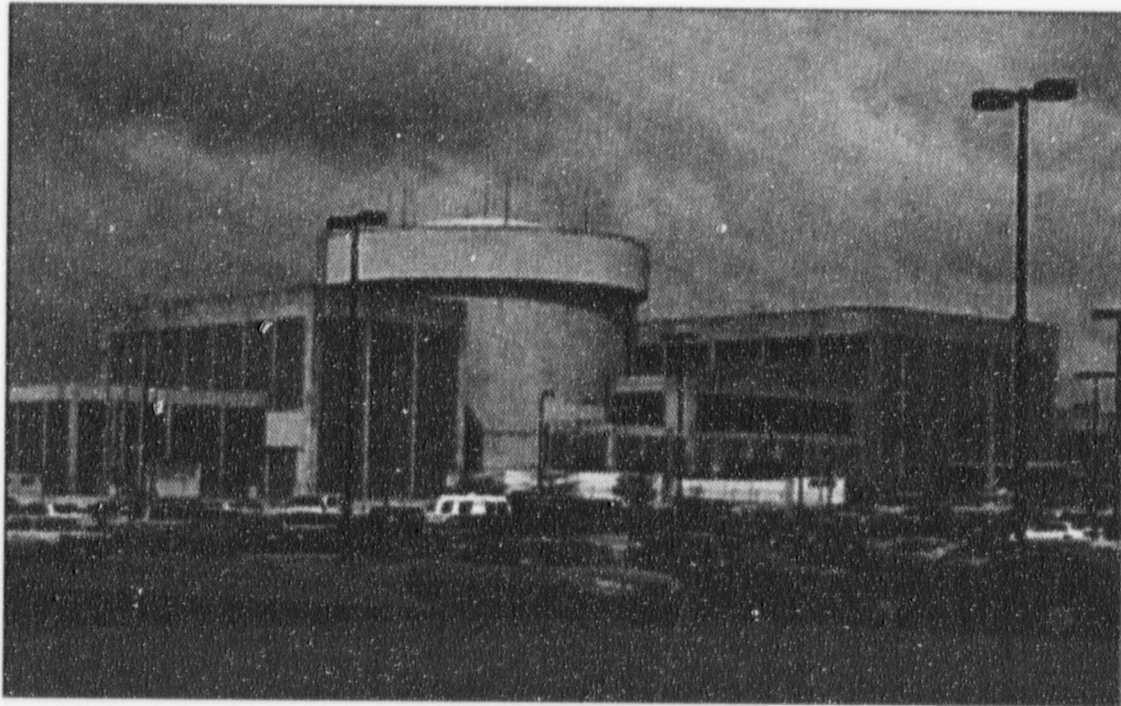


OMAHA PUBLIC POWER DISTRICT

FORT CALHOUN STATION



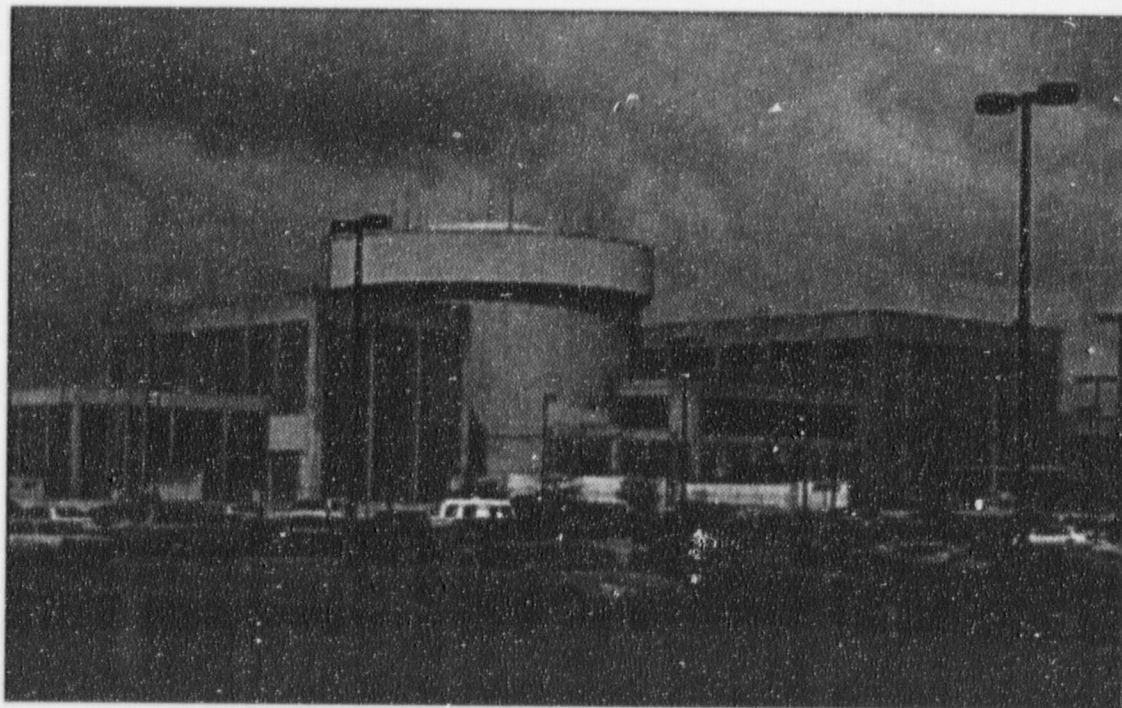
PERFORMANCE INDICATORS

MARCH 1998

**SAFE OPERATIONS
PERFORMANCE EXCELLENCE
COST EFFECTIVENESS**

OMAHA PUBLIC POWER DISTRICT

FORT CALHOUN STATION



PERFORMANCE INDICATORS

MARCH 1998

**SAFE OPERATIONS
PERFORMANCE EXCELLENCE
COST EFFECTIVENESS**

9805180349 980505
PDR ADOCK 05000285
R PDR

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FORT CALHOUN STATION

Monthly Summary

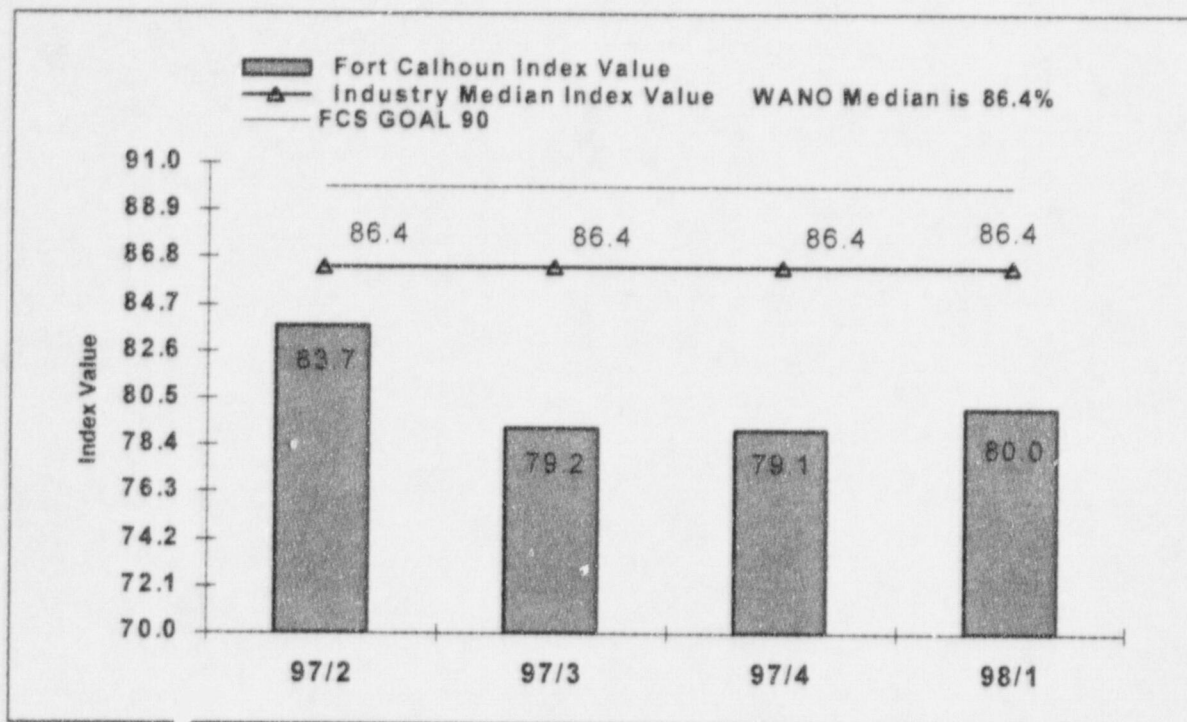
OPERATIONS

Fort Calhoun Station (FCS) operated at a nominal 100% power level during the month of March 1998, until March 24, 1998 at 1402 hours when a power reduction to 70% was commenced. This reduction was a part of the two step power reduction plan to minimize radiological hazards during the upcoming refueling outage. Reactor power reached 70% on March 25, 1998 at 1845 hours. Reactor power remained at a nominal 70% until March 28, 1998 at 0100 hours when a power reduction to 30% was commenced. Reactor power reached 30% on March 28, 1998 at 2230 hours. On March 31, 1998 at 2140 hours the Main Generator was taken Off Line and on April 1, 1998 at 0135 hours the Reactor was sub-critical, starting the 1998 Refueling Outage.

WANO PERFORMANCE INDICATORS

The overall WANO Performance Index was 80% during the 1st Quarter of 1998. Significant percentage point losses are attributed to the following WANO Performance Indicators listed below:

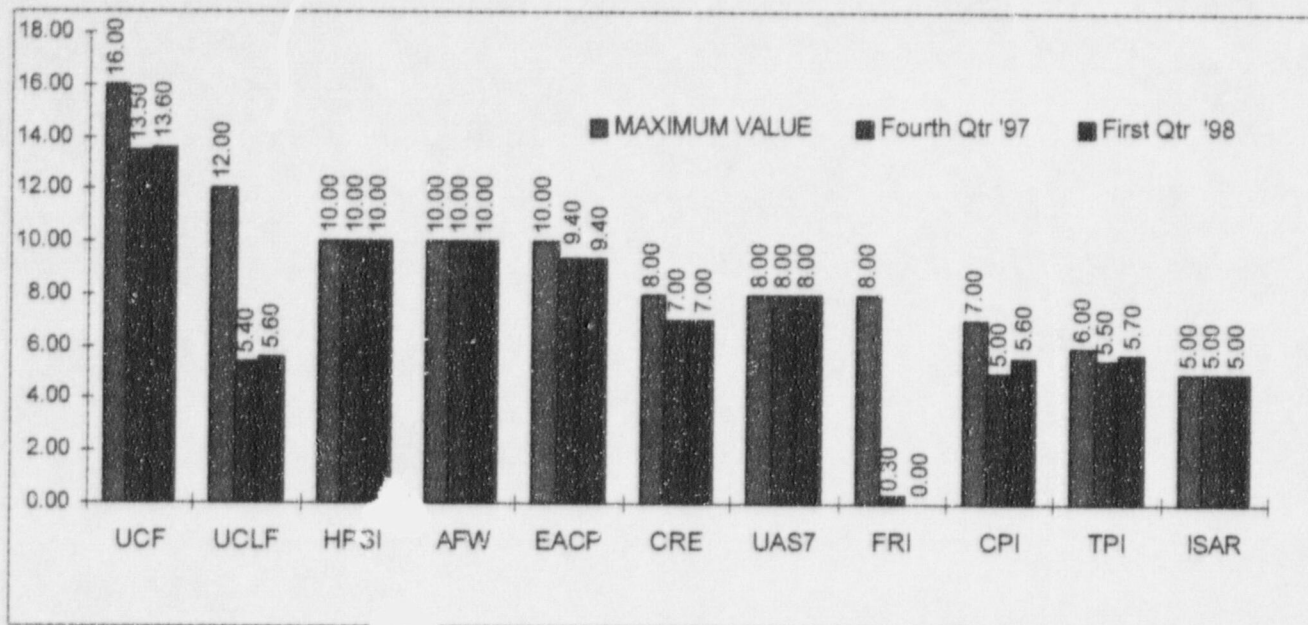
1. The **Unit Capability Factor Indicator**, calculated over the previous 24 months, contributed to a 2.4 point loss as a result of unplanned energy losses defined on page 9.
2. The **Unplanned Capability Loss Factor Indicator** calculated over the previous 24 months, contributed to a 6.4 point loss as a result of unplanned energy losses defined on pages 9 and 10.
3. The **Fuel Reliability Indicator**, calculated over the previous 3 months, contributed to a 8.0 point loss due to increased reactor coolant activity caused by fuel defects on page 16.
4. The **Thermal Performance Indicator**, calculated over the previous 12 months, contributed to a 0.9 point loss due to thermal energy losses experienced during reactor power changes and forced outages defined on Pages 9 and 15.
5. The **Collective Radiation Exposure Indicator**, calculated over the previous 24 months, contributed to a 1.0 point loss, which was attributed to fuel failures and recent high exposure jobs such as resin shipment and work on AC-7, "Storage Pool Demineralizer" on page 18.
6. The **Emergency AC Power Indicator**, calculated over the previous 24 months, contributed to a 0.6 point loss, which was a result of on-line maintenance and replacement of relays under ECN95-347, "Replace Relays for Seismic Adequacy" on page 14.
7. The **Chemistry Performance Index Indicator**, calculated over the previous 12 months, contributed to a 1.4 point loss, which is due to copper tubes in heat exchangers and mechanical shock to systems in the past year from forced outages defined on page 17.



WANO PERFORMANCE INDEX TREND

The Wano Performance Index Trend calculation is made up of eleven variables, each value is weighted to arrive at an overall index value. WANO calculates the performance Index value based on the industry reporting the information each quarter. The variables are calculated over a defined period of time as listed below.

<u>PERFORMANCE INDICATOR</u>	<u>WEIGHTED FACTOR</u>	<u>TIME</u>
Unit Capability Factor	16	24 Months
Unplanned Capability Loss Factor	12	24 Months
High Pressure Safety Injection	10	24 Months
Auxiliary Feedwater	10	24 Months
Emergency AC Power	10	24 Months
Unplanned Auto Scrams/7000 Hours	8	24 Months
Collective Radiation Exposure	8	24 Months
Thermal Performance Indicator	6	12 Months
Secondary Chemistry Indicator	7	12 Months
Industrial Safety Accident Rate	5	12 Months
Fuel Reliability Indicator	8	Quarterly



WANO PERFORMANCE INDEX INDICATORS

This graph shows the difference between **Fourth Qtr '97** and **First Qtr '98** actual values achieved by Fort Calhoun.

CALCULATED OVER A 2 YEAR PERIOD

UCF	Unit Capability Factor
UCLF	Unplanned Capability Loss Factor
HPSI	High Pressure Safety Injection
AFW	Auxiliary Feedwater
EACP	Emergency AC Power
UAS7	Unplanned Auto Scrams/ 7000 Hours
CRE	Collective Radiation Exposure

MAXIMUM VALUE

16
12
10
10
10
10
8

TREND

Increase
Increase
No Change
No Change
No Change
No Change
No Change

CALCULATED OVER A 12 MONTH PERIOD

TPI	Thermal Performance Indicator
CPI	Secondary Chemistry Indicator
ISAR	Industrial Safety Accident Rate

6
7
5

Increase
Increase
No Change

CALCULATED OVER A QUARTERLY PERIOD

FRI	Fuel Reliability Indicator
-----	----------------------------

8

Decrease

PERFORMANCE INDICATORS SUMMARY REPORT

POSITIVE TREND REPORT

A performance indicator with data representing three consecutive months of improving performance or three consecutive months of performance that is superior to the stated goal is exhibiting a positive trend per Nuclear Operations Division Quality Procedure 37 (NOD-QP-37). The following performance indicators exhibited positive trends for the reporting month:

Unplanned Automatic Reactor Scrams
(Page 11)

High Pressure Safety Injection System Safety System Performance
(Page 12)

Aux. Feed Water System Safety System Performance
(Page 13)

Industrial Safety Accident Rate
(Page 19)

Disabling Injury/Illness Frequency Rate
(Page 22)

Contaminated Radiation Controlled Area
(Page 34)

ADVERSE TREND REPORT

A performance indicator with data representing three consecutive months of declining performance or three consecutive months of performance that is trending toward declining as determined by the Manager - Nuclear Licensing, constitutes an adverse trend per Nuclear Operations Division Quality Procedure 37 (NOD-QP-37). A supervisor whose performance indicator exhibits an adverse trend by this definition may specify in written form (to be published in this report) why the trend is not adverse. The following performance indicators exhibited adverse trends for the reporting month.

Fuel Reliability Indicator (Page 16)

INDICATORS NEEDING INCREASED MANAGEMENT ATTENTION REPORT

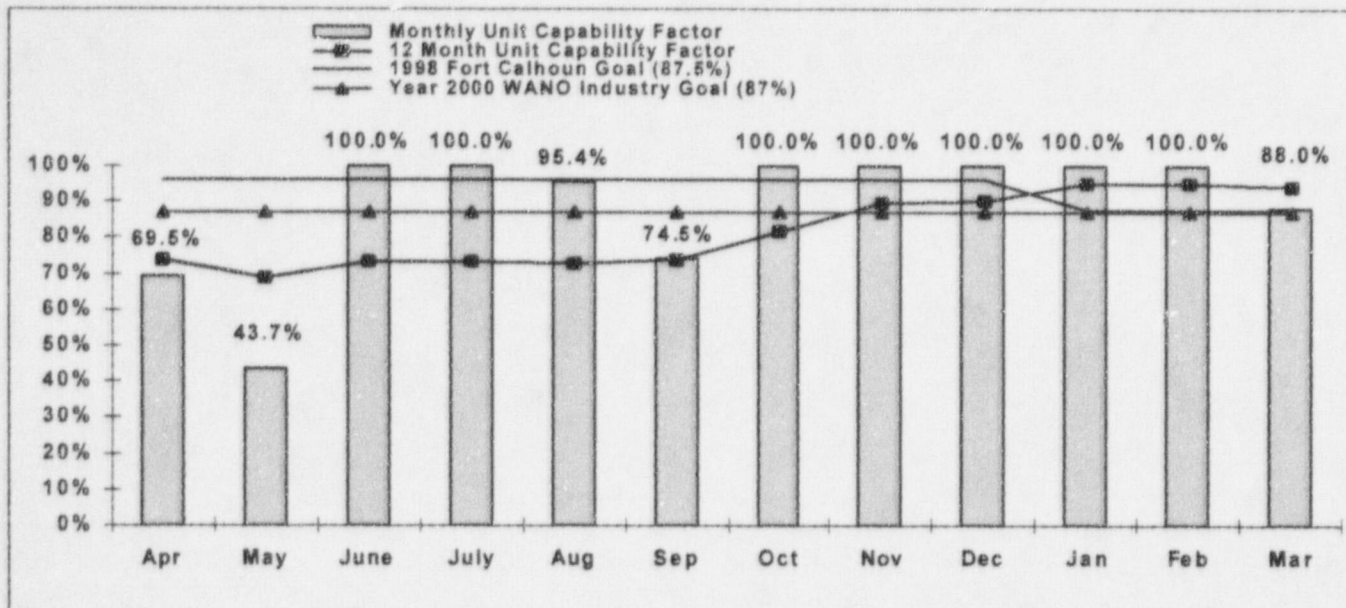
A performance indicator with data for the reporting period that is inadequate when compared to the OPPD goal is defined as "Needing Increased Management Attention" per (NOD-QP-37).

Maintenance Workload Backlog (Page 31)

Ratio of Preventive to Total Maintenance Preventive Maintenance Items Overdue (Page 32)

Temporary Modifications (Page 38)

WANO PERFORMANCE INDICATORS



UNIT CAPABILITY FACTOR

UCF is defined as the ratio of the available energy generation over a given period of time to the reference energy generation over the same time period, expressed as a percentage.

UNIT CAPABILITY FACTOR AVERAGES			
Year to Date	12 Month	24 Month	36 Month
95.8%	93.8%	80.4%	81.1%

Energy Losses:

Forced Outage-Condenser circulating valve repairs and leakage on Condenser "B"
Event Period: September 10, thru 13, 1997.

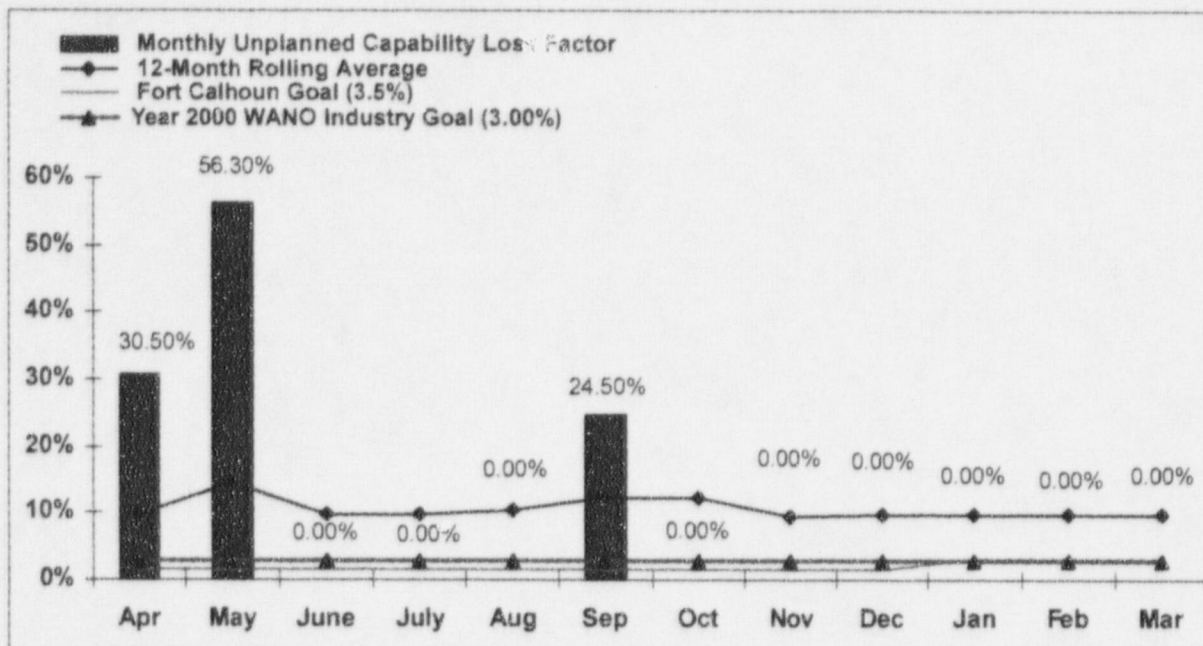
Power Reduction- Faculty Manual Transfer switch on instrument inverter "A"
Event Period: August 26, 28, 1997.

