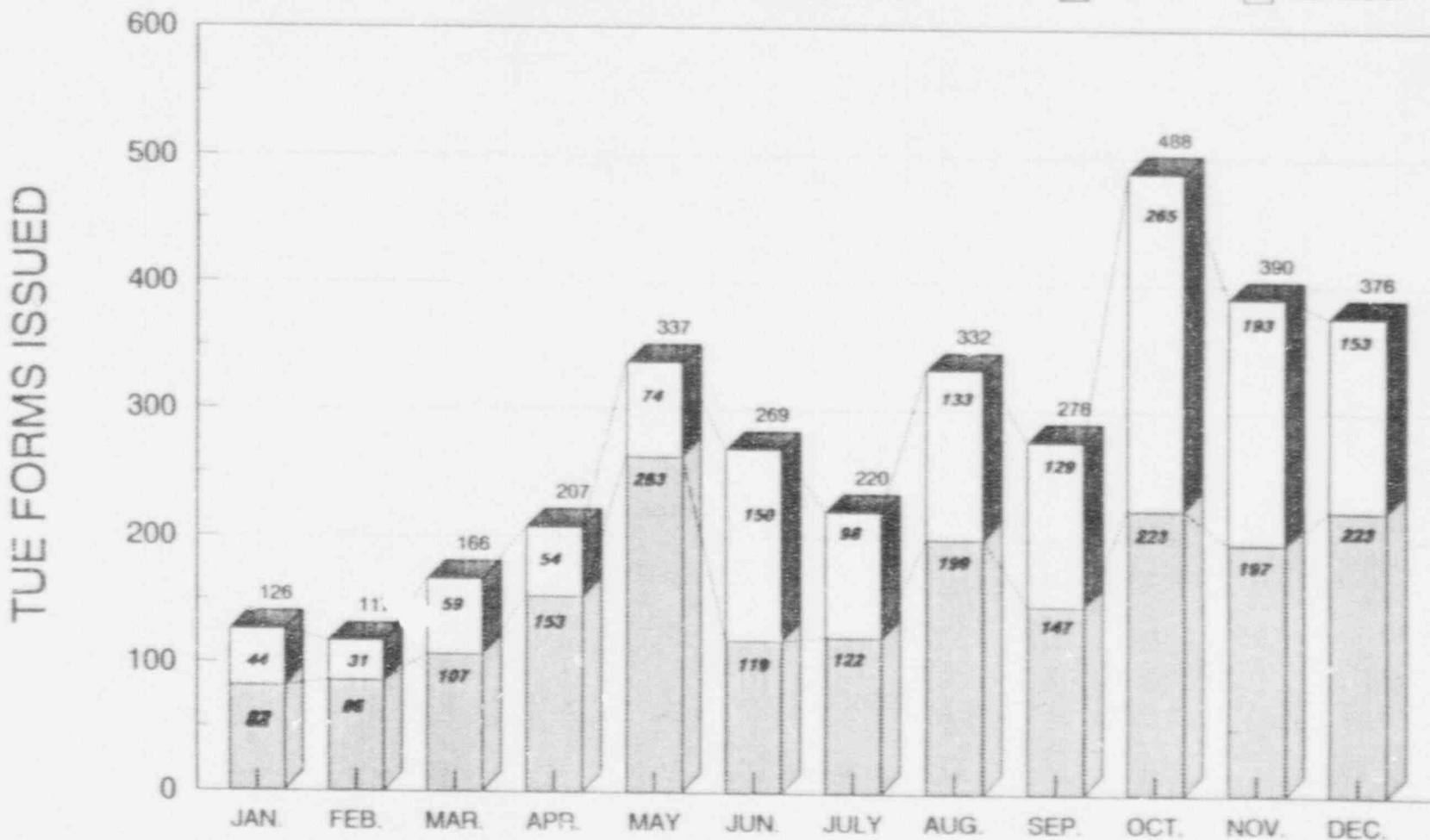


# COMANCHE PEAK STEAM ELECTRIC STATION

TUE FORMS ISSUED PER MONTH

NEW WORK VS OLD WORK

OLD WORK NEW WORK



1991

TUE FORMS ISSUED

## PROACTIVE QUALITY ACHIEVEMENTS

- BOP Overview Program
- Established a Quality Task Team to Reduce Open NCR's and TUE's
- TUE Form Committee
- Established QC Monitoring Inspection in the Flush Program
- Quality Accountability Program
  - 1,094 TUEs Reviewed
  - 175 TUEs Addressed in the Project QAP
  - 158 TUEs Addressed in the Engineering QAP