Forced Outage- Circumferential cracking of a weld down stream of a moisture separator due to high system stresses
Event Period: May 28, thru May 29, 1997.

Forced Outage- Steam leak in the fourth stage extraction steam system
Event Period: April through mid May 1997.

The Year 2000 WANO industry goal is 87.7% and the current industry median value is approximately 83.6%. The maximum index point value for this indicator is **16.00**. At the end of the **First Quarter 1998** the FCS Value was **13.6** which compares to the **Fourth Quarter 1997** value of **13.5**.

Data Source: Generation Totals Report & Monthly Operating Report
Accountability: Chase
Trend: None



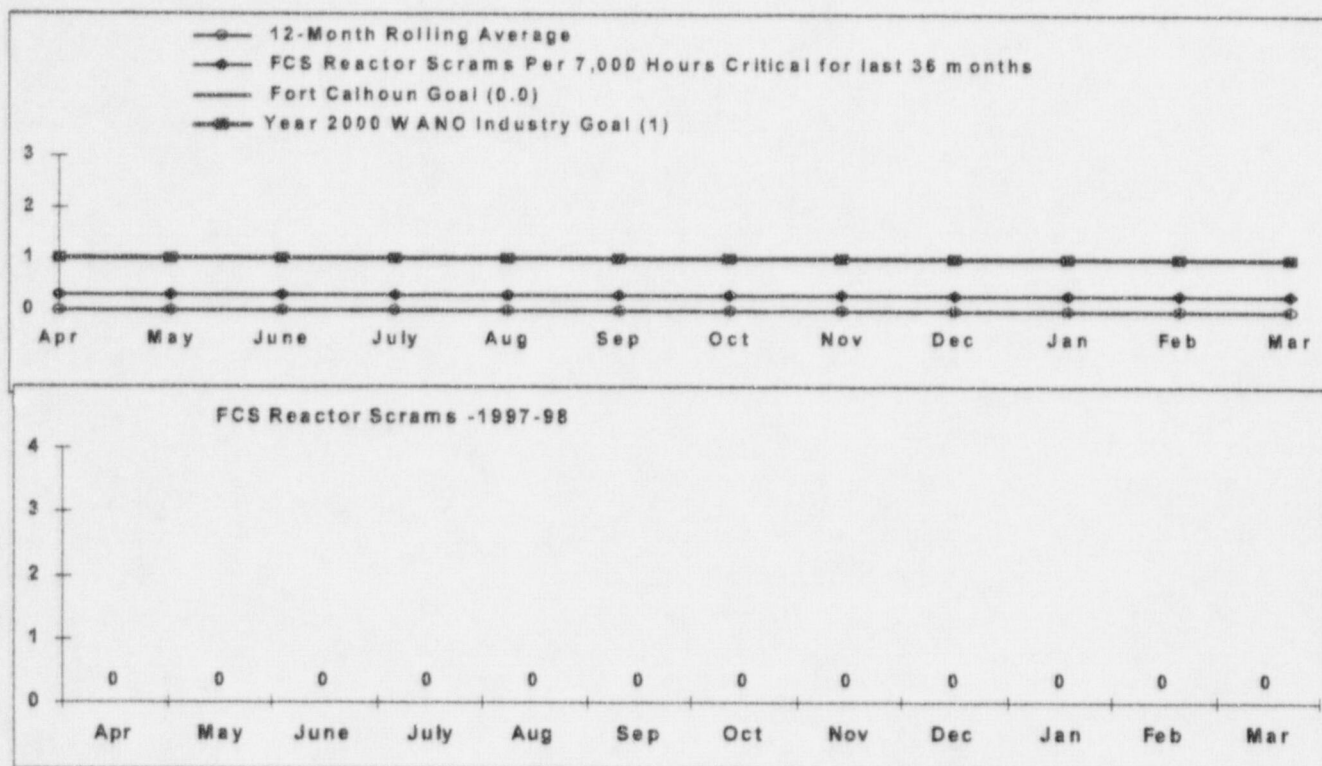
UNPLANNED CAPABILITY LOSS FACTOR

This indicator shows the plant monthly Unplanned Capability Loss Factor (UCLF), a rolling 12-month average, the OPPD goal, and the Year 2000 WANO goal. UCLF is defined as the ratio of the unplanned energy losses during a given period of time, to the reference energy generation expressed as a percentage. Unplanned energy loss is defined as energy not produced as a result of unscheduled shutdowns, outage extensions, or load reductions due to causes under plant management control. Energy losses are considered to be unplanned if they are not scheduled at least four weeks in advance.

UNPLANNED CAPABILITY LOSS FACTOR AVERAGES			
Year to Date	12 Month	24 Month	36 Month
0%	9.8%	8.7%	7.5%

The Year 2000 WANO industry goal is 3.0% and the industry current best quartile value is approximately 3.2%. The maximum index point value for this indicator is **12.00**. At the end of the **First Quarter 1998** the FCS Value was **5.6** which compares to the **Fourth Quarter 1997** value of **5.4**.

Data Source: Generation Totals Report & Monthly Operating Report
 Accountability: Chase
 Trend: None

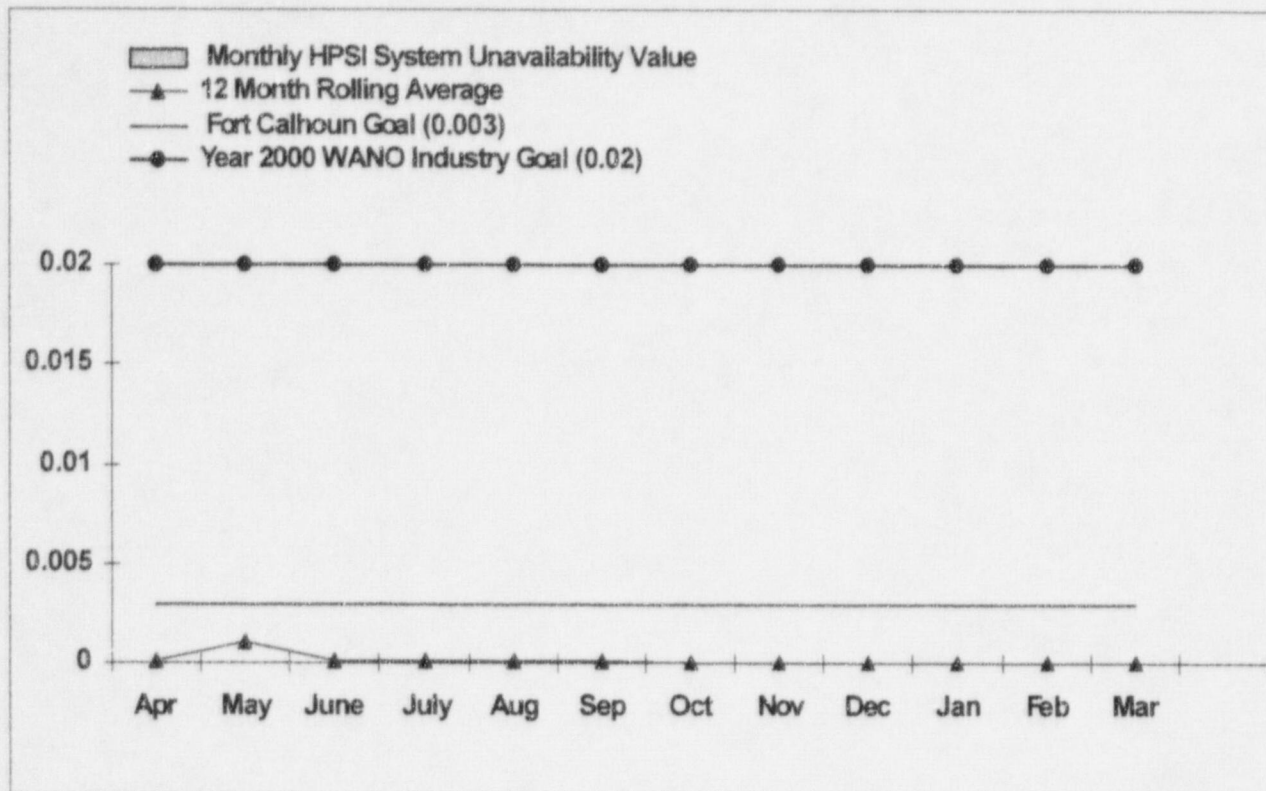


UNPLANNED AUTOMATIC REACTOR SCRAMS PER 7000 HOURS CRITICAL

The upper graph shows the 12-month rolling average, the 36-month average, the OPPD goal for 1997 and the Year 2000 WANO goal. The lower graph shows the number of unplanned automatic reactor scrams that occurred during the last 12 months. This indicator is defined as the number of unplanned automatic scrams that occur per 7,000. There were **no** unplanned automatic reactor SCRAMs during the month of **March 1998**. The 12-month rolling average (**April 1997 through March 1998**) was **0**. An unplanned automatic reactor SCRAM occurred in August 1995; therefore, the 36-month value (**April 1995 through March 1998**) was **0.982**.

The Year 2000 WANO industry goal is a maximum of one unplanned automatic reactor scram per 7,000 hours critical. The maximum index point value for this indicator is **8.0**. At the end of the **First Quarter 1998** the FCS Value was **8.0** which compares to the **Fourth Quarter 1997** value of **8.0**.

Data Source:	Monthly Operating Report & Plant Licensee Event Reports (LERs)
Accountability:	Chase
Trend:	Positive



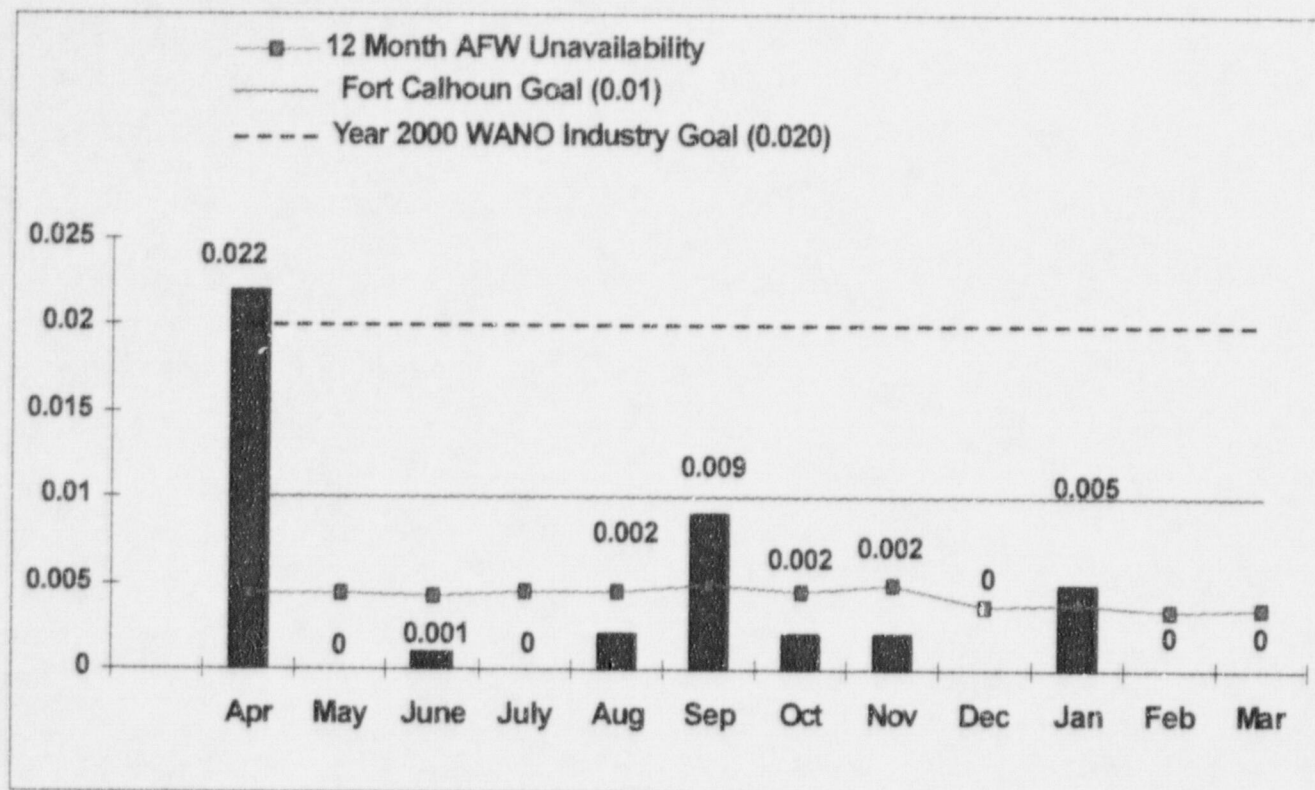
HIGH PRESSURE SAFETY INJECTION SYSTEM SAFETY SYSTEM PERFORMANCE

This indicator shows the High Pressure Safety Injection (HPSI) System unavailability value, as defined by WANO in the Safety System Performance Indicator Definitions, for **March 1998**.

The HPSI System unavailability value for the month of **March 1998** was **0.0**. There were **0.0** hours of planned unavailability, and **0.0** hours of unplanned unavailability. The 12 month rolling average was (**April 1997 through March 1998**) was **1.57 X E-5**, and the year-to-date HPSI unavailability value was **0.00 x E-4** at the end of the month. For the previous year there was a total of **9.8** hours of planned unavailability and **0.0** hours of unplanned unavailability for the HPSI system.

The 1998 Fort Calhoun year-end goal for this indicator is a maximum value of 0.003. The Year 2000 WANO industry goal is 0.020. The maximum index point value for this indicator is **10.0**. The **First Quarter 1998** the FCS Value was **10.0** which compares to the **Fourth Quarter 1997** value of **10.0**.

Data Source: Phelps/Schaffer (Manager/Source)
 Accountability: Phelps/Schaffer
 Trend: Positive



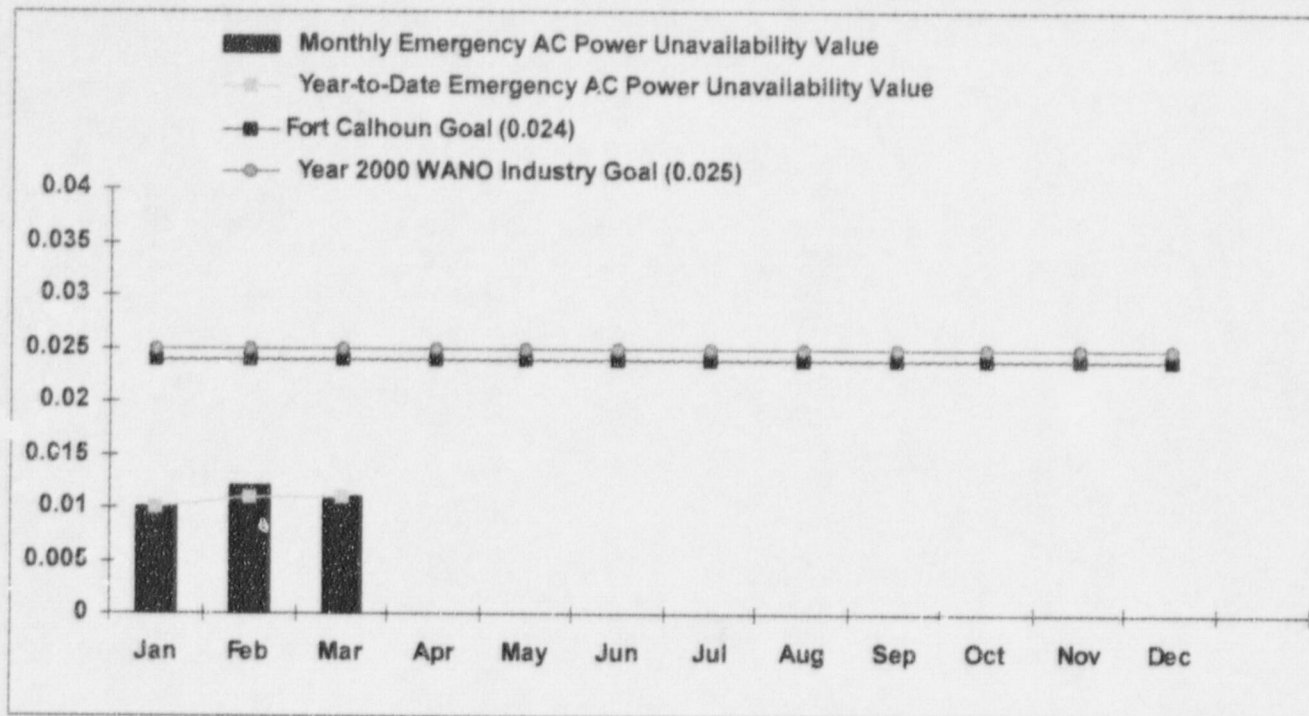
AUXILIARY FEEDWATER SYSTEM SAFETY SYSTEM PERFORMANCE

This indicator shows the Auxiliary Feedwater (AFW) System Unavailability value, as defined by WANO in the Safety System Performance Indicator Definitions, for the month of **March 1998**.

The AFW System Unavailability Value for **March 1998** was **0.0 hours**. There were **0.0** hours of planned and **0.0** hours of Unplanned Train Unavailability hours during the month. The 12 month rolling average (**April 1997 through March 1998**) was **0.003**, and the year-to-date unavailability value was **0.002** at the end of **March 1998**.

The 1998 Fort Calhoun Station year-end goal for this indicator is a maximum value of 0.01. The Year 2000 WANO industry goal is 0.020. The maximum index point value for this indicator is **10.0**. The **First Quarter 1998** the FCS Value was **10.0** which compares to the **Fourth Quarter 1997** value of **10.0**.

Data Source: Phelps/Fritts (Manager/Source)
 Accountability: Phelps/Fritts
 Trend: Postive



EMERGENCY AC POWER SYSTEM SAFETY SYSTEM PERFORMANCE

This indicator shows the Emergency AC Power System unavailability value, as defined by WANO in the Safety System Performance Indicator Definitions, for the month of **March 1998**. The Emergency AC Power System unavailability value for **March 1998** was **0.011**. The Emergency AC Power System unavailability value year-to-date was **0.011** and the value for the last 12 months (**April 1997 through March 1998**) was **0.012**.

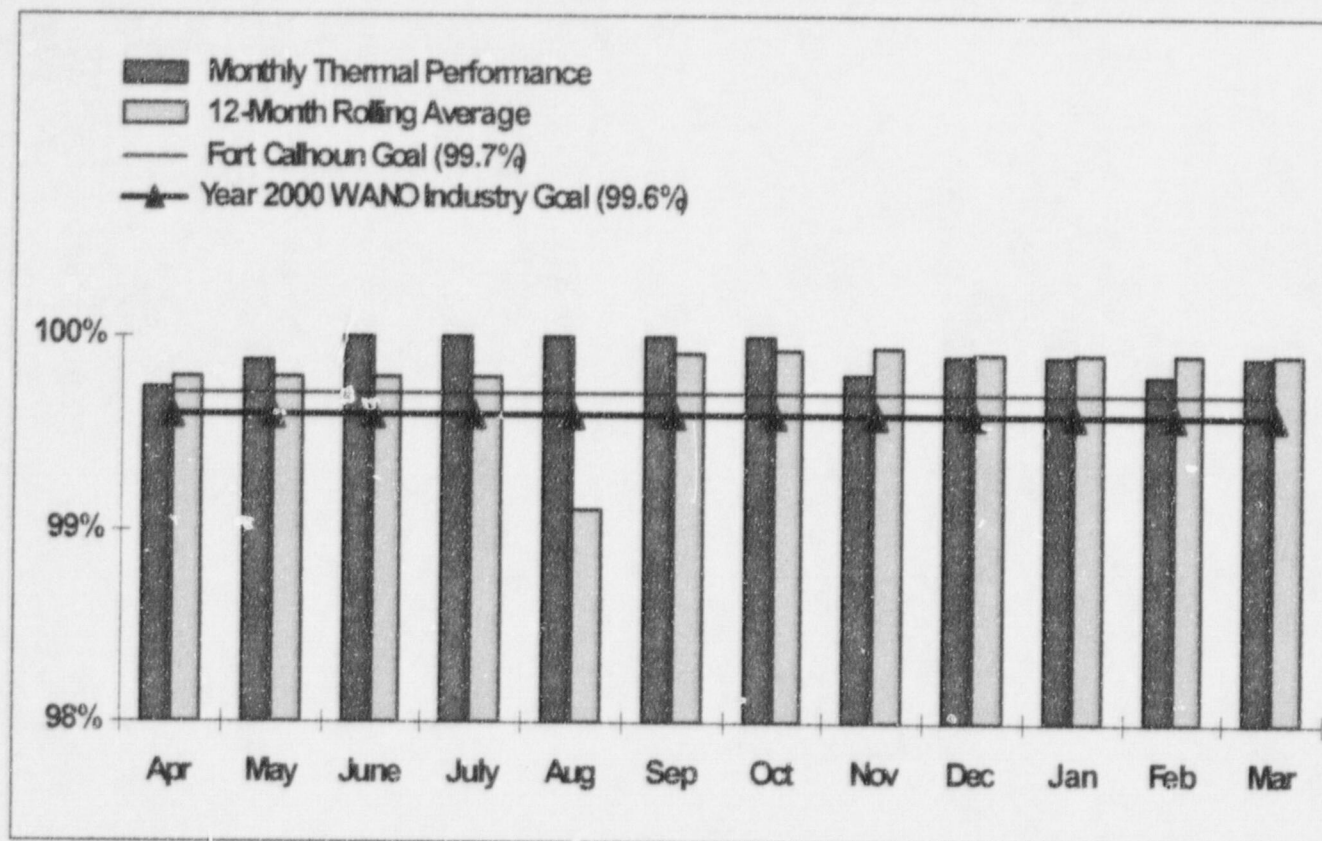
Monthly Statistics

Planned Unavailability: DG-1: 2.6 DG-2: 13.1 Total: 15.7 YTD: 47.1 Hours

Unplanned Unavailability: DG-1: 0.0 DG-2: 0.0 Total: 0.0 YTD: 00.0 Hours

The 1998 Fort Calhoun year-end goal for this indicator is a maximum value of 0.024. The Year 2000 WANO industry goal is 0.025. The maximum index point value for this indicator is 10.0. The **First Quarter 1998** the FCS Value was 9.4 which compares to the **Fourth Quarter 1997** value of 9.4.

Data Source:	Phelps/Ronning (Manager/Source)
Accountability:	Phelps/Ronning
Trend:	None



THERMAL PERFORMANCE

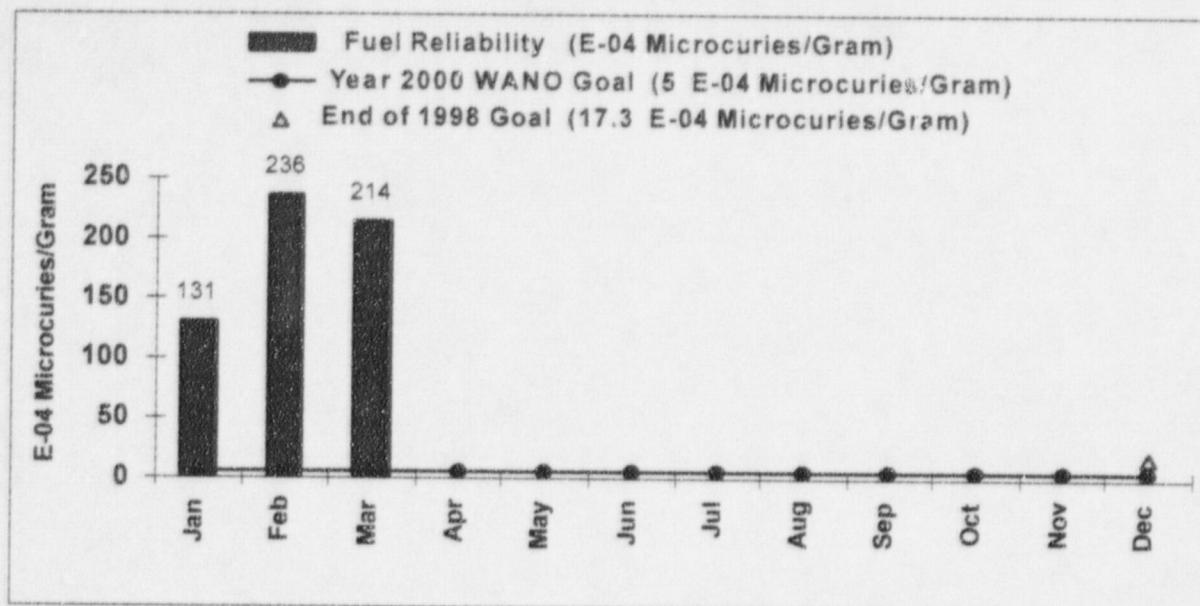
This indicator shows the monthly Thermal Performance Value, the rolling 12-month average, the OPPD goal, and the Year 2000 WANO goal.

The thermal performance value for the month of **March** was **99.9%**. The year to date value was reported as **99.9%**. The 12 month rolling average (**April 1997 through March 1998**) was reported as **99.9%**.

The 1998 Fort Calhoun year-end goal for this indicator is an index value which is > 99.7%. The Year 2000 WANO industry goal is 99.6%.

The maximum index point value for this indicator is **6.0**. The **First Quarter 1998** the FCS Value was **5.7** which compares to the **Fourth Quarter 1997** value of **5.5**.

Data Source:	Phelps/Naser(Manager/Source)
Accountability:	Phelps/Naser
Trend:	None



FUEL RELIABILITY INDICATOR

The monthly FUEL RELIABILITY INDICATOR (FRI) for March 1998 was 214 E-04 microcuries/gram based on steady state data at 100% power. NOTE: The end of 1997 goal was 147 E-04 microcuries/gram, and the end of 1998 goal for this indicator is 17.3 E-04 microcuries/gram.

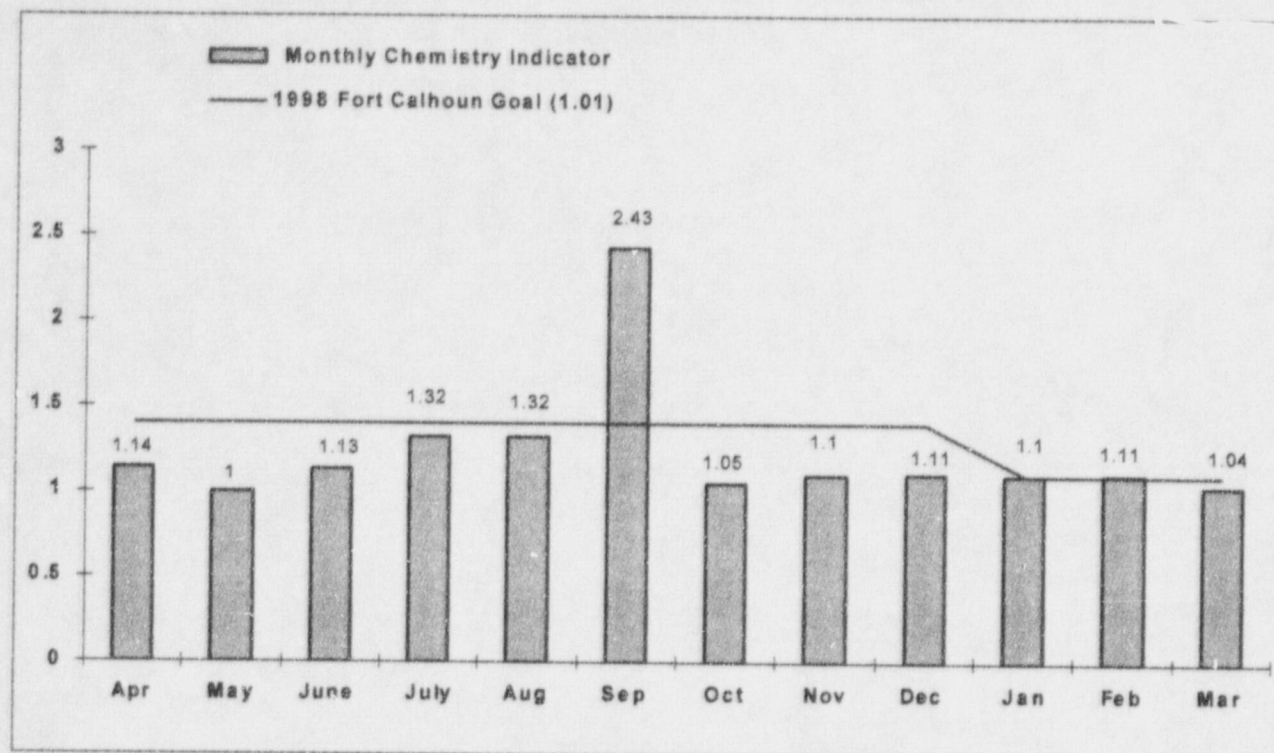
Coolant activity data through March 31, 1998 shows the presence of 33 leaking rods at core average power. If the leaking rods are at 70% or 50% of core average power, the number of leaking rods changes to 56 and 92, respectively. The increase in predicted failures from January is primarily due to the increase in Xenon-133. The Cesium data indicates the leaking fuel is most likely in the second and third burned fuel regions (Batches S and T) which have the original grid design. These batches will be permanently discharged from the reactor core during the spring 1998 refueling outage. However, unusual RCS activity data from early December may indicate the presence of one high power failure from the new fuel region (Batch U) with the new grid design. Confirmation of the fuel region(s) with failures cannot occur until the fuel inspection campaign during the spring 1998 refueling outage.

The Cycle 17 monthly FRI is trending slightly lower than the Cycle 16 FRI at the same time in the fuel cycle due to the large contribution of the Iodine-134 from the "tramp" Uranium. The Iodine-134 activity is released to the coolant from the tramp activity that is plated out on fuel assembly surfaces due to fuel failures in prior cycles. In the FRI equation, the Iodine-134 activity is subtracted from the Iodine-131 activity. This cycle, the tramp activity is trending two times higher than Cycle 16 while the Iodine-131 is trending similar to the Cycle 16 values at the same point in the cycle. Therefore, the Cycle 17 calculated FRI value is trending lower.

The plant is currently in Action Level 4 Standing Order SO-O-43, "Fuel" Reliability Action Plan", based on the current 33 core average power failures.

The maximum index point value for this indicator is 8.0. The **First Quarter 1998** the FCS Value was 0.0 which compares to the **Fourth Quarter 1997** value of 0.3.

Data Source:	Guinn/Roenigk (Manager/Source)
Accountability:	Chase/Stafford
Trend:	Adverse



SECONDARY SYSTEM CHEMISTRY

Steady state plant conditions required for calculating the Secondary System Chemistry Performance Index (CPI) are as follows:

February was consistent with recent trends. Morpholine injection continues and the evaluation on iron reduction continues.

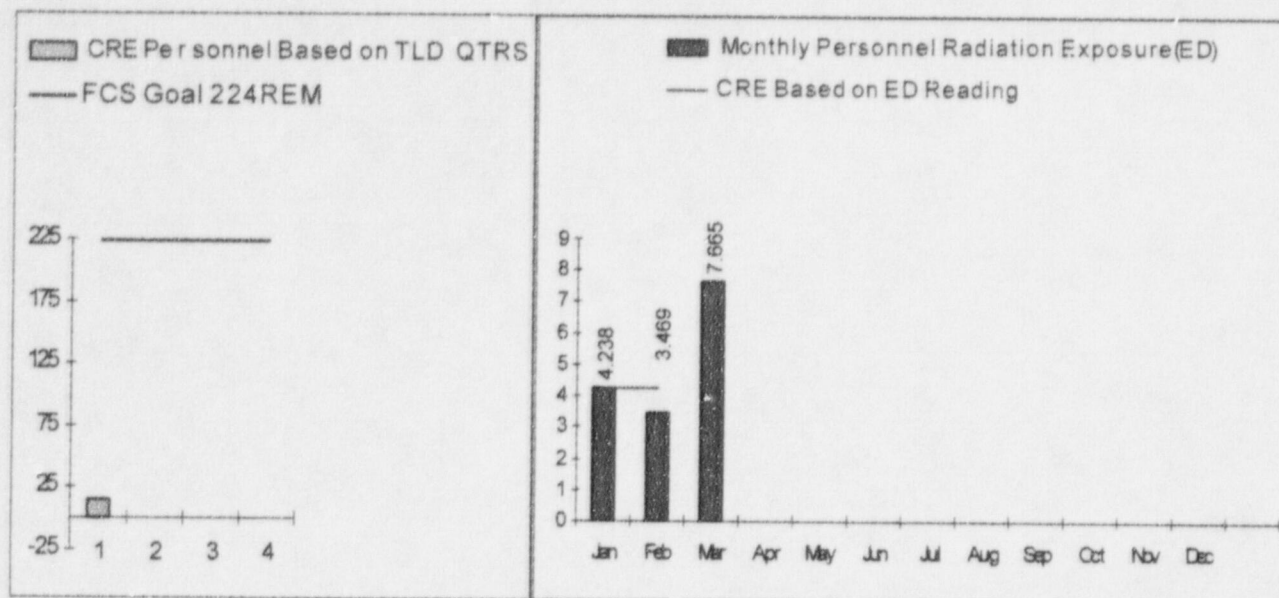
The CPI for **March 1998** is **1.04**. The CPI value for the past 12 months (**April 1997 through March 1998**) was **1.23**. The CPI value in the industry's upper quartile is 1.17. Six parameters are used in the CPI calculation. Four of the parameters were below the WANO mean value which are as follows: 1) steam generator chloride, 2) sulfate, 3) feedwater iron, and condensate pump discharge dissolved oxygen. Slight increase in CPI observed this month due to power reduction for work on Stator Cooling Heat Exchangers. Morpholine injection began this month for iron reduction. Results of analysis are inconclusive at this time. Trending continues.

The maximum index point value for this indicator is **7.00**. The **First Quarter 1998** the FCS Value was **5.60** which compares to the **Fourth Quarter 1997** value of **5.0**.

Data Source: Hamilton/Ostien (Manager/Source)

Accountability: Hamilton

Trend: None



COLLECTIVE RADIATION EXPOSURE

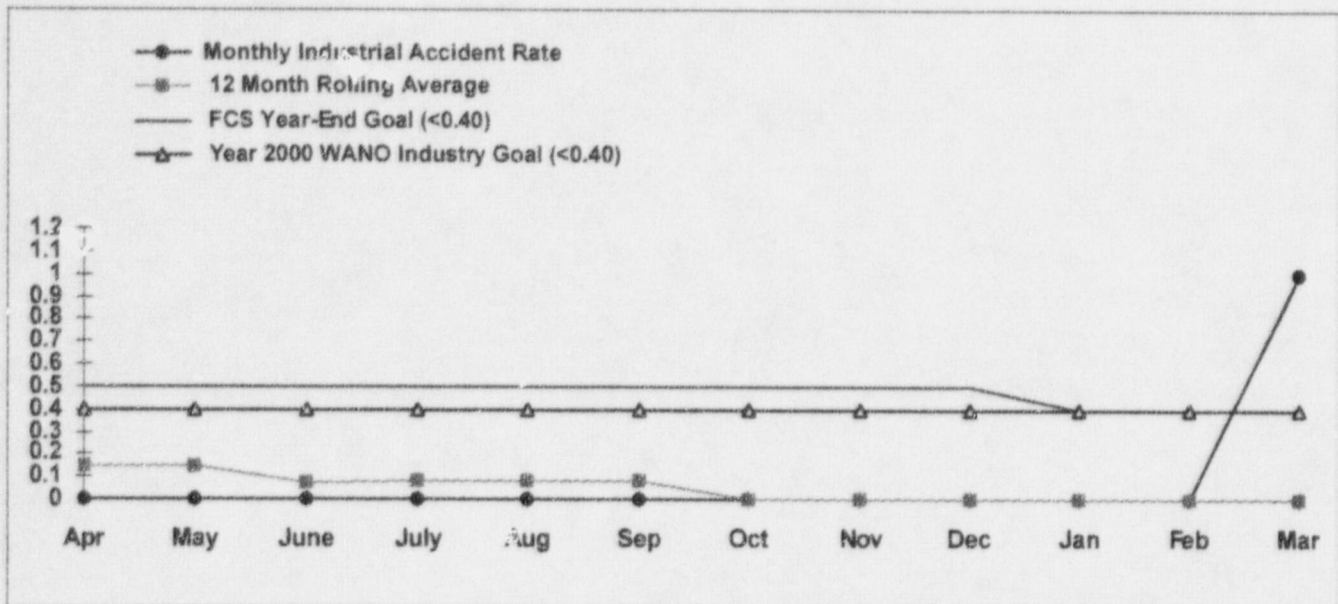
The 1998 goal for Collective Radiation Exposure (CRE) at Fort Calhoun Station was established for a Total Dose of 224.0 person-rem, based on TLD readings. Dose is tracked monthly by obtaining Electronic Dosimeter (ED) readings, until the Quarterly TLD readings are obtained. The exposure for **March 1998** was **7.660** Person-rem (SRD).

Dose	FCS Goal Person-Rem	First Qtr.	Second Qtr.	Third Qtr.	Fourth Qtr.
Total Person-Rem	224.0	15.302			

The total 3 year CRE value, from the **First Quarter 1996 through the Fourth Quarter of 1997**, was **405.090** Person-Rem which averages out to **135.030** Person-Rem per year. The Year 2000 WANO industry goal for Collective Radiation Exposure is 107 person-rem per year. The maximum index point value for this indicator is **8.00**. The **First Quarter 1997** the FCS CRE Value was **7.0** compared to the **Fourth Quarter 1997** CRE Value of **7.0**.

Data Source: Chase/Williams (Manager/Source)
 Accountability: Chase/Gebers
 Trend: None

SEP 54



INDUSTRIAL SAFETY ACCIDENT RATE

The purpose of this indicator is to monitor progress in improving industrial safety performance for utility personnel permanently assigned to the station. Contractor work-hours are not included in the indicator. This indicator is defined as the number of accidents per 200,000 work-hours worked for all utility personnel permanently assigned to the station that result in any of following:

- one or more days of restricted work (excluding the day of the accident.)
- One or more days away from work (excluding the day of the accident.)
- Fatalities.

$$\text{ISAR} = \frac{(\text{number of restricted-time accidents} + \text{lost-time accidents} + \text{fatalities}) \times 200,000}{(\text{number of station person-hours worked})}$$

The Fort Calhoun Station industrial safety accident rate at the end of **March 1998 was 0.63**. The 12 month rolling average (**April 1997 through March 1998**) was **one**. The year to date value was **1** at the end of **March 1998**.

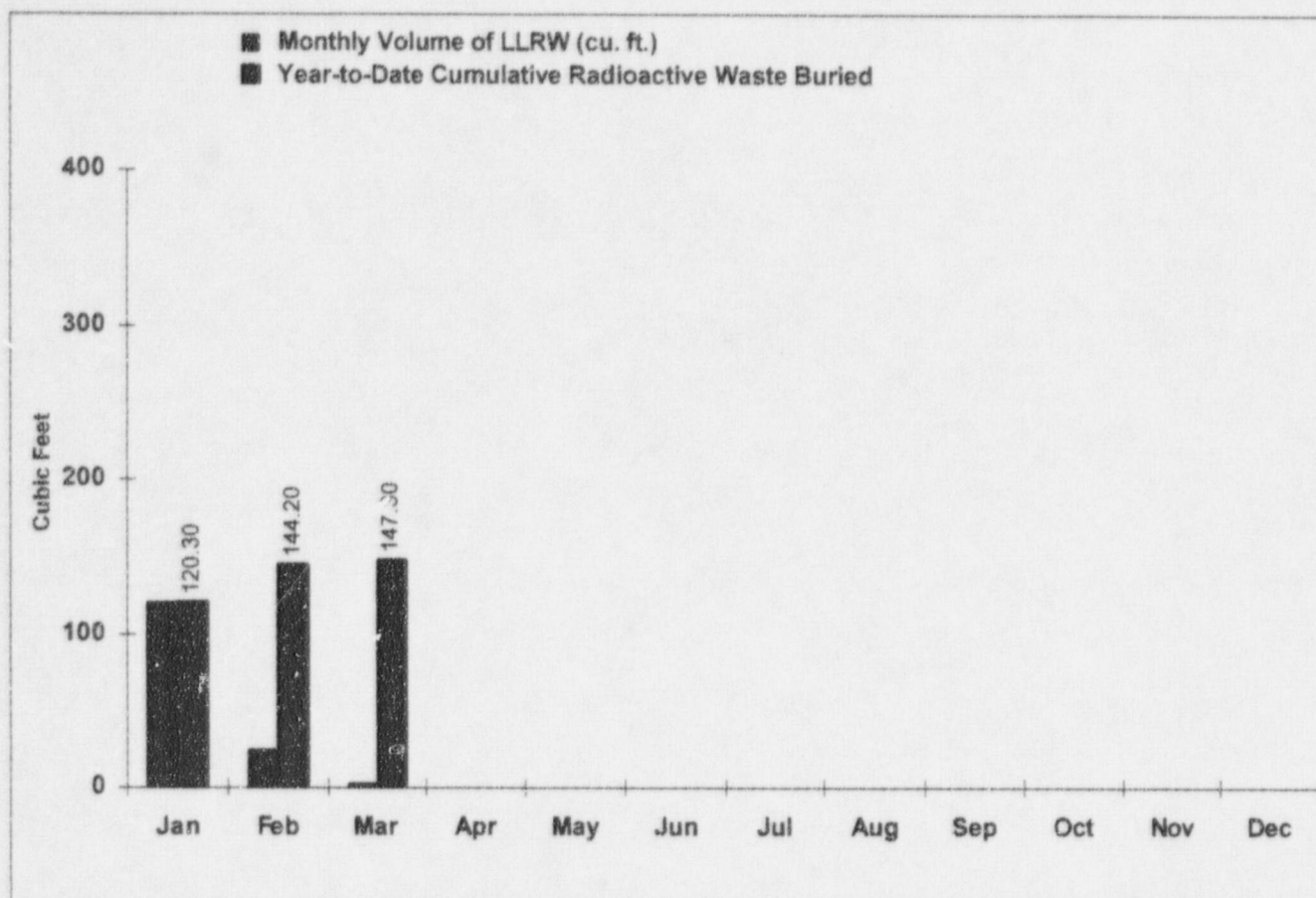
There was **one** restricted-time and **one** lost-time accident in **March 1998**. The 1998 Fort Calhoun year-end goal is ≤ 0.40 . The Year 2000 WANO industry goal is ≤ 0.40 .

The maximum index point value for this indicator is **5.0**. The **First Quarter 1998** the FCS Value was **5.0** which compares to the **Fourth Quarter 1997** value of **5.0**.

Data Source: Sorensen/Blumenthal (Manager/Source)
Chase/Booth (Manager/Source)

Accountability: Chase/Short

Trend: Positive



VOLUME OF LOW-LEVEL RADIOACTIVE WASTE

This indicator shows the volume of the monthly Radioactive Waste buried and the cumulative year-to-date radioactive waste buried. The Fort Calhoun goal is 800 cu.ft.

	<u>Ft³</u>	<u>m³</u>
Amount of solid radwaste shipped off-site for processing during current month :	0.0	0.00
Volume of solid radwaste buried during March 1998 :	3.1	0.09
Cumulative volume of solid radioactive waste buried in 1998 :	147.3	4.17
Amount of solid radwaste in temporary storage :	00.0	0.00

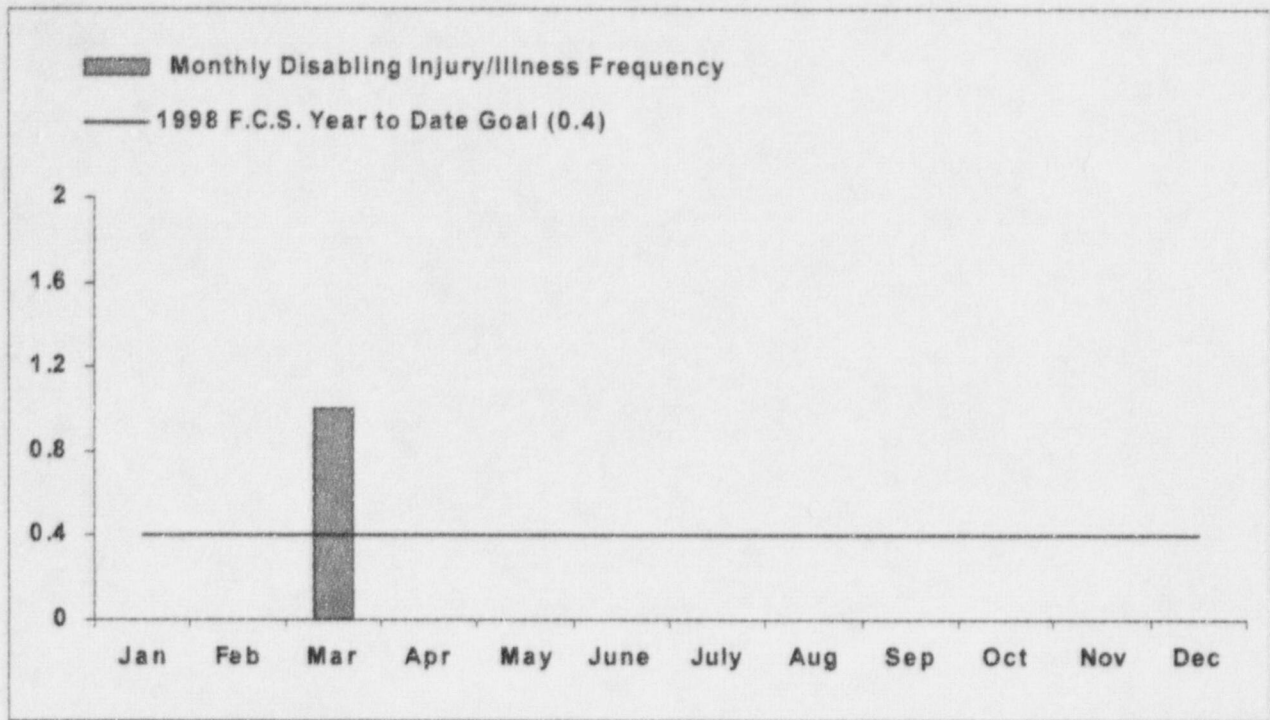
The Year 2000 WANO industry goal is 30 cubic meters (1,071 cubic feet) per year. The industry upper ten percentile value is approximately 27.33 cubic meters (965.3 cubic feet) per year.

Data Source: Chase/Breuer (Manager/Source)
 Accountability: Chase/Gebbers
 Trend: None

SEP 54

SAFE OPERATIONS

Goal: A proactive, self-critical and safety conscious culture is exhibited throughout the nuclear organization. Individuals demonstrate professionalism through self-ownership and personal initiative and open communication.



DISABLING INJURY/ILLNESS FREQUENCY RATE (LOST-TIME ACCIDENT RATE)

This indicator shows the **March 1998** Disabling Injury/Illness Frequency Rate. For the month of **March 1998** the disabling injury/illness frequency rate was **0.63**. There was **one** disabling injury/illness case reported for **March 1998**. An employee was performing Ultra-Sonic Testing underneath some piping in the plant. While working in an awkward position, the person experienced muscle spasms in the lower back. The employee received pain medication for treatment of the injury.

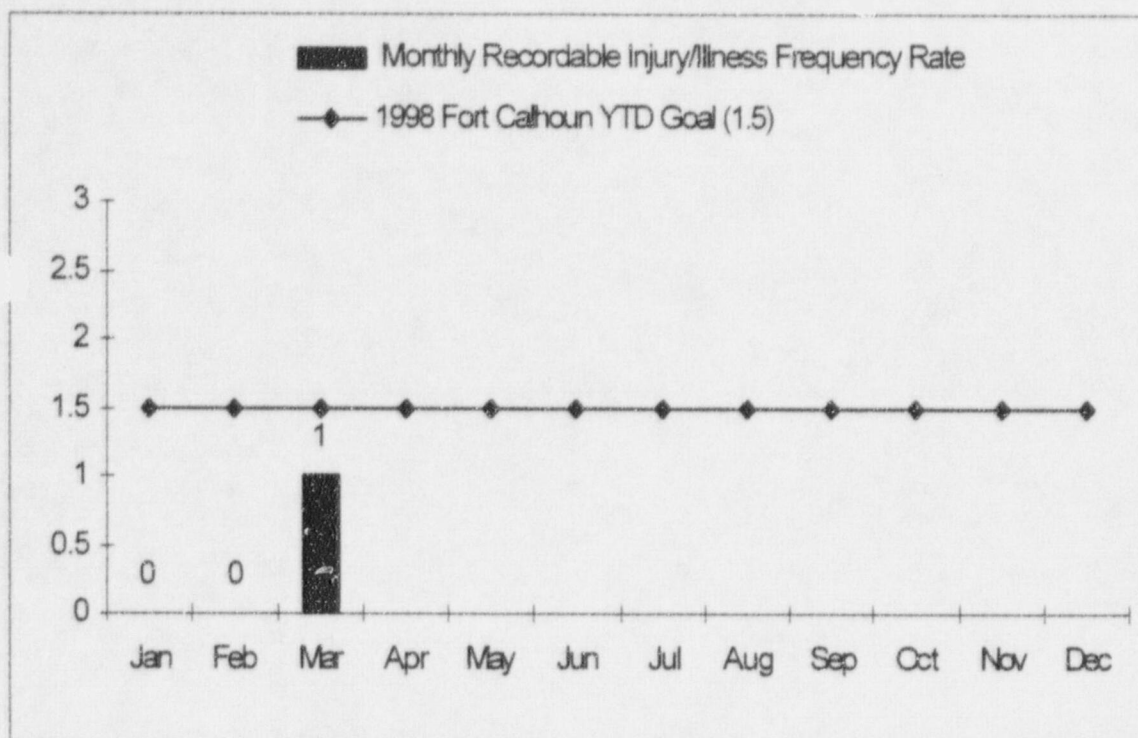
The 1998 Fort Calhoun Station year-end goal for this indicator is a maximum value of 0.4.

Data Source: Sorensen/Blumenthal (Manager/Source)

Accountability: Chase/Gebers

Trend: Positive

SEP 25, 26 & 27



RECORDABLE INJURY/ILLNESS FREQUENCY RATE

This indicator shows the monthly Recordable Injury/Illness Frequency Rate. A recordable injury/illness case is reported if personnel from any of the Nuclear Divisions are injured on the job and require corrective medical treatment beyond first aid.

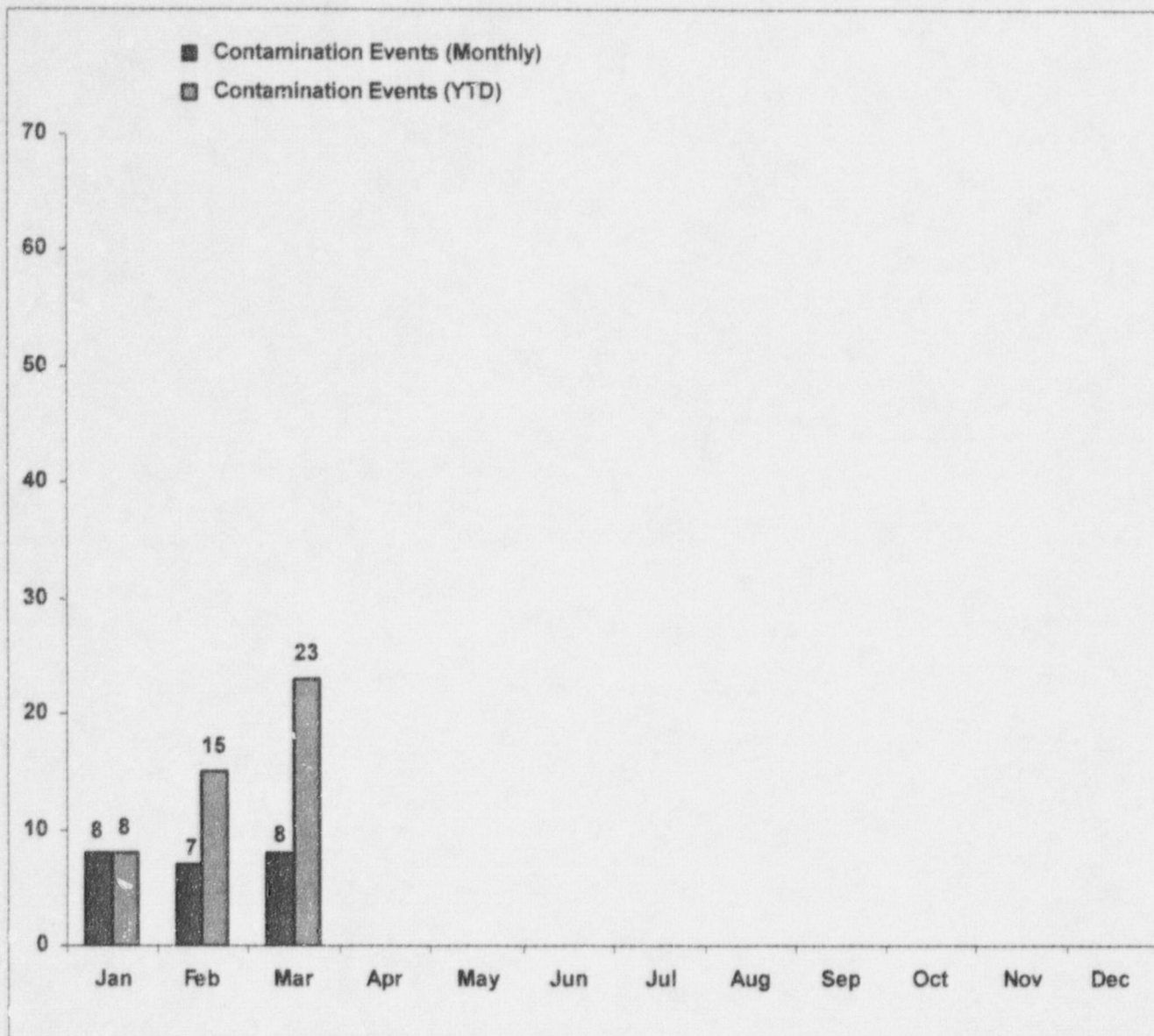
The recordable injury/illness case numbers for the month of **March 1998** were **one**. The 1998 Fort Calhoun Station year-to-date goal for this indicator is a maximum value of 1.5.

Data Source: Sorensen/Blumenthal (Manager/Source)

Accountability: Gebers

Trend: None

SEP 15, 25, 26 & 27



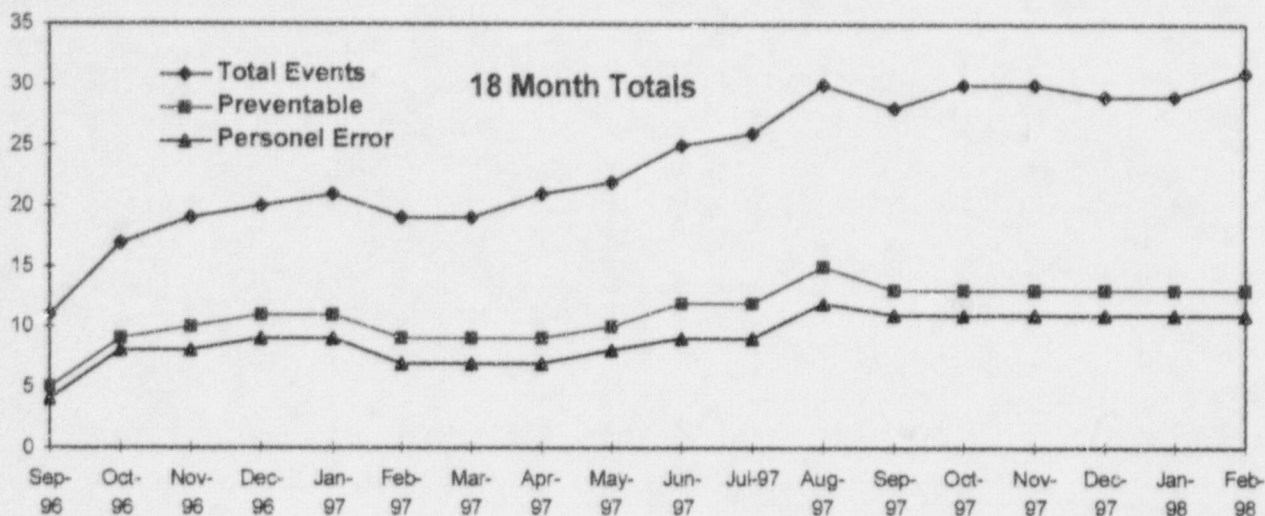
CLEAN CONTROLLED AREA CONTAMINATIONS $\geq 1,000$ DISINTEGRATIONS/MINUTE PER PROBE AREA

This indicator shows the Personnel Contamination Events in the Clean Controlled Area for contaminations $\geq 1,000$ disintegrations/minute per probe area for **March 1998**.

There were **8** personnel contamination events in **March 1998**. The total year-to-date of Personnel events is **23** at the end of **March 1998**.

Data Source: Chase/Williams (Manager/Source)
 Accountability: Chase/Gebers
 Trend: None

SEP 15 & 54



PREVENTABLE/PERSONNEL ERROR LERs

This indicator depicts 18-month totals for numbers of "Preventable" and "Personnel Error" LERs.

The graph shows the 18-month totals for preventable LERs, the 18-month totals for Personnel Error LERs, and the Personnel Error totals for each month. The LERs are trended based on the LER event date as opposed to the LER report date.

In **February 1998**, there were **two** events which was subsequently reported as LERs. **No** LERs were categorized as "Preventable" and **No** LERs were categorized as "Personnel Error" during the month of **February**. The total LERs for the year 1998 are **two**. The total Personnel Error LERs for the **year 1998** are **zero**.

The year-to-date goal for this indicator is that the year-end values for the 18-month totals not to exceed 5 Preventable and 2 Personnel Error LERs.

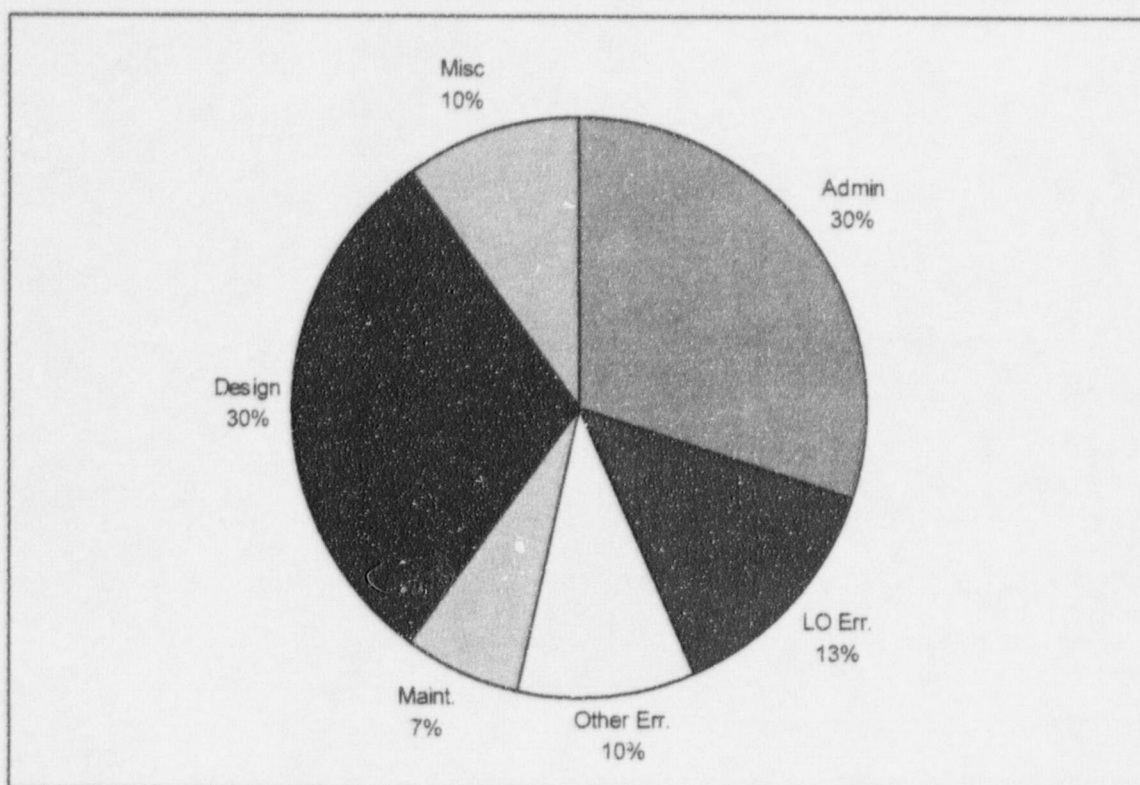
NOTE: Due to the way LERs are tracked & reported, this indicator lags by one-month.

Data Source: Tills/Matzke (Manager/Source)

Accountability: Chase

Trend: None

SEP 15



LICENSEE EVENT REPORT (LER) ROOT CAUSE BREAKDOWN

This indicator shows the LERs by event date broken down by Root Cause Code for each of the past eighteen months from **September 1, 1996**, through **February 28, 1998**. To be consistent with the Preventable/Personnel Error LERs indicator, this indicator is reported by the LER event date, as opposed to the LER report date.

The cause codes are intended to identify possible programmatic deficiencies. For detailed descriptions of these codes, see the "Performance Indicator Definitions" section of this report.

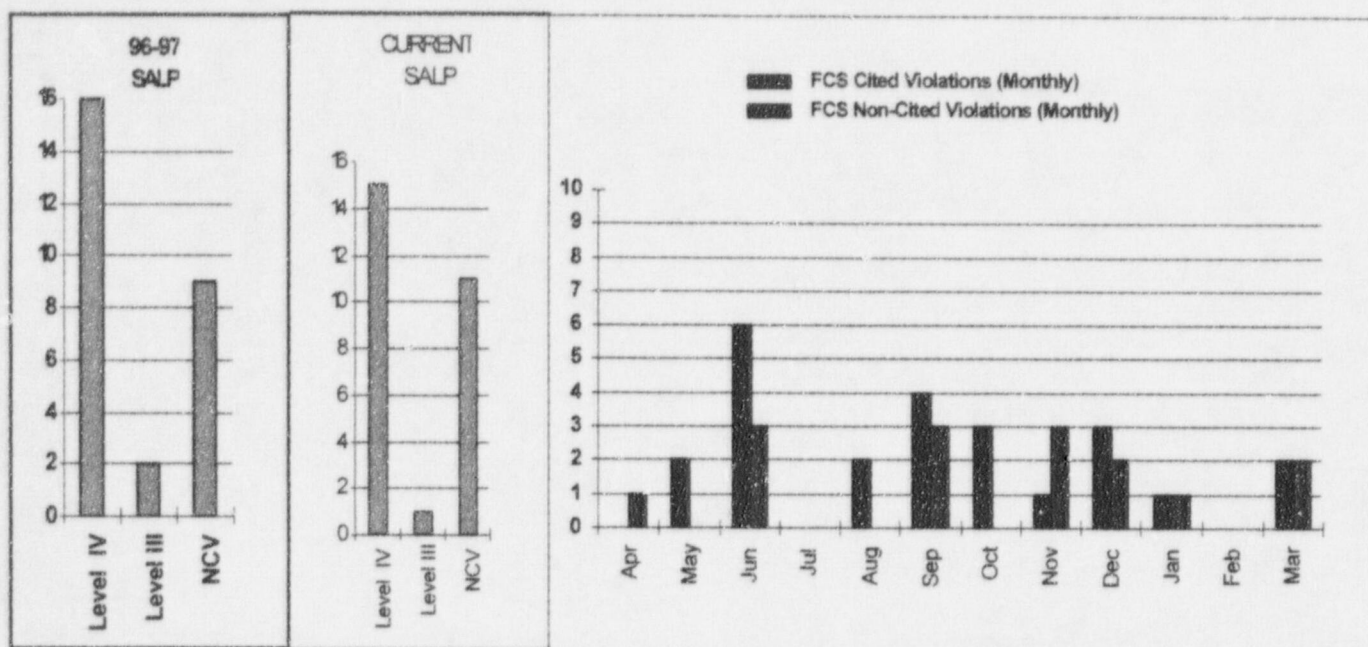
NOTE: Due to the way LERs are tracked & reported, this indicator is one-month behind. There were **two** events in **February 1998** that resulted in LERs. There were **no** missed surveillance tests resulting in LERs during **February 1998**. The 1998 Fort Calhoun monthly goal for this indicator is 0.

Data Source: Tills/Matzke (Manager/Source)

Accountability: Chase

Trend: None

SEP 60 & 61



VIOLATION TREND

This indicator depicts twelve months of violation data for Fort Calhoun Station. Illustrated monthly are Cited Violations and Non-Cited Violations. The current SALP cycle began on August 3, 1997 and ends on January 30, 1999.

The following inspection reports noting violations were received during **March 1998**:

<u>Violation Level</u>	<u>IER No.</u>	<u>Title</u>
IV (2)	98-02	Quality Assurance Program Inspection (3/25/98)
NCV (2)	98-03	Security (3/27/98)

To date, OPPD has received **twenty seven** violations for inspections completed in the current SALP cycle.

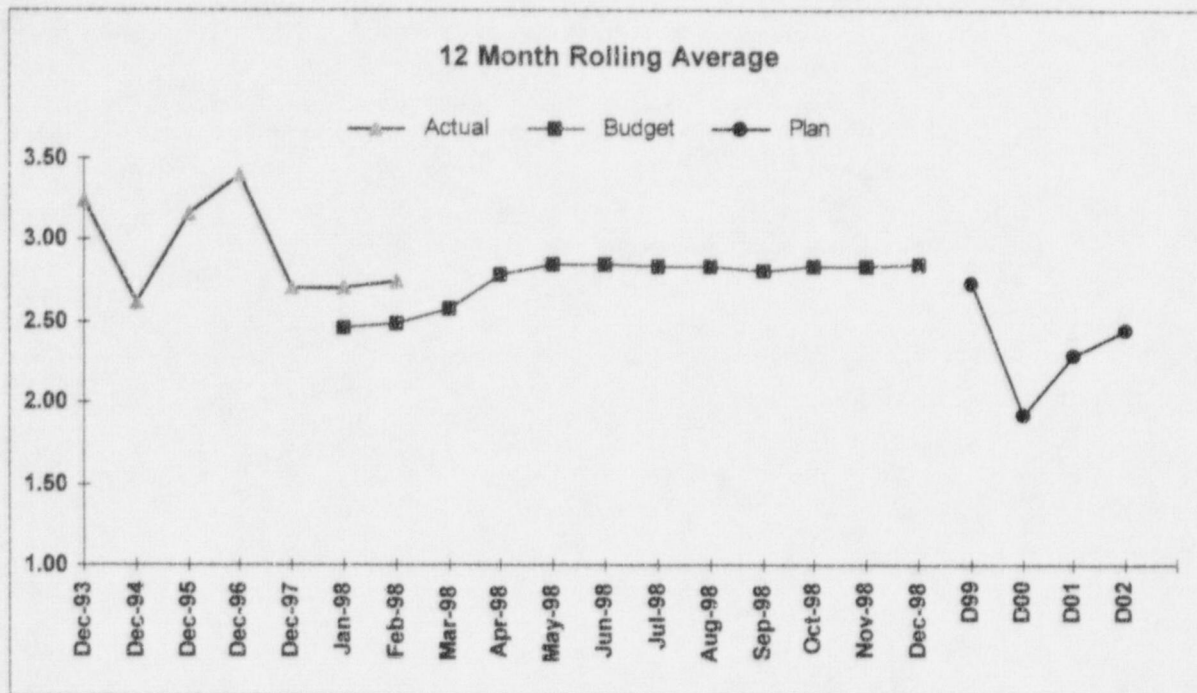
Level III Violations	1
Level IV Violations	15
<u>Non-Cited Violations</u>	<u>11</u>
Total	27

The 1998 Fort Calhoun Station Goal for this performance indicator is to be at or below the cited violation trend for the top quartile plants in Region IV.

Data Source: Tills/Cavanaugh (Manager/Source)
 Accountability: Tills
 Trend: None

COST

Goal: Operate Fort Calhoun Station in a manner that cost effectively maintains nuclear generation as an economically viable contribution to OPPD's bottom line. Cost consciousness is exhibited at all levels of the organization.



CENTS PER KILOWATT HOUR February 1998

The purpose of this indicator is to quantify the economical operation of Fort Calhoun Station. The Cents Per Kilowatt Hour indicator represents the budget and actual cents per kilowatt hour on a 12-month rolling average for the current year. The basis for the budget curve is the approved 1998 revised budget. The basis for the actual curve is the Financial and Operating Report.

The December 31 amounts are also shown for the prior years 1993 through 1997. In addition, the report shows the plan amounts for the years 1999 through 2002 for reference. The basis for the dollars are the Nuclear Long Range Financial Plan and the 1998 Corporate Planning and Budget Review. The basis for the generation is provided by Nuclear Fuels.

The 12-month rolling average unit price period of (March 1997 through February 1998) averaged above the budget due to 12-month rolling expenses exceeding the budget and the 12 month budgeted generation also exceeding the budget. The 12 month rolling average (03/97 through 02/98) is 2.75 cents per kilowatt hour.

The year-to-date average is trending in a positive direction.

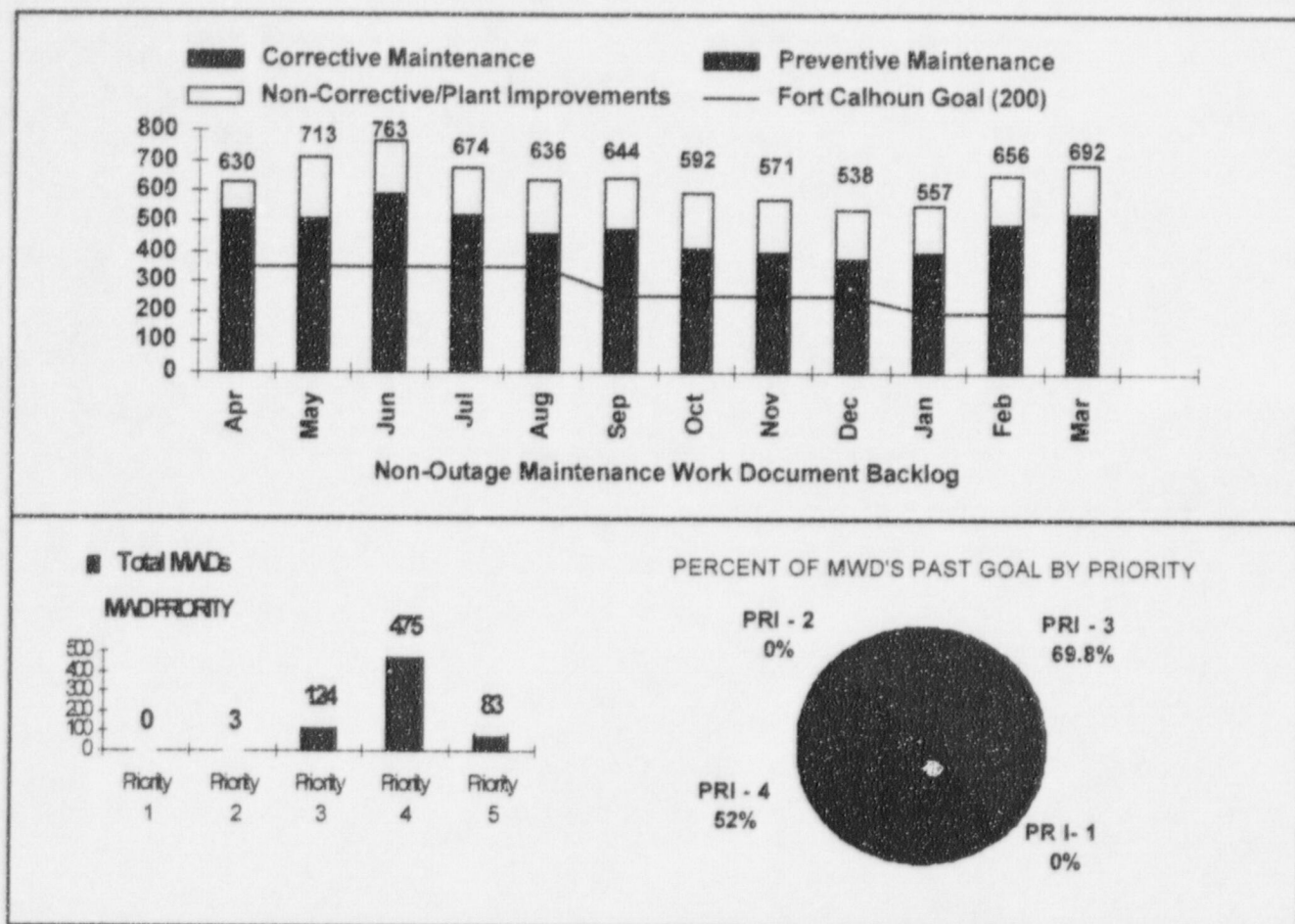
Cents per KWH	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Budget Y-T-D	3.02	2.85	3.16	4.03	3.71	3.45	3.28	3.12	3.03	2.98	2.91	2.85
Actual Y-T-D	2.96	2.85										

NOTE: This information lags by a month due to the short turn around required for processing.

Data Source: Lounsberry/Belek (Manager/Source)
 Accountability: Lounsberry
 Trend: None

DIVISION AND DEPARTMENT PERFORMANCE INDICATORS

Goal: Achieve high standards at Fort Calhoun Station resulting in safe, reliable and cost effective power production.



MAINTENANCE WORKLOAD BACKLOG

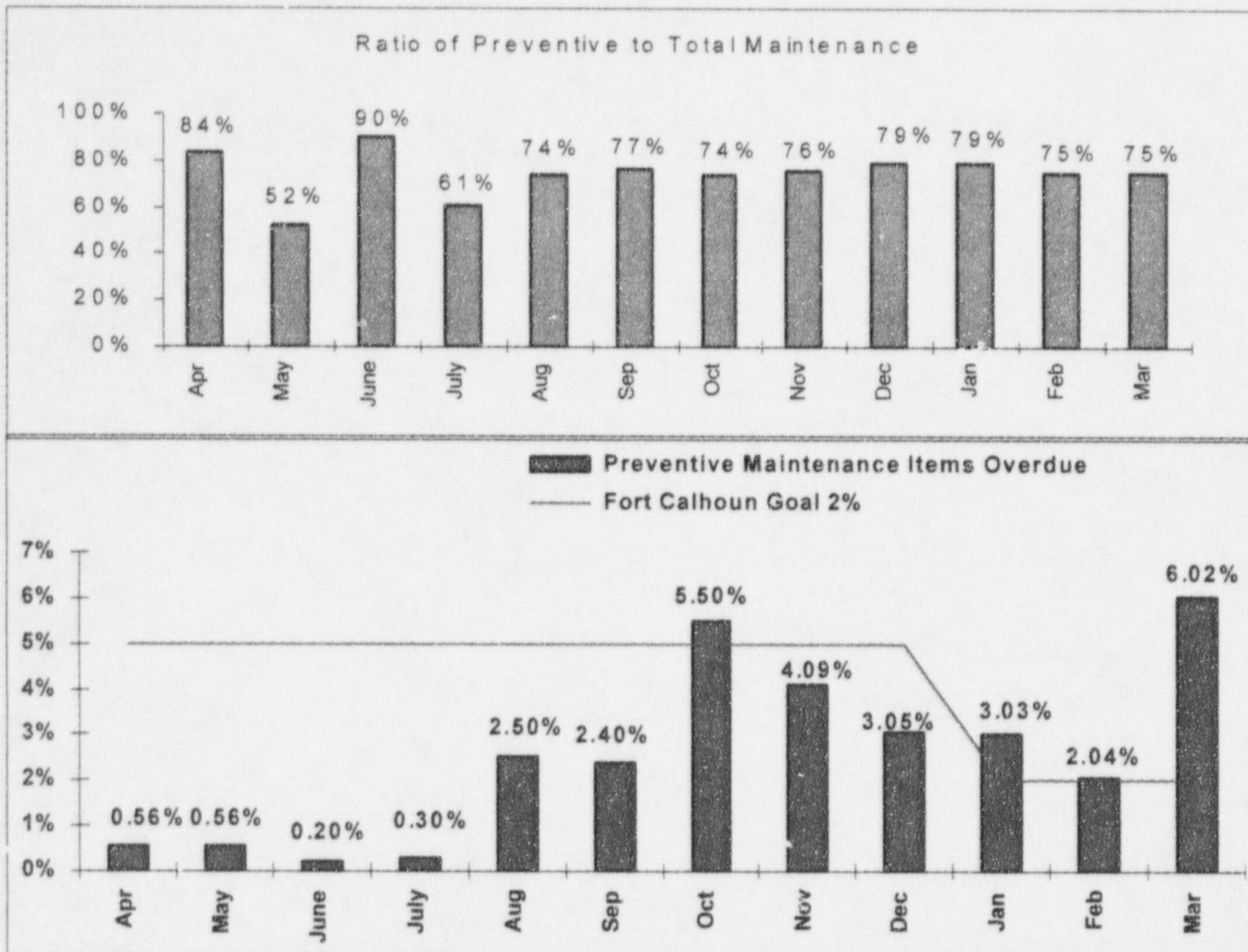
This indicator shows the backlog of non-outage Maintenance Work Documents remaining open at the end of the reporting month. It also includes a breakdown by maintenance classification and priority. The 1998 goal for this indicator is 200 non-outage corrective maintenance MWDs. The current backlog of corrective MWDs is 303 to ensure that the MWD backlog is worked in a timely manner, non-outage maintenance completion goals have been established as follows:

	Goal
Priority 1	24 hours
Priority 2	7 days
Priority 3	30 days
Priority 4	90 days
Priority 5	As resources permit

The Corrective Maintenance workload backlog goal is 200 for 1998.

Data Source: Chase/Johnson (Manager/Source)
 Accountability: Chase/Clemens
 Trend: Needing Increased Management Attention

SEP 36



RATIO OF PREVENTIVE TO TOTAL MAINTENANCE PREVENTIVE MAINTENANCE ITEMS OVERDUE

The top graph shows the ratio of completed non-outage preventive maintenance to total completed non-outage maintenance. The ratio of preventive to total maintenance was **75%** for the month of **March 1998**.

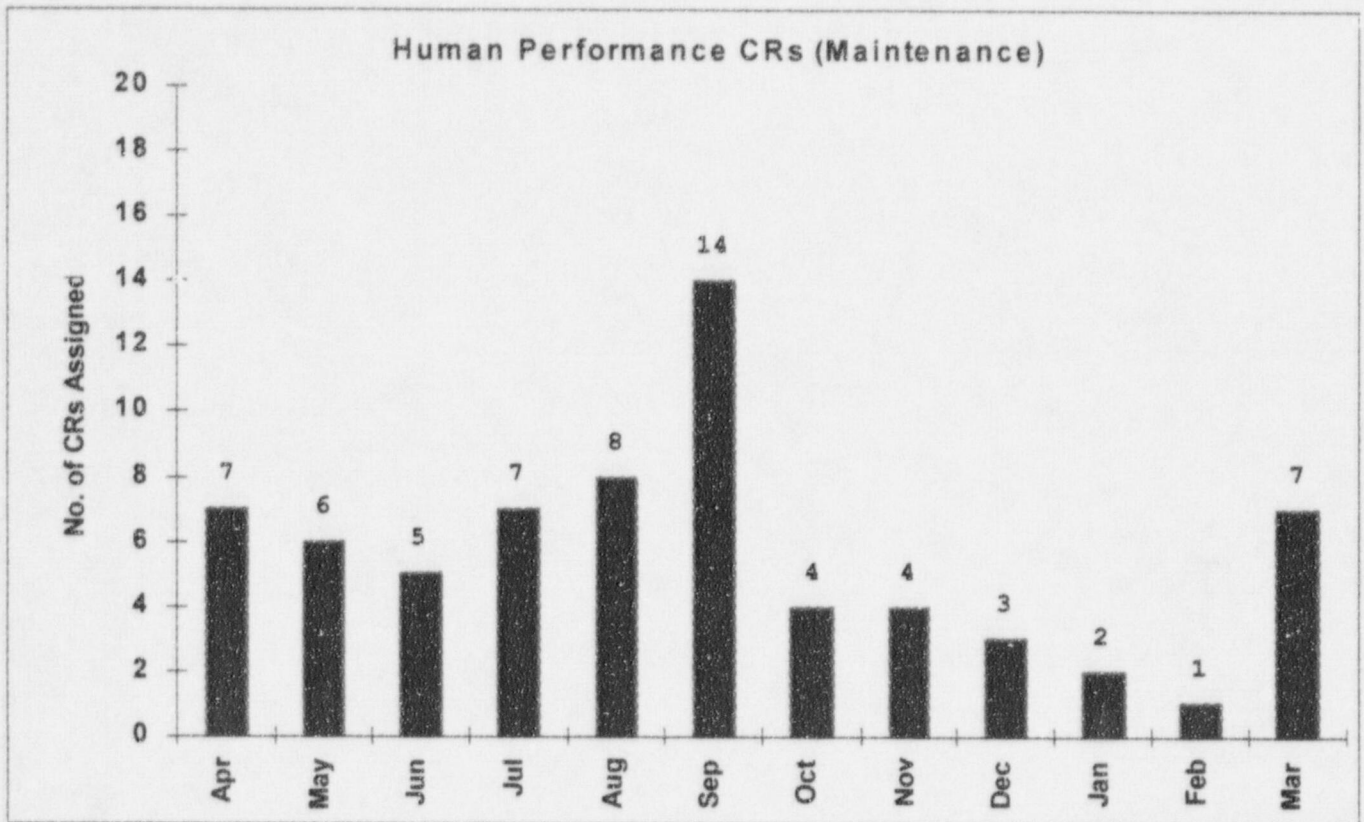
The lower graph shows the percentage of scheduled preventive maintenance items that were not completed by the late finish date. From the period of **February 15th thru March 15th** there were **30 PMs** that were completed late or not completed out of **487** scheduled. The 1998 Fort Calhoun monthly goal for the percentage of preventive maintenance items overdue is a maximum of 2%.

Data Source: Chase/Johnson (Manager/Source)

Accountability: Chase/Clemens

Trend: Needing Increased Management Attention

SEP 41 & 44

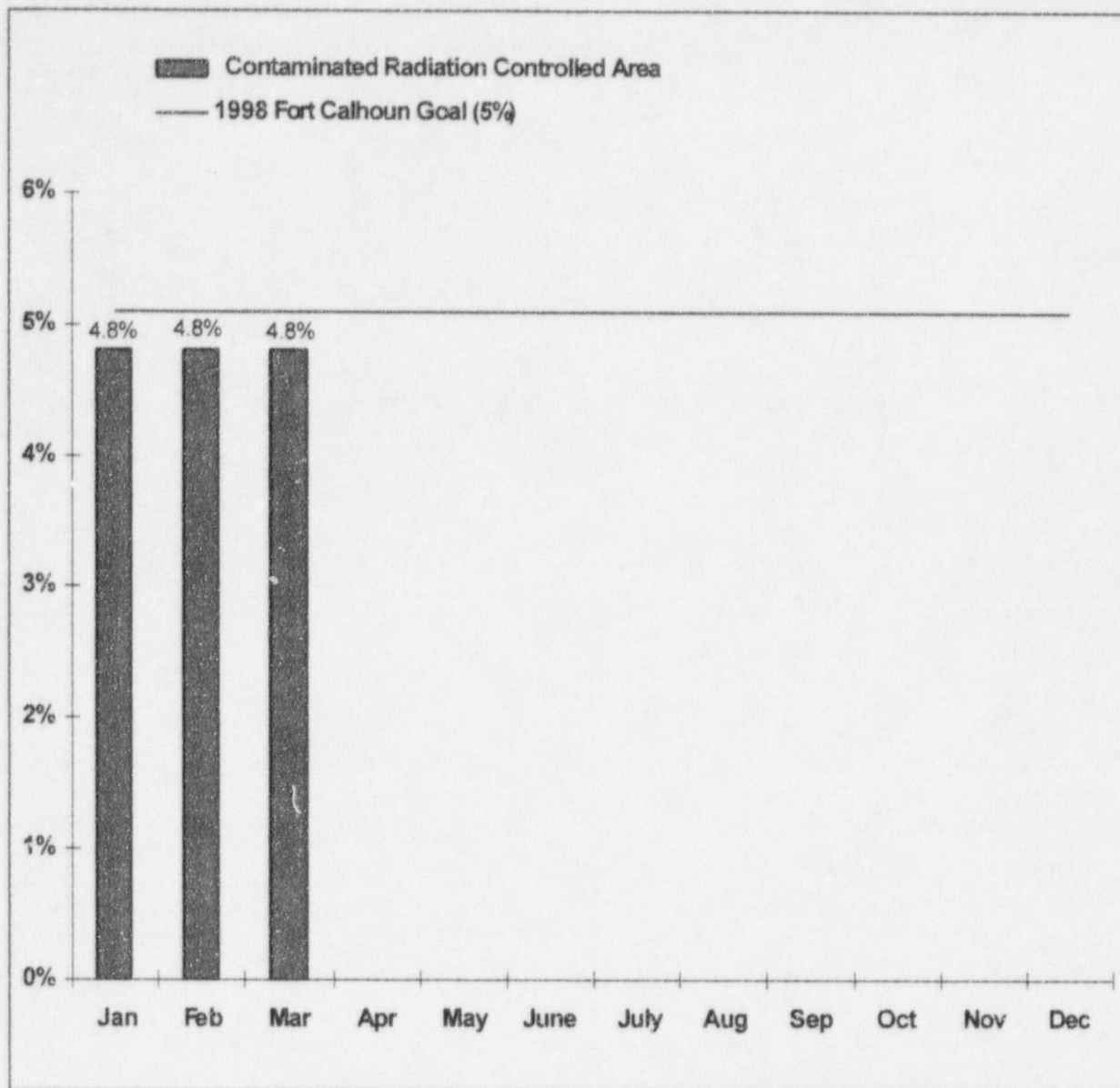


**PROCEDURAL NONCOMPLIANCE INCIDENTS
(MAINTENANCE)**

This indicator shows the number of Condition Reports related to procedural noncompliance incidents assigned to the Maintenance Department.

Data Source: Clemens/Burggraf (Manager/Source)
Accountability: Chase/Clemens
Trend: None

SEP 15, 41 & 44

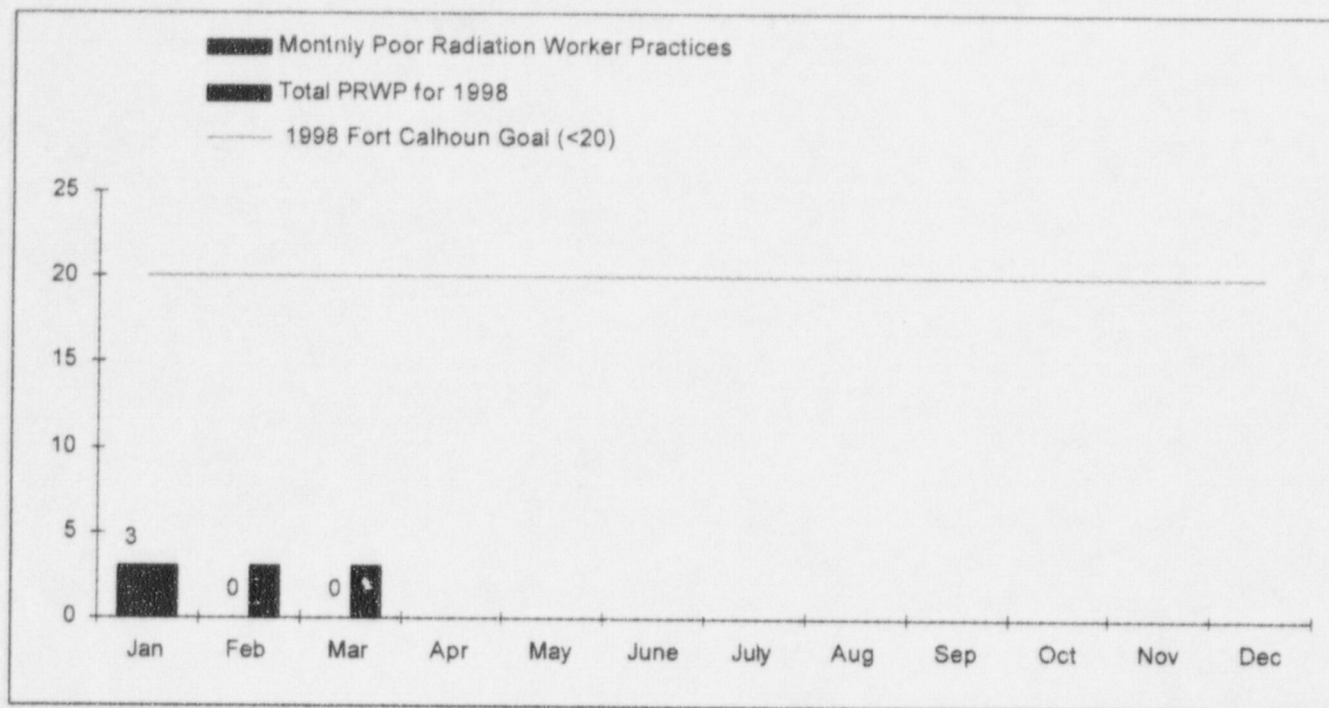


CONTAMINATED RADIATION CONTROLLED AREA

This indicator shows the percentage of the Radiologically Controlled Area (RCA) that is contaminated based on the total square footage of 70475. At the end of **March 1998**, the total contaminated area was **3383** square feet which is **4.8** percent of the RCA. The monthly FCS goal for 1998 is a Maximum of 5% Contaminated Area.

Data Source: Chase/Williams (Manager/Source)
 Accountability: Chase/Gebers
 Trend: Positive

SEP 54



RADIOLOGICAL WORK PRACTICES PROGRAM

The Radiological Work Practices Program Indicator shows the number of Poor Radiological Work Practices (PRWPs) which were identified during the reporting month.

The number of PRWPs which are identified each month should indirectly provide a means to qualitatively assess supervisor accountability for their workers' radiological performance. This indicator needs increased management attention due to a 3 month increasing trend of poor radiation worker practices based on YTD.

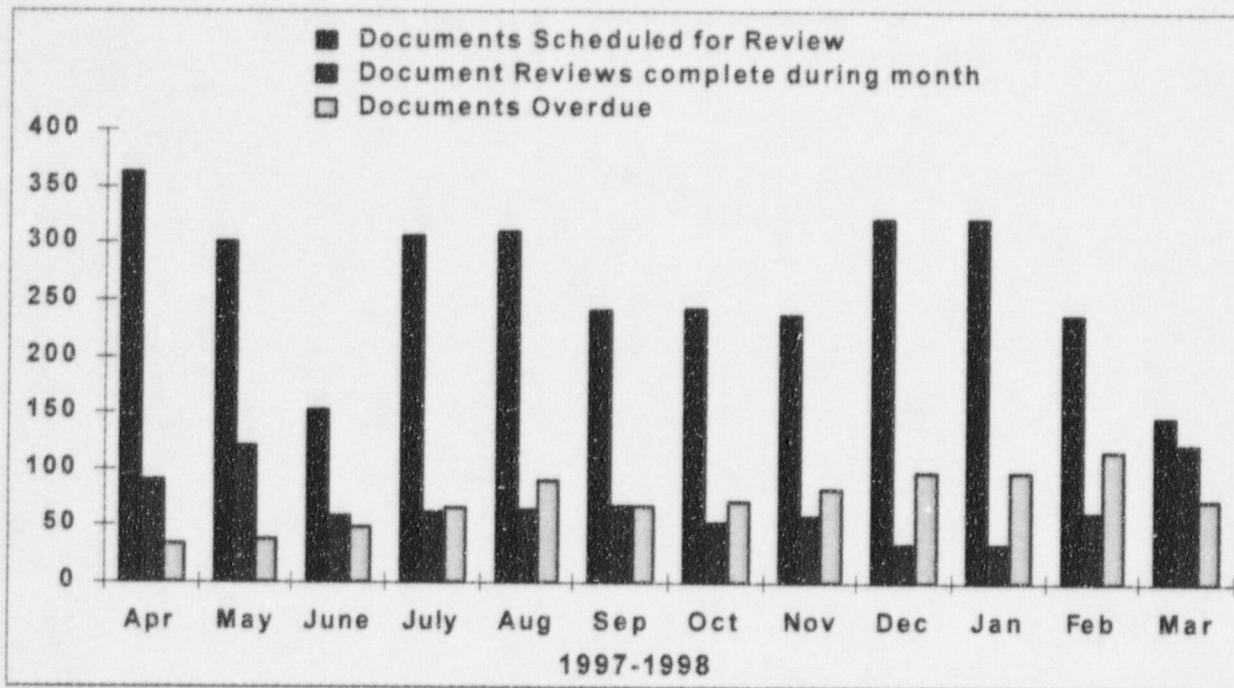
During the month of **March**, there was **0** PRWP identified.

There have been a total of **3** Poor Radiation Worker Practices in 1998.

The 1998 FCS goal is <20 PRWPs, the 1997 goal was <15 PRWPs.

Data Source: Chase/Williams (Manager/Source)
 Accountability: Chase/Gebbers
 Trend: None

SEP 52



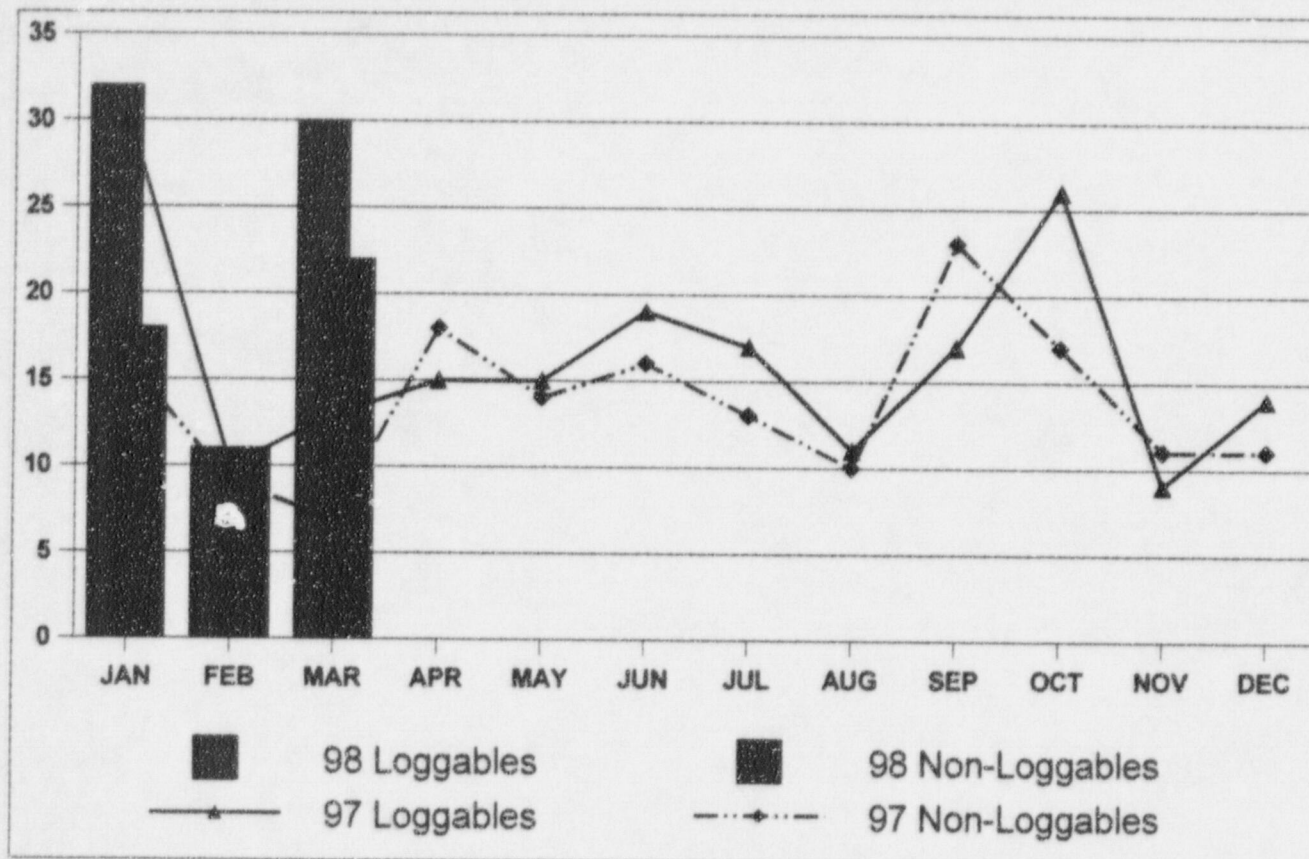
DOCUMENT REVIEW

The Document Review indicator shows the number of completed, scheduled, and overdue (greater than 6 months past the scheduled due date) biennial reviews for the reporting month. The documents reviews are performed in-house and include Special Procedures, the Site Security Plan, Maintenance Procedures, Preventive Maintenance Procedures, and the Operating Manual.

During **March 1998**, there were **147** document reviews scheduled, while **122** reviews were completed. At the end of the month, there were **73** document reviews more than 6 months overdue. There were **15** new documents initiated during **March 1998**.

Data Source: Ponec/Plath (Manager/Source)
 Accountability: Ponec
 Trend: None

SEP 46



SECURITY INCIDENTS

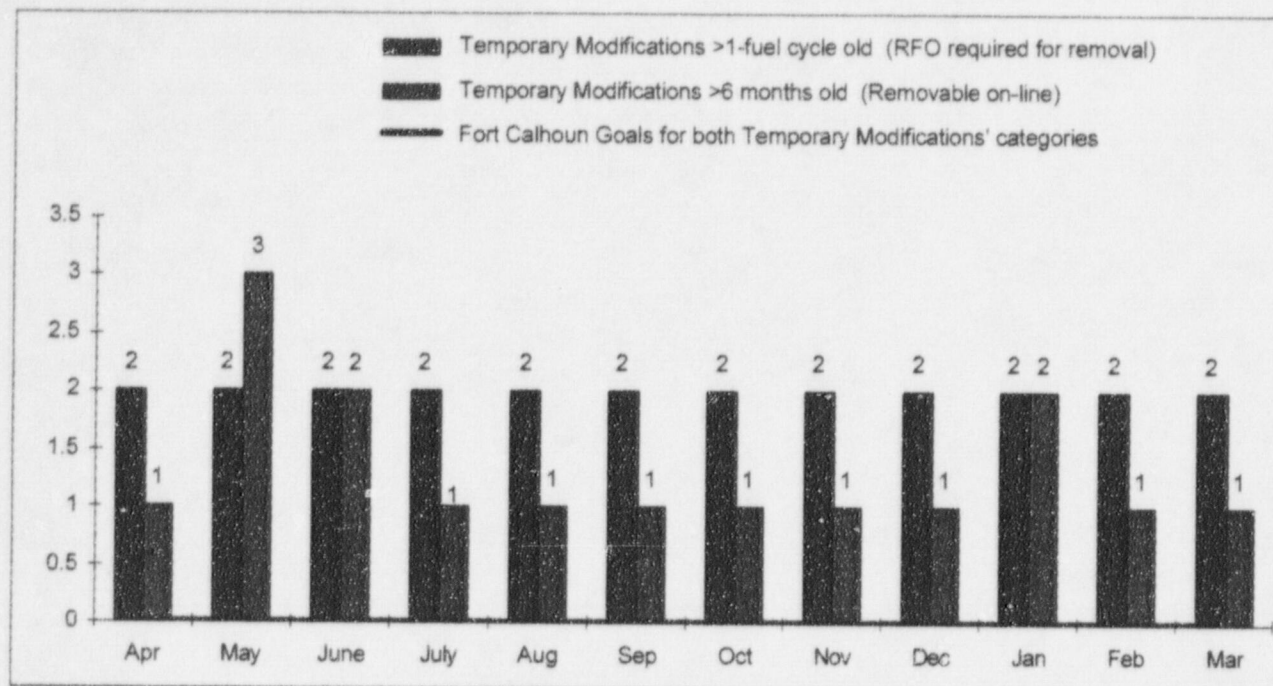
The Loggable and Non-Loggable Incident (Security) Indicators are depicted in the following chart. The chart depicts the total number of loggable and non-loggable human error events, system failures and access denials which occurred during the reporting month.

During the month of March 1998, there were 30 loggable incidents and 22 non-loggable incidents identified. 31% of all incidents recorded this month were human error events. 29% percent of all incidents were access denials. Of loggable events, 27% were human performance errors and 53% were system failures. 38% of the loggable system failures were environmental. There were sixteen (16) human error events, eleven (11) being internal. There were eight (8) security force error events during the reporting period, two (2) of which were loggable. Internal human error events continue to be an organizational focus.

This indicator provides information on security performance for Safety Enhancement Program (SEP) Item No. 58.

Data Source: Sefick/Clark (Manager/Source)
 Accountability: Sefick
 Trend: None

SEP 58



TEMPORARY MODIFICATIONS

This indicator provides information on the number of Temporary Modifications (TMs) greater than one fuel cycle old requiring a refueling outage (RFO) for removal and the number of TMs removable on-line that are greater than six months old. The 1998 Fort Calhoun monthly goals for both of the TM categories are zero.

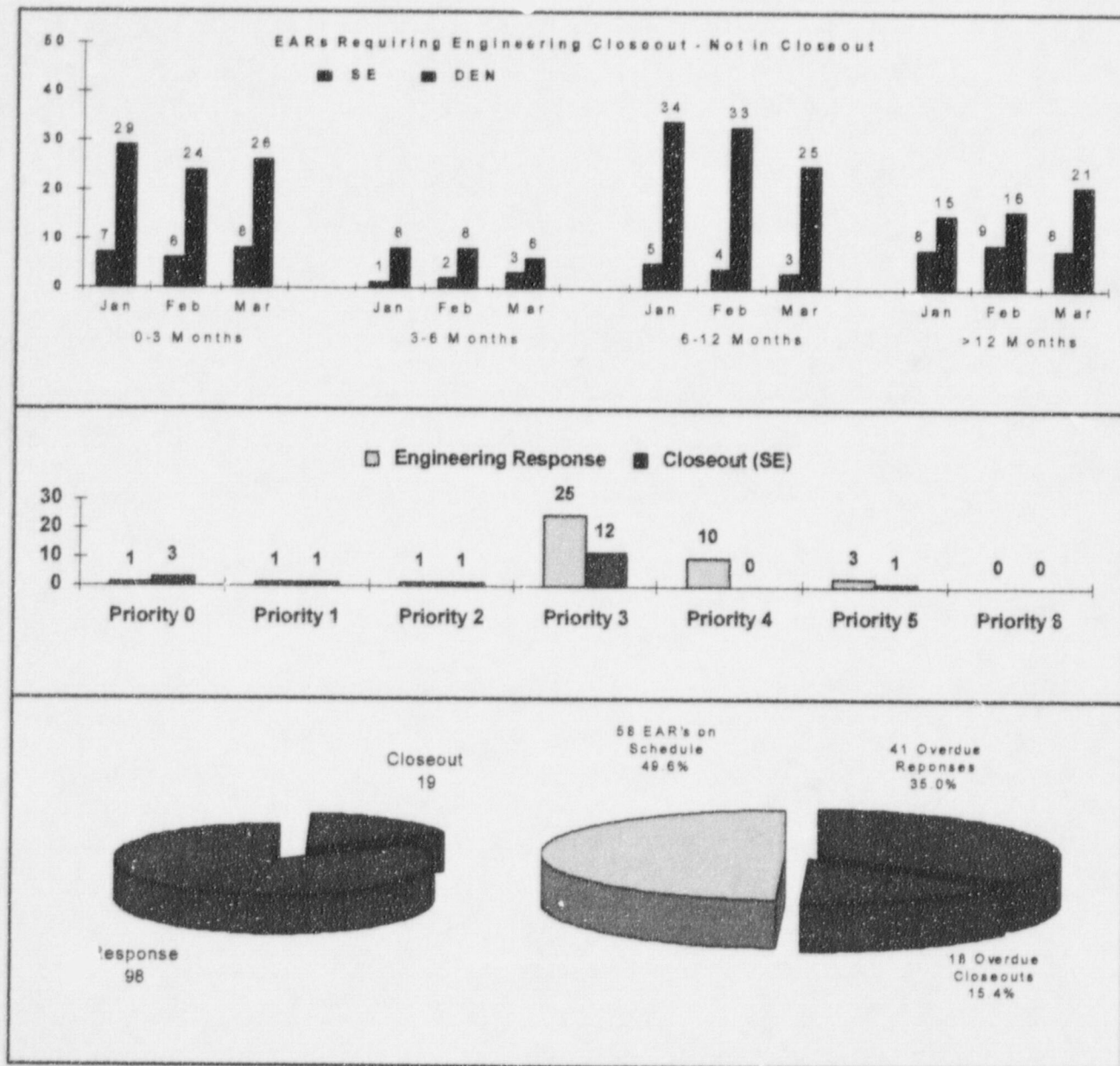
At the end of **March 1998**, there were **two (2)** TMs that were greater than one-fuel cycle old requiring an outage for removal. TM 96-014, Reactor Coolant Gas Vent Line Pressure High Alarm, was installed April 22, 1996. Repairs for this TM were completed during the 1996 RFO, but the reactor coolant gas vent line pressure is still high. MR-FC-97-011 was initiated to solve this problem and currently DEN is planning the modification. MR-FC-97-011 is expected to be completed during the 1998 RFO. TM 96-018, Equipment Drain Header Soft Rubber Patch was installed June 16, 1996. MWO 963468 has been written to replace the piping and is currently scheduled for the 1998 RFO.

At the end of **March 1998**, there was **one (1)** TM installed that was greater than six months old that could be removed on-line. TM 96-039, Railroad Siding/Corridor 26 Door, was installed November 1, 1996. EAR 97-219 will close this TM. EAR 97-219 requires Component Testing review and approval. EAR 97-219 is expected to be completed by May 1, 1998.

At the end of **March 1998**, there was a total of **twenty (20)** TMs installed in the Fort Calhoun Station. **Thirteen (13)** of the **twenty (20)** installed TMs require an RFO for removal and **seven (7)** are removable on-line. In 1998, a total of **eight (8)** TMs have been installed. At the end of **March 1998**, there were **seven (7)** procedural or maintenance configuration alterations (PMCAs) (a special classification of TM) installed in the Fort Calhoun Station using PRC approved procedures which are controlled by Standing Order O-25.

Data Source: Phelps/Frank (Manager/Source)
 Accountability: Phelps/Core
 Trend: Needing Increased Management Attention

SEP 62&71



ENGINEERING ASSISTANCE REQUEST BREAKDOWN

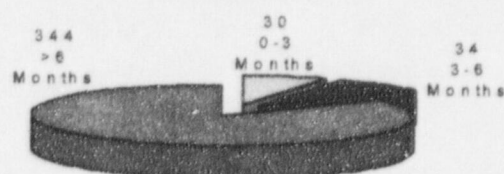
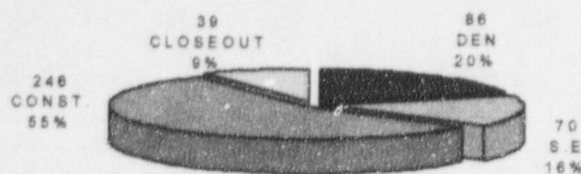
This indicator shows a breakdown of the number of EARs assigned to Design Engineering and System Engineering. The 1998 year-end goal for this indicator is a maximum of 120 outstanding EARs.

The Total EAR breakdown is as follows:

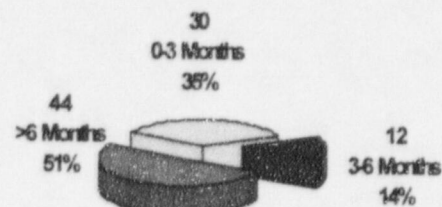
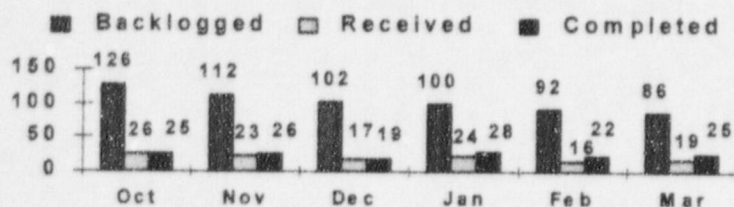
EARs opened during the month	17
EARs closed during the month	25
Total EARs open at the end of the month	117

Data Source: Jaworski/Livingston (Manager/Source)
 Accountability: Phelps/Jaworski
 Trend: None

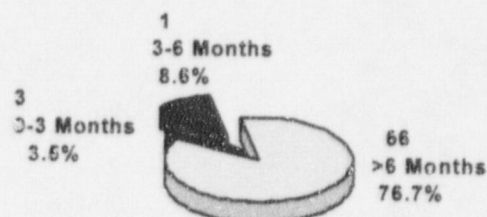
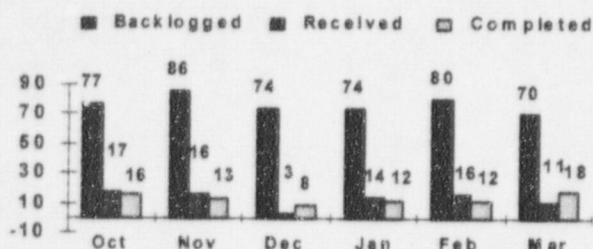
SEP 62



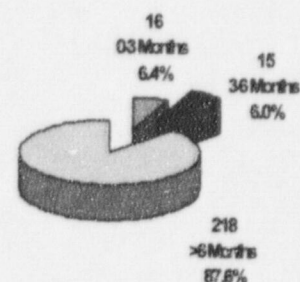
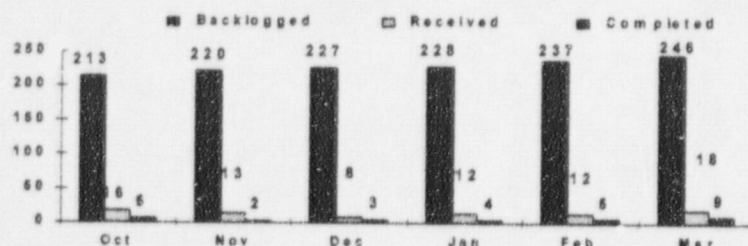
ECN STATUS - OVERALL BACKLOG



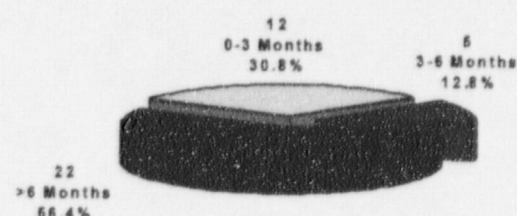
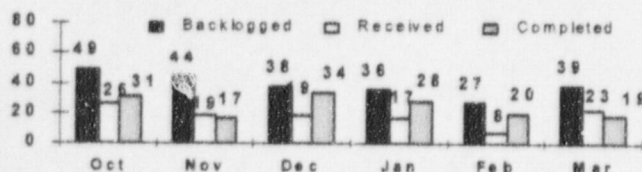
DESIGN ENGINEERING



SYSTEM ENGINEERING



PROCUREMENT/CONSTRUCTION



DRAFTING/CLOSEOUT

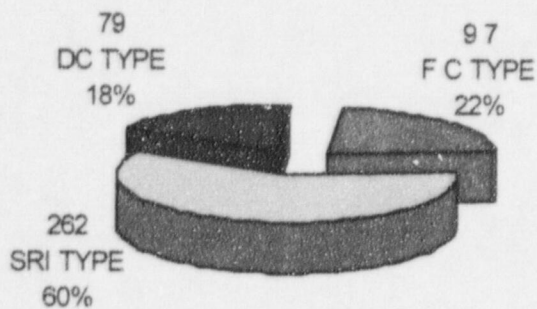
ENGINEERING CHANGE NOTICE STATUS

Data Source: Jaworski/Livingston (Manager/Source)

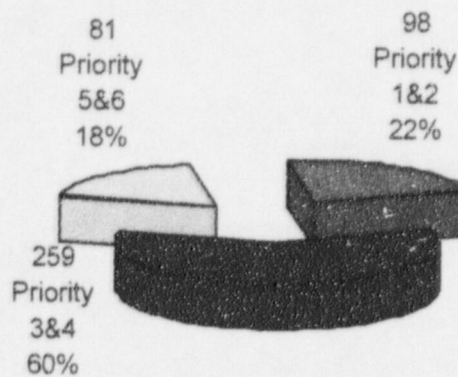
Accountability: Jaworski/Phelps

Trend: None

SEP62

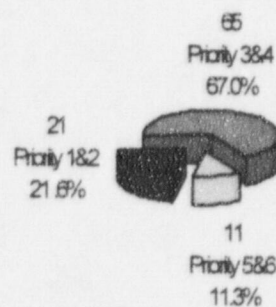
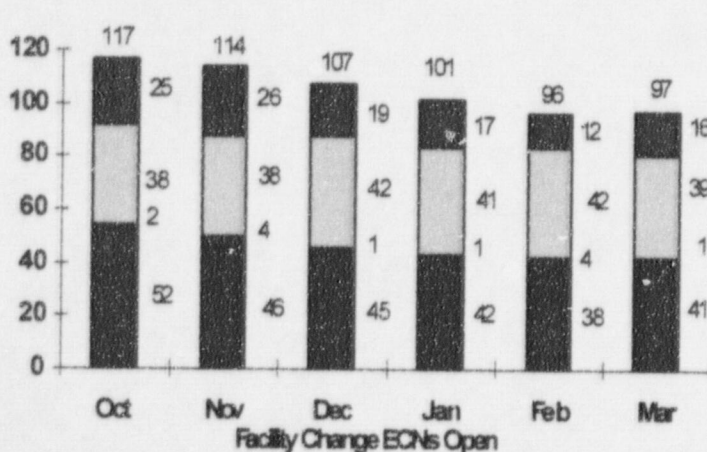


Total Open ECNs = 438



Total Open ECNs = 438

- DEN - Closeout or Drafting Not Complete
- Maintenance/Construction/Procurement - Work Not Complete
- System Engineering - Response, Confirmation Not Complete
- DEN - Engineering Not Complete

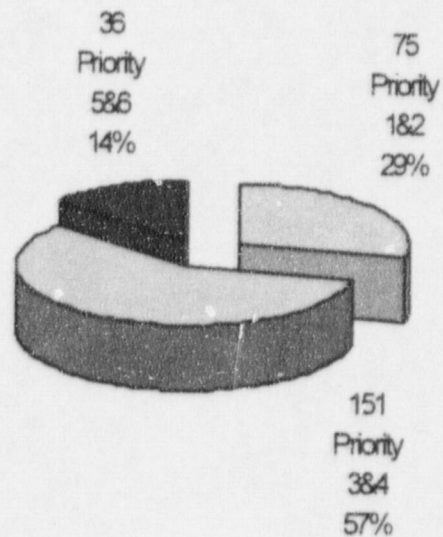
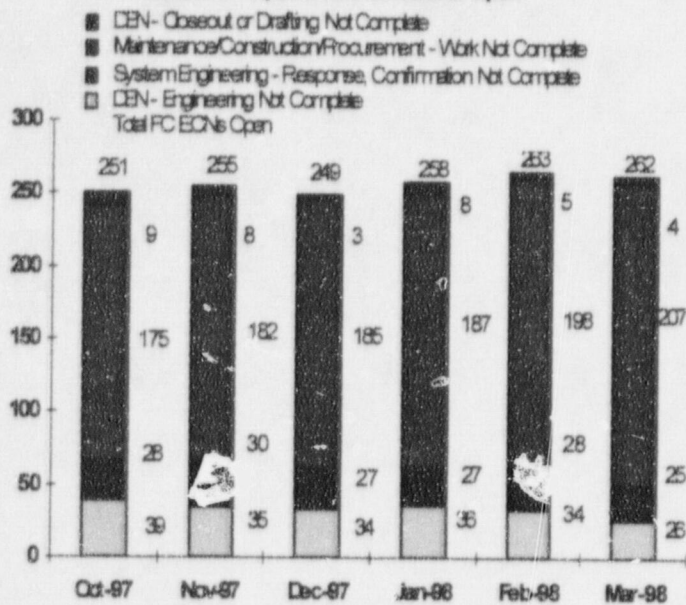


ENGINEERING CHANGE NOTICES OPEN

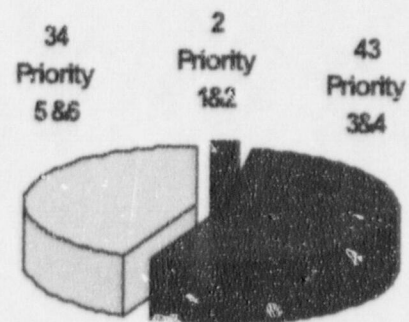
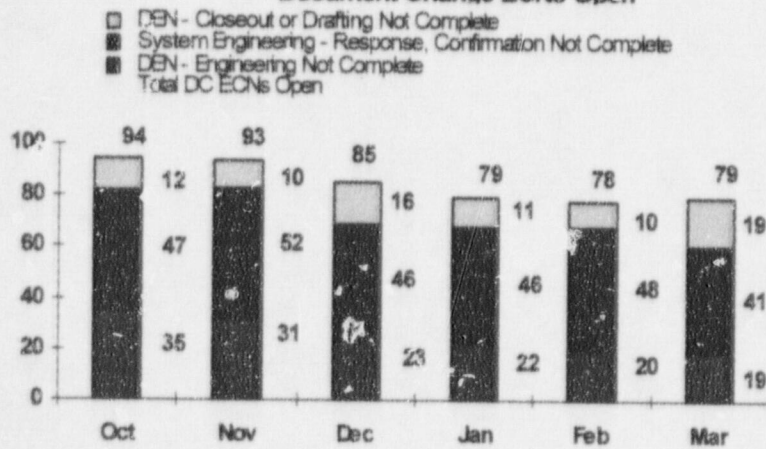
Data Source: Jaworski/Livingston (Manager Source)
 Accountability: Phelps/Jaworski
 Trend: None

SEP 62

Substitute Replacement Item ECNs Open



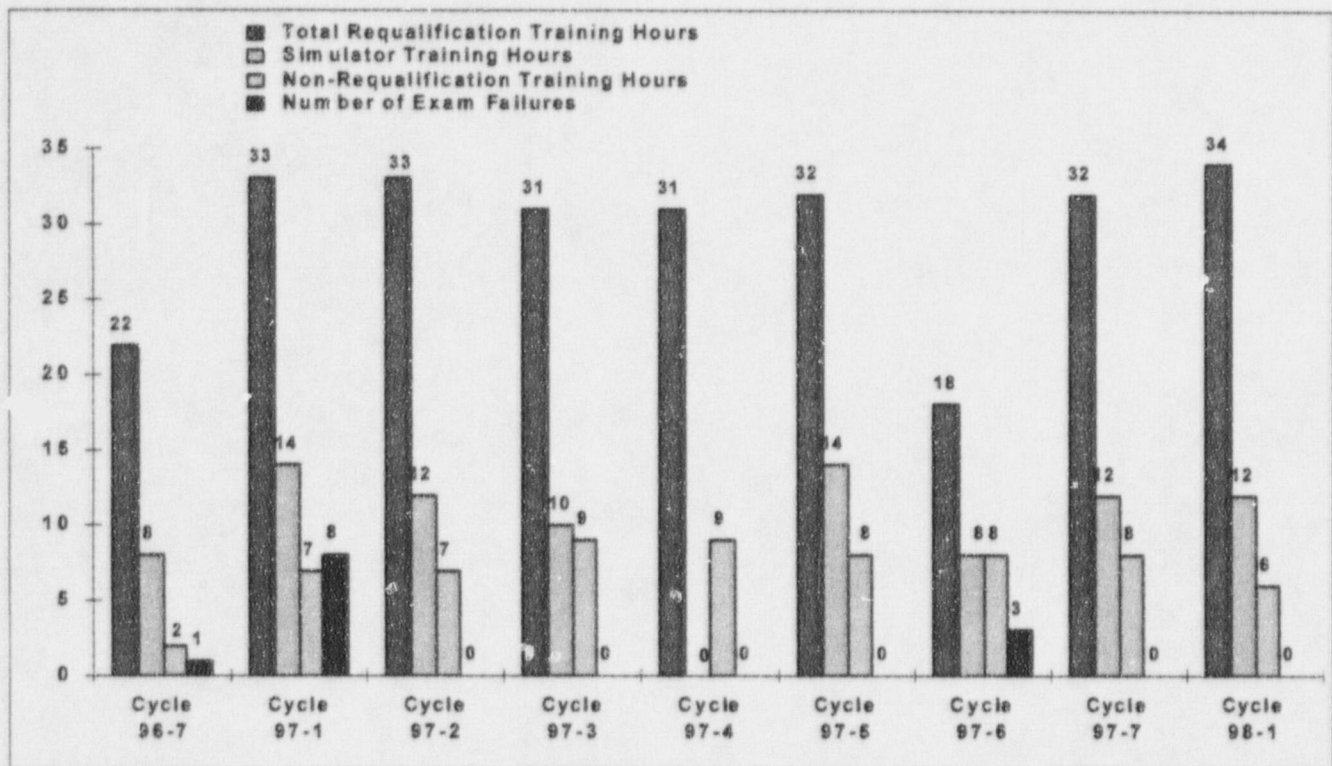
Document Change ECNs Open



ENGINEERING CHANGE NOTICES OPEN

Data Source: Jaworski/Livingston (Manager Source)
 Accountability: Phelps/Jaworski
 Trend: None

SEP 62



LICENSED OPERATOR REQUALIFICATION TRAINING

This indicator provides information on the total number of hours of training given to each crew during each cycle. The simulator training hours shown on the graph are a subset of the total training hours. Non-Requalification Training Hours are used for AOP/EOP verification & validation, INPO commitments, GET, Fire Brigade, Safety Meetings, and Division Manager lunches.

Exam failures are defined as failures in the written, simulator, and Job Performance Measures (JPMs) segments of the Licensed Operator Requalification Training.

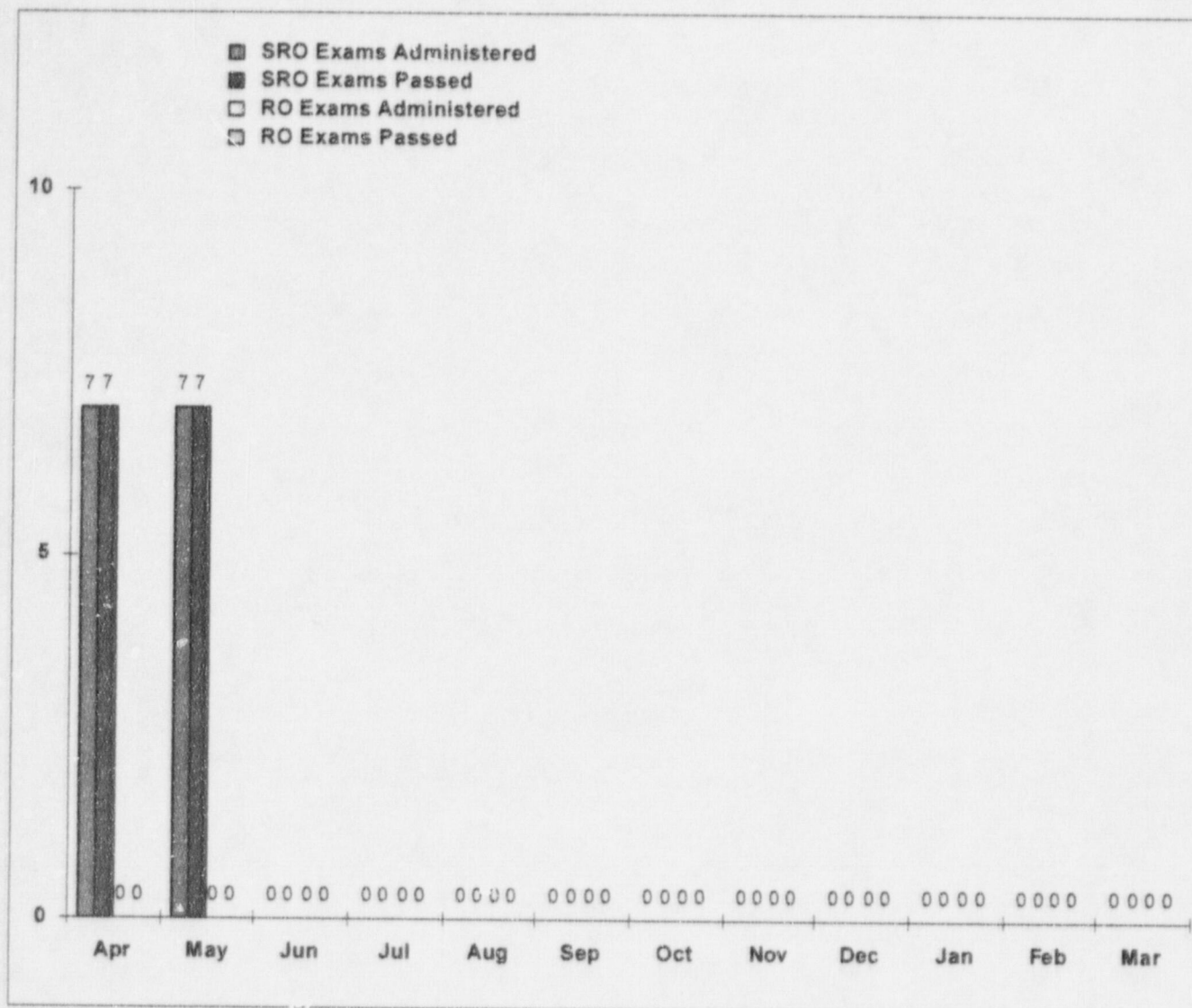
Note: Rotation 97-6 was the Annual Licensed Operator Requalification Examination rotation for 1997. There were Three (3) individual and one (1) crew simulator exam failures during rotation 97-6. All remediations were completed prior to the end of the exam week.

Data Source: Conner/Guliani (Manager/Source)

Accountability: Conner/Guliani

Trend: None

SEP 68



LICENSE CANDIDATE EXAMS - 1998

This indicator shows the number of Senior Reactor Operator (SRO) and Reactor Operator (RO) quizzes and exams taken and passed each month. These internally administered quizzes and exams are used to plot the SRO and RO candidates' monthly progress.

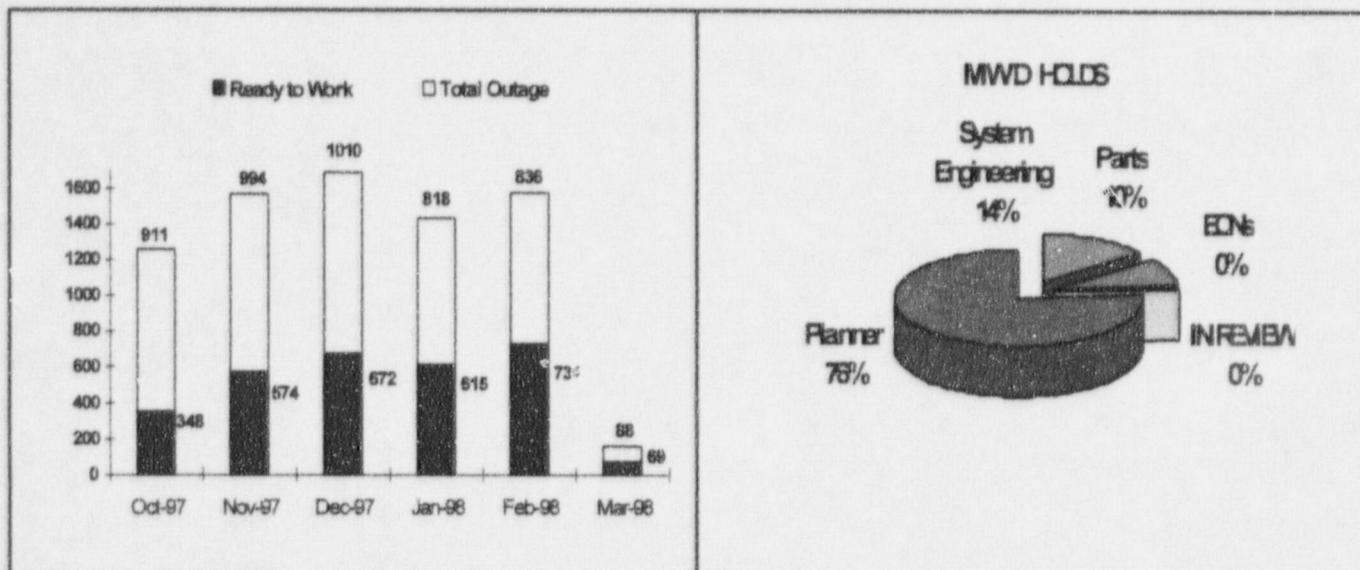
During the month of **March 1998**, there were no (SRO) or (RO) training classes in session. The next license class is scheduled to begin in July, 1998.

Data Source: Conner/Guliani (Manager/Source)

Accountability: Conner/Guliani

Trend: None

SEP 68



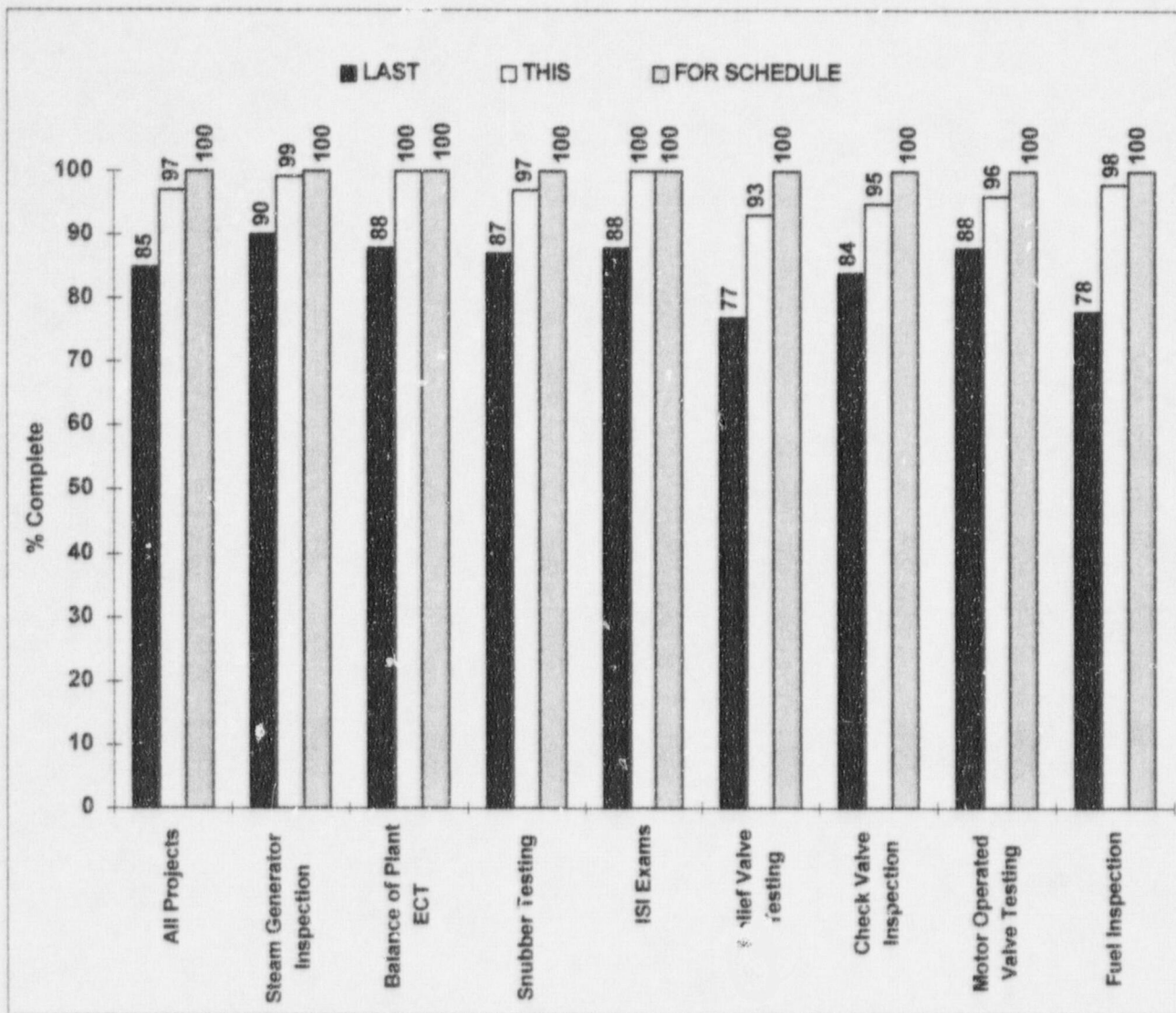
MWD PLANNING STATUS (CYCLE 18 REFUELING OUTAGE)

This indicator shows the total number of Maintenance Work Requests (MWRs) and Maintenance Work Documents (MWDs) that have been approved for inclusion in the Cycle 18 Refueling Outage. This graph indicates:

- Parts Holds - Planning Complete, Awaiting Parts
- System Engineering Holds - Awaiting System Engineering Input to Planning
- Planner Holds - Maintenance Planner has not completed planning the work package.
- ECN Hold - Awaiting Substitute Replacement Items ECN from DEN.
- In Review - Planning Complete awaiting SE, ISI and QC review.

Data Source: Chase/Johnson (Manager/Source)
 Accountability: Chase/Herman
 Trend: None

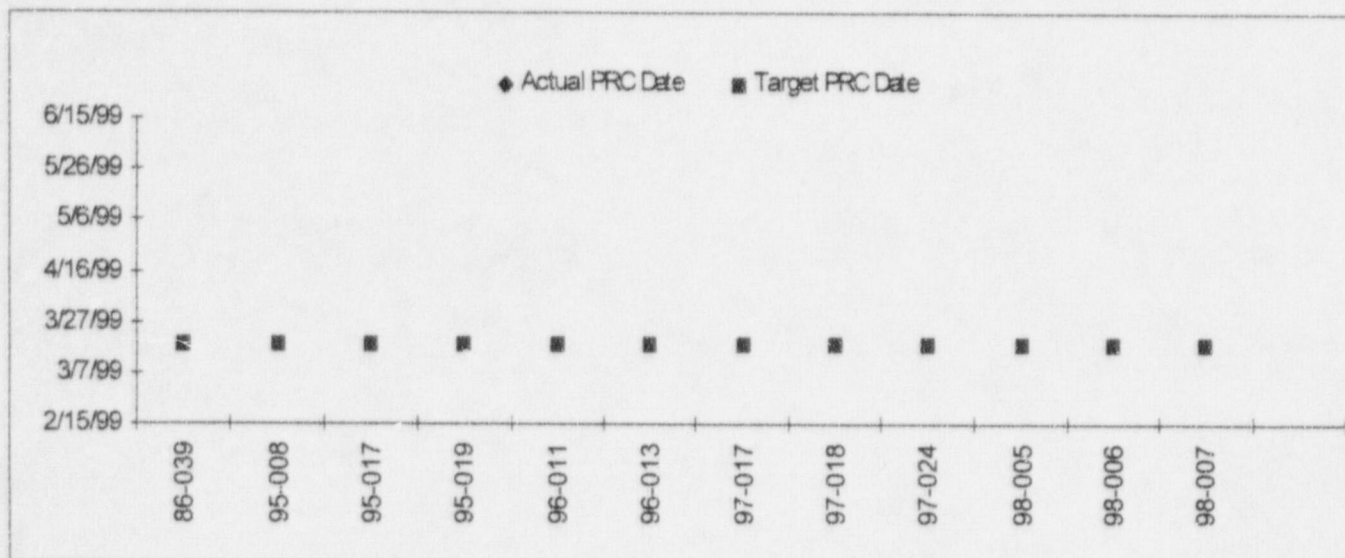
SEP 31



COMPONENT TESTING DEPARTMENT AND SPECIAL SERVICES ENGINEERING DEPARTMENT 1998 OUTAGE PROJECTS STATUS REPORT

Data Source Phelps/Bloyd/Boughter (Manager/Source)
 Accountability: Phelps/Bloyd/Boughter
 Trend: None

SEP 31



PROGRESS OF 1999 REFUELING OUTAGE MODIFICATIONS CYCLE 19

This indicator shows the status of Modifications approved for installation during the Cycle 19 Refueling Outage (September 1999).

The goal for this indicator is to have all modification packages which were identified prior to March 31, 1998, PRC approved by March 18, 1999.

March 1998 Modifications added: 0 Deleted = 0

Data Source: Jaworski/Walling (Manager/Source)

Accountability: Gambhir/Jaworski

Trend: None

SEP 31

NO DATA AVAILABLE

**PROGRESS OF CYCLE 19 OUTAGE
MODS AND ECNS ADDED TO 1999 REFUELING OUTAGE AFTER
FREEZE DATE**

This indicator will show the status of Modifications and ECNs approved for installation during the Cycle 19 Refueling Outage. The goal for this indicator is to have all modification packages PRC approved by their target date.

March 1998

Modifications /ECNs Added = 0

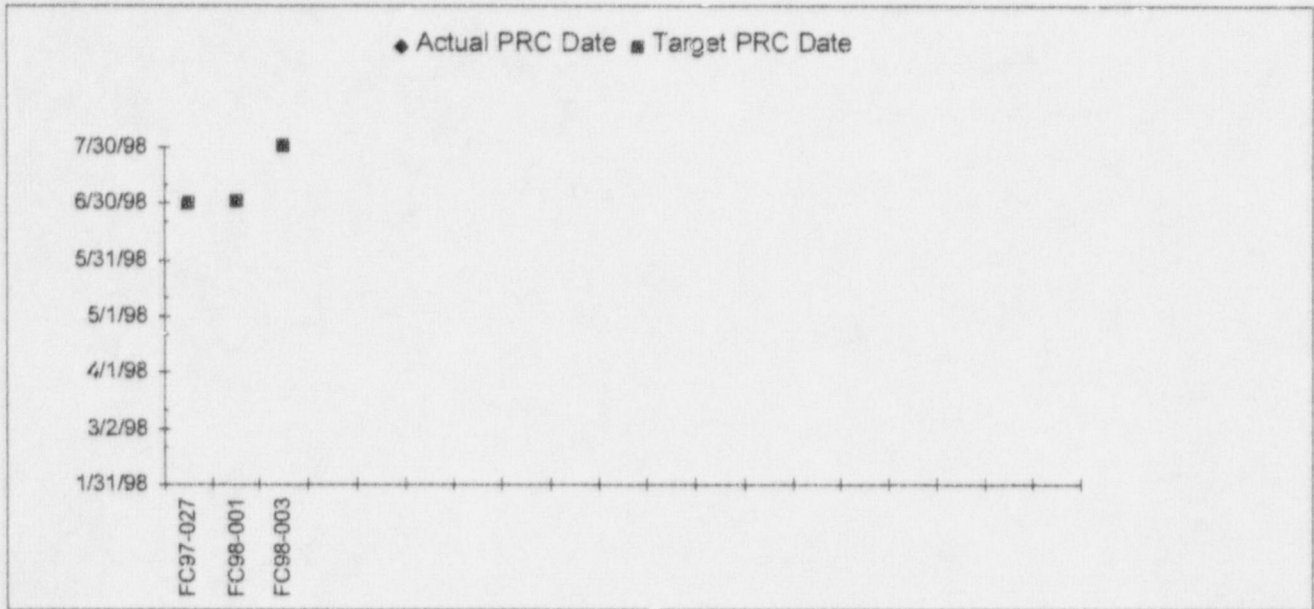
Deleted = 0

Data Source: Jaworski/Walling (Manager/Source)

Accountability: Gambhir/Jaworski

Trend: None

SEP 33



PROGRESS OF 1998 ON-LINE MODIFICATION PLANNING

This indicator shows the status of modifications approved or in review for approval for on-line installation during 1998.

The goal for this indicator is to have all modification packages PRC approved by their scheduled date.

March 1998 Modifications Added: 0 Deleted: 2

Data Source: Jaworski/Walling (Manager/Source)

Accountability: Gambhir/Jaworski

Trend: None

SEP 31

ACTION PLANS SEP INDEX & DISTRIBUTION LIST

ACTION PLANS

This section lists action plans that have been developed for the performance indicators cited as Adverse Trends during the month preceding this report. Also included are Action Plans for indicators that have been cited in the preceding month's report as Needing Increased Management Attention for three (3) consecutive months.

In accordance with Revision 5 of NOD-QP-37, the following performance indicators would require action plans based on three (3) consecutive months of performance cited as "Needing Increased Management Attention":

- **Fuel Reliability Indicator (page 16)**

Based on the current number of predicted fuel failures and expectation that future fuel failures will be identified, Fuel Performance functional area performance is considered to be POOR for 1st quarter of 1998. **The plant is currently in "Action Level 4" in accordance with Standing Order O-43, "Fuel Reliability Action Plan," based on the current number of core average power failed rods (33).**

PERFORMANCE INDICATOR DEFINITIONS & SEP INDEX

PERFORMANCE INDICATOR INDEX

This indicator index is calculated from a weighted combination of eleven performance indicator values, which include the following: Unit Capability Factor, Unplanned Capability Loss Factor, HPSI, AFW, Emergency AC Power System, Unplanned Automatic Scrams, Collective Radiation Exposure, Fuel Reliability, Thermal Performance, Secondary System Chemistry, and Industrial Safety Accident Rate.

(Page 6)

UNIT CAPABILITY FACTOR

The ratio of the available energy generation over a given time period to the reference energy generation (the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions) over the same time period, expressed as a percentage. (Page 9)

UNPLANNED CAPABILITY LOSS FACTOR

The ratio of the unplanned energy losses during a given period of time, to the reference energy generation (the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions) over the same time period, expressed as a percentage. (Page 10)

UNPLANNED AUTOMATIC REACTOR SCRAMS PER 7,000 CRITICAL HOURS

This indicator is defined as the number of unplanned automatic scrams (RPS logic actuations) that occur per 7,000 hours of critical operation.

The value for this indicator is calculated by multiplying the total number of unplanned automatic reactor scrams in a specific time period by 7,000 hours, then dividing that number by the total number of hours critical in the same time period. The indicator is further defined as follows:

- 1) Unplanned means that the scram was not an anticipated part of a planned test.
- 2) Scram means the automatic shutdown of the reactor by a rapid insertion of negative reactivity (e.g., by control rods, liquid injection system, etc.) that is caused by actuation of the reactor protection system. The signal may have resulted from exceeding a set point or spurious.
- 3) Automatic means that the initial signal that caused actuation of the reactor protection system logic was provided from one of the sensor's monitoring plant parameters and conditions, rather than the manual scram switches or, manual turbine trip switches (or

push-buttons) provided in the main control room.

- 4) Critical means that during the steady-state condition of the reactor prior to the scram, the effective multiplication (k_{eff}) was essentially equal to one

(Page 11)

HIGH PRESSURE SAFETY INJECTION SYSTEM SAFETY SYSTEM PERFORMANCE

The sum of the known (planned and unplanned) unavailable hours and the estimated unavailable hours for the high pressure safety injection system for the reporting period divided by the critical hours for the reporting period multiplied by the number of trains in the high pressure safety injection system.

INDUSTRIAL SAFETY ACCIDENT RATE - INPO

This indicator is defined as the number of accidents per 200,000 man-hours worked for all utility personnel permanently assigned to the station that result in any of the following:

- 1) One or more days of restricted work (excluding the day of the accident);
- 2) One or more days away from work (excluding the day of the accident); and
- 3) Fatalities.

Contractor personnel are not included for this indicator. (Page 12)

AUXILIARY FEEDWATER SYSTEM SAFETY SYSTEM PERFORMANCE

The sum of the known (planned and unplanned) unavailable hours and the estimated unavailable hours for the auxiliary feedwater system for the reporting period divided by the critical hours for the reporting period multiplied by the number of trains in the auxiliary feedwater system. (Page 13)

EMERGENCY AC POWER SYSTEM SAFETY SYSTEM PERFORMANCE

The sum of the known (planned and unplanned) unavailable and the estimated unavailable hours for the emergency AC power system for the reporting period divided by the number of hours in the reporting period multiplied by the number of trains in the emergency AC power system. (Page 14)

THERMAL PERFORMANCE

The ratio of the design gross heat rate (corrected) to the adjusted actual gross heat rate, expressed as a percentage. (Page 15)

PERFORMANCE INDICATOR DEFINITIONS & SEP INDEX

FUEL RELIABILITY INDICATOR

This indicator is defined as the steady-state primary coolant I-131 activity, corrected for the tramp uranium contribution and normalized to a common purification rate. Tramp uranium is fuel which has been deposited on reactor core internals from previous defective fuel or is present on the surface of fuel elements from the manufacturing process. Steady state is defined as continuous operation for at least three days at a power level that does not vary more than + or -5%. Plants should collect data for this indicator at a power level above 85%, when possible. Plants that did not operate at steady-state power above 85% should collect data for this indicator at the highest steady-state power level attained during the month.

The density correction factor is the ratio of the specific volume of coolant at the RCS operating temperature (540 degrees F., $V_f = 0.0217$) divided by the specific volume of coolant at normal letdown temperature (120° F at outlet of the letdown cooling heat exchanger, $V_f = 0.0163$), which results in a density correction factor for FCS equal to 1.33. (Page 16)

SECONDARY SYSTEM CHEMISTRY PERFORMANCE INDEX

The Chemistry Performance Index (CPI) is a calculation based on the concentration of key impurities in the secondary side of the plant. These key impurities are the most likely cause of deterioration of the steam generators. Criteria for calculating the CPI are:

- 1) The plant is at greater than 30 percent power; and
- 2) the power is changing less than 5% per day.

The CPI is calculated using the following equation:

$$CPI = ((\text{sodium}/0.79) + (\text{Chloride}/1.52) + (\text{Sulfate}/1.44) + (\text{Iron}/3.30) + (\text{Copper}/0.30) + (\text{Condensate O}_2/2.90))/6$$

Where: Sodium, sulfate, chloride and condensate dissolved

oxygen are the monthly average blowdown concentrations in ppb, iron and copper are monthly time weighted average feedwater concentrations in ppb. The denominator for each of the five factors is the INPO median value. If the monthly average for a specific parameter is less than the INPO median value, the median value is used in the calculation. (Page 17)

COLLECTIVE RADIATION EXPOSURE

Collective radiation exposure is the total external whole-body dose received by all on-site personnel (including contractors and visitors) during a time period, as measured by the thermoluminescent dosimeter (TLD).

Collective radiation exposure is reported in units of person-rem. This indicator tracks radiological work performance for SEP #54.

(Page 18)

INDUSTRIAL SAFETY ACCIDENT RATE

The purpose of this indicator is to monitor progress in improving industrial safety performance for utility personnel permanently assigned to the station. Contractor work-hours are not included in this indicator. (Page 19)

VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

This indicator is defined as the volume of low-level solid radioactive waste actually shipped for burial. This indicator also shows the volume of low-level radioactive waste which is in temporary storage, the amount of radioactive oil that has been shipped off-site for processing, and the volume of solid dry radioactive waste which has been shipped off-site for processing. Low-level solid radioactive waste consists of dry active waste, sludges, resins, and evaporator bottoms generated as a result of nuclear power plant operation and maintenance. Dry radioactive waste includes contaminated rags, cleaning materials, disposable protective clothing, plastic containers, and any other material to be disposed of at a low-level radioactive waste disposal site, except resin, sludge, or evaporator bottoms. Low-level refers to all radioactive waste that is not spent fuel or a by-product of spent fuel processing. This indicator tracks radiological work performance for SEP #54. (Page 20)

DISABLING INJURY/ILLNESS FREQUENCY RATE (LOSS TIME ACCIDENT RATE)

This indicator is defined as the number of accidents for all utility personnel permanently assigned to the station, involving days away from work per 200,000 man-hours worked (100 man-years). This does not include contractor personnel. This indicator tracks personnel performance for SEP #25, 26 & 27. (Page 22)

RECORDABLE INJURY/ILLNESS CASES FREQUENCY RATE

The number of injuries requiring more than normal first aid per 200,000 man-hours worked. This indicator trends personnel performance for SEP #15, 25 and 26. (Page 23)

CLEAN CONTROLLED AREA CONTAMINATIONS \geq 1,000 DISINTEGRATIONS/MINUTE PER PROBE AREA

The personnel contamination events in the clean controlled area. This indicator tracks personnel performance for SEP #15 & 54. (Page 24)

PERFORMANCE INDICATOR DEFINITIONS & SEP INDEX

PREVENTABLE/PERSONNEL ERROR LERs

This indicator is a breakdown of LERs. For purposes of LER event classification, a "Preventable LER" is defined as:

An event for which the root cause is personnel error (i.e., inappropriate action by one or more individuals), inadequate administrative controls, a design construction, installation, installation, fabrication problem (involving work completed by or supervised by OPPD personnel) or a maintenance problem (attributed to inadequate or improper upkeep/repair of plant equipment). Also, the cause of the event must have occurred within approximately two years of the "Event Date" specified in the LER (e.g., an event for which the cause is attributed to a problem with the original design of the plant would not be considered preventable).

For purposes of LER event classification, a "Personnel Error" LER is defined as follows:

An event for which the root cause is inappropriate action on the part of one or more individuals (as opposed to being attributed to a department or a general group). Also, the inappropriate action must have occurred within approximately two years of the "Event Date" specified in the LER. Additionally, each event classified as a "Personnel Error" should also be classified as "Preventable." This indicator trends personnel performance for SEP Item #15. (Page 25)

LICENSEE EVENT REPORT (LER) ROOT CAUSE BREAKDOWN

This indicator shows the number and root cause code for Licensee Event Reports. The root cause codes are as follows:

- 1) **Administrative Control Problem** - Management and supervisory deficiencies that affect plant programs or activities (i.e., poor planning, breakdown or lack of adequate management or supervisory control, incorrect procedures, etc).
- 2) **Licensed Operator Error** - This cause code captures errors of omission/commission by licensed reactor operators during plant activities.
- 3) **Other Personnel Error** - Errors of omission/commission committed by non-licensed personnel involved in plant activities.
- 4) **Maintenance Problem** - The intent of this cause code is to capture the full range of problems which can be attributed in any way to programmatic deficiencies in the maintenance functional organization. Activities included in this category are maintenance, testing, surveillance,

calibration and radiation protection.

- 5) **Design/Construction/Installation/Fabrication Problem** - This cause code covers a full range of programmatic deficiencies in the areas of design, construction, installation, and fabrication (i.e., loss of control power due to underrated fuse, equipment not qualified for the environment, etc.).
- 6) **Equipment Failures (Electronic Piece-Parts or Environmental-Related Failures)** - This code is used for spurious failures of electronic piece-parts and failures due to meteorological conditions such as lightning, ice, high winds, etc. Generally, it includes spurious or one-time failures. Electric components included in this category are circuit cards, rectifiers, bistables, fuses, capacitors, diodes, resistors, etc.
In addition this indicator reports SEP # 6 & 61. (Page 26)

VIOLATION TREND this indicator is defined as Fort Calhoun Station Cited Violations and Non-Cited Violations trended over 12 months. Additionally, Cited Violations for the top quartile Region IV plant is trended over 12 months (lagging the Fort Calhoun Station trend by 2-3 months). It is the Fort Calhoun Station goal to be at or below the cited violation trend for the top quartile Region IV plant.
(Page 27)

CENTS PER KILOWATT HOUR

The purpose of this indicator is to quantify the economical operation of Fort Calhoun Station. The cents per kilowatt hour indicator represents the budget and actual cents per kilowatt hour on a twelve-month average for the current year. The basis for the budget curve is the approved yearly budget. The basis for the actual curve is the Financial and Operating Report.
(Page 29)

PERFORMANCE INDICATOR DEFINITIONS & SEP INDEX

MAINTENANCE WORKLOAD BACKLOGS

This indicator shows the backlog of non-outage Maintenance Work Documents remaining open at the end of the reporting month. Maintenance classifications are defined as follows:

Corrective - Repair and restoration of equipment or components that have failed or are malfunctioning and are not performing their intended function.

Preventive - Actions taken to maintain a piece of equipment within design operating conditions, prevent equipment failure, and extend its life and are performed prior to equipment failure.

Non-Corrective/Plant Improvements - Maintenance activities performed to implement station improvements or to repair non-plant equipment.

Maintenance Work Priorities are defined as:

Emergency - Conditions which significantly degrade station safety or availability.

Immediate Action - Equipment deficiencies which significantly degrade station reliability. Potential for unit shutdown or power reduction.

Operations Concern - Equipment deficiencies which hinder station operation.

Essential - Routine corrective maintenance on essential station systems and equipment.

Non-Essential - Routine corrective maintenance on non-essential station systems and equipment.

Plant Improvement - Non-corrective maintenance and plant improvements.

This indicator tracks maintenance performance for SEP #36. (Page 31)

RATIO OF PREVENTIVE TO TOTAL MAINTENANCE & PREVENTIVE MAINTENANCE ITEMS OVERDUE

The ratio of preventive maintenance (including surveillance testing and calibration procedures) to the sum of non-outage corrective maintenance and preventive maintenance completed over the reporting period. The ratio, expressed as a percentage, is calculated based on man-hours. Also displayed are the percent of preventive maintenance items in the month that were not completed or administratively closed by the scheduled date plus a grace period equal to 25% of the scheduled interval. This indicator tracks preventive maintenance activities for SEP #41. (Page 32)

PROCEDURAL NONCOMPLIANCE INCIDENTS

(MAINTENANCE)

The number of identified incidents concerning maintenance procedural problems, the number of closed IRs related to the use of procedures (includes the number of closed IRs caused by procedural noncompliance), and the number of closed procedural noncompliance IRs. This indicator trends personnel performance for SEP #15, 41 and 44. (Page 33)

CONTAMINATED RADIATION CONTROLLED AREA

The percentage of the Radiation Controlled Area, which includes the auxiliary building, the radwaste building, and areas of the C/RP building, that is contaminated based on the total square footage. This indicator tracks performance for SEP #54. (Page 34)

RADIOLOGICAL WORK PRACTICES PROGRAM

The number of identified poor radiological work practices (PRWPs) for the reporting month. This indicator tracks radiological work performance for SEP #52. (Page 35)

DOCUMENT REVIEW (BIENNIAL)

The Document Review Indicator shows the number of documents reviewed, the number of documents scheduled for review, and the number of document reviews that are overdue for the reporting month. A document review is considered overdue if the review is not complete within six months of the assigned due date. This indicator tracks performance for SEP #46. (Page 36)

SECURITY INCIDENTS

The total number of security incidents for the reporting month depicted in two graphs. This indicator tracks security performance for SEP #58. (Page 37)

TEMPORARY MODIFICATIONS

The number of temporary mechanical and electrical configurations to the plant's systems.

- 1) Temporary configurations are defined as electrical jumpers, electrical blocks, mechanical jumpers, or mechanical blocks which are installed in the plant operating systems and are not shown on the latest revision of the P&ID, schematic, connection, wiring, or flow diagrams.
- 2) Jumpers and blocks which are installed for Surveillance Tests, Maintenance Procedures, Calibration Procedures,

PERFORMANCE INDICATOR DEFINITIONS & SEP INDEX

Special Procedures or Operating Procedures are not considered as temporary modifications unless the jumper or block remains in place after the test or procedure is complete. Jumpers and blocks installed in test or lab instruments are not considered as temporary modifications.

- 3) Scaffold is not considered a temporary modification. Jumpers and blocks which are installed and for which MRS have been submitted will be considered as temporary modifications until final resolution of the MR and the jumper or block is removed or is permanently recorded on the drawings. This indicator tracks temporary modifications SEP #62 and 71.
(Page 38)

ENGINEERING ASSISTANCE REQUEST (EAR) BREAKDOWN

This indicator shows a breakdown, by age and priority of the EAR, of the number of EARs assigned to Design Engineering Nuclear and System Engineering. This indicator tracks performance for SEP #62. (Page 39)

ENGINEERING CHANGE NOTICE (ECN) STATUS

The number of ECNs that were opened, ECNs that were completed, and open backlog ECNs awaiting completion by DEN for the reporting month. This indicator tracks performance for SEP #62. (Page 40)

ENGINEERING CHANGE NOTICES OPEN

This indicator breaks down the number of Engineering Change Notices (ECNs) that are assigned to Design Engineering Nuclear (DEN), System Engineering, and Maintenance. The graphs provide data on ECN Facility Changes open, ECN Substitute Replacement Items open, and ECN Document Changes open. This indicator tracks performance for SEP #62.
(Page 41 & 42)

LICENSED OPERATOR REQUALIFICATION TRAINING

The total number of hours of training given to each crew during each cycle. Also provided are the simulator training hours (which are a subset of the total training hours), the number of non-REQUALIFICATION training hours and the number of exam failures. This indicator tracks training performance for SEP # 68. (Page 43)

LICENSE CANDIDATE EXAMS

This indicator shows the number of SRO and/or RO quizzes and exams that are administered and passed each month. This indicator tracks training performance for SEP #68.
(Page 44)

MWD PLANNING STATUS (CYCLE 18 REFUELING OUTAGE)

This indicator shows the total number of Maintenance Work Requests (MWRs) and Maintenance Work Documents (MWDs) that have been approved for inclusion in the Cycle 18 Refueling Outage. This indicator tracks performance #31
(Page 45)

SPECIAL SERVICES ENGINEERING 1998 OUTAGE PROJECTS STATUS REPORT

This indicator tracks performance for SEP # 31.
(Page 46)

PROGRESS OF 1998 REFUELING OUTAGE MODIFICATIONS CYCLE 18

This indicator shows the status of Modifications approved for installation during the Cycle 18 Refueling Outage (March 1998). This indicator tracks performance for SEP # 31. (Page 47)

PROGRESS OF CYCLE 18 OUTAGE MODS AND ECN'S ADDED TO '98 REFUELING OUTAGE AFTER FREEZE DATE

This indicator will show the status of Modifications and ECN's approved for installation during the Cycle 18 Refueling Outage. This indicator tracks performance for SEP #33. (Page 48)

Progress of 1997 On-Line modification Planning

This indicator shows the status of modifications approved or in review for approval for on-line installation during 1997. This indicator tracks performance for SEP # 31.
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