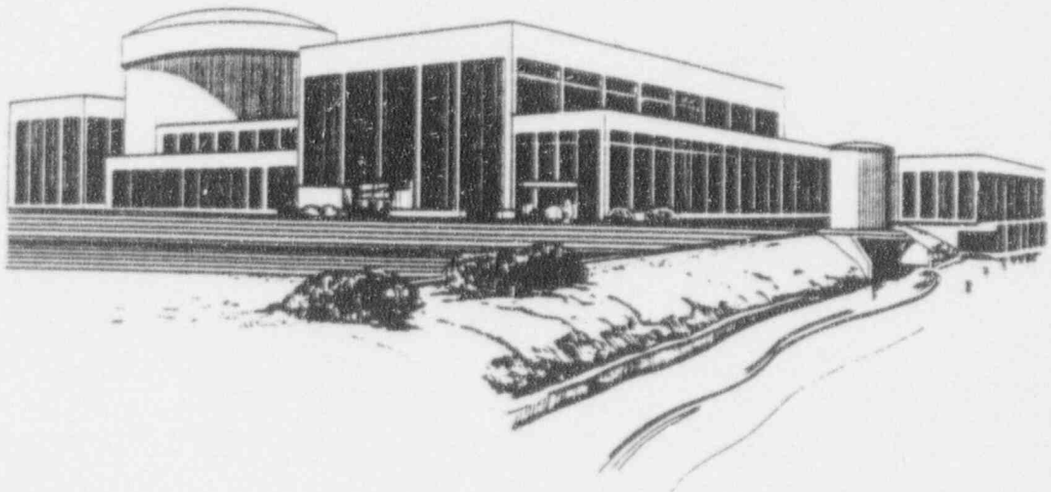
OPPD

FORT CALHOUN STATION
PERFORMANCE INDICATORS



OCTOBER 1993

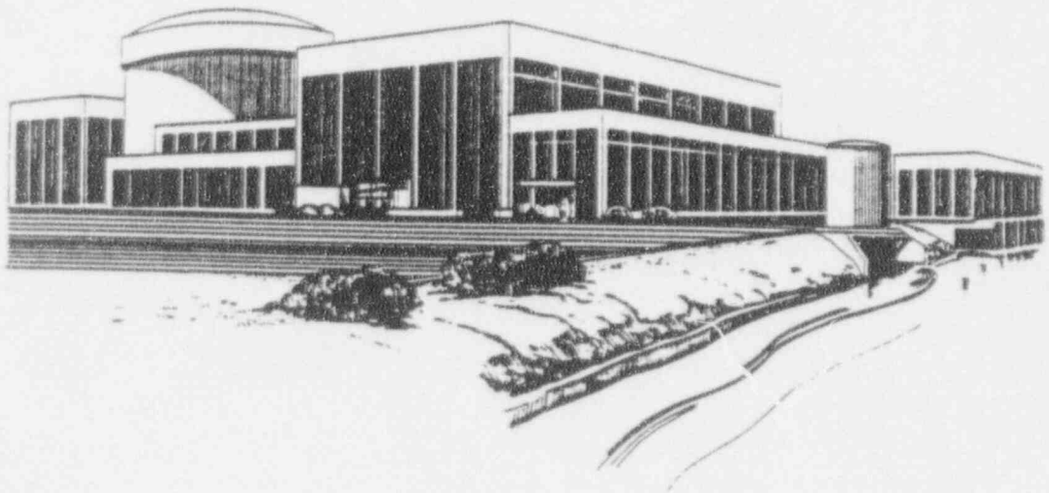
SAFE OPERATIONS
PERFORMANCE EXCELLENCE
COST EFFECTIVENESS

Pursuit of excellence is an attitude...
it involves wisdom and sound judgment...
it is a lifetime, career-long commitment...
it is a way of life...it is doing the job
right the first time, every time. It is
inner-directed, not the result of external
pressure, it is our own self worth-who
we are and the pride and satisfaction
that comes from being the right kind of
person, not just in doing the right things.

James J. O'Connor

OPPD

FORT CALHOUN STATION PERFORMANCE INDICATORS



OCTOBER 1993

SAFE OPERATIONS
PERFORMANCE EXCELLENCE
COST EFFECTIVENESS

OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION
PERFORMANCE INDICATORS REPORT

Prepared By:
Production Engineering Division
System Engineering
Test and Performance Group

OCTOBER 1993

FORT CALHOUN STATION
OCTOBER 1993 MONTHLY OPERATING REPORT

OPERATIONS SUMMARY

The 1993 Refueling Outage continued throughout the month of October. As of the end of October, the reactor had been defueled and refueled, the majority of the outage engineered safeguards testing had been completed, and the reactor head had been reinstalled. A portion of the Generic Letter 89-10 required testing of various motor operated valves was completed. Electrical bus outages for maintenance and/or modification continues. Reactor vessel surveillance capsule removal and replacement took place during the core off-load period.

Eddy current testing of steam generators was completed with only one tube needing to be plugged in RC-2B (tube had 45% through-wall degradation). This is the first steam generator tube that has been plugged since the 1988 Refueling Outage. A total of 25% of the tubes in each steam generator was tested with the Bobbin Coil method and 19% in each with the Rotating Pancake Coil. The testing revealed no other evidence of general degradation or tube cracking.

During the core support plate inspection prior to fuel reload, an unidentified foreign object was found protruding from a flow hole. The object (triangular in shape approximately 4" long X 2" wide X 1/4" thick) was evaluated and determined to be most probably made of stainless steel. The object has a dose rate of approximately 800 R/hr on contact. A detailed evaluation was performed to determine the object's origin and consequences. The origin of the object is unknown; however, a detailed investigation has eliminated the reactor coolant system or connected systems as the source. The impact on nuclear safety was determined to be negligible due to the object's size and as-found location.

The root cause for a long-standing leakage problem with the letdown strainer, CH-24, appears to have been determined when a Level III NDE QC inspector discovered a casting discontinuity in the body of the strainer. A new strainer has been manufactured and is scheduled to be installed next month.

The steam packing exhauster, ST-4, inspection revealed its internal divider plate was cracked and had pulled away from the heat exchanger. This is assumed to have occurred during the June 24, 1993 plant trip. The divider plate was repaired and successfully reattached to the exhauster's heat exchanger.

Activities continue toward the completion of the outage on November 20, 1993.

The following NRC inspections were completed during this reporting period:

IER No.	Description
93-20	Monthly Resident Inspection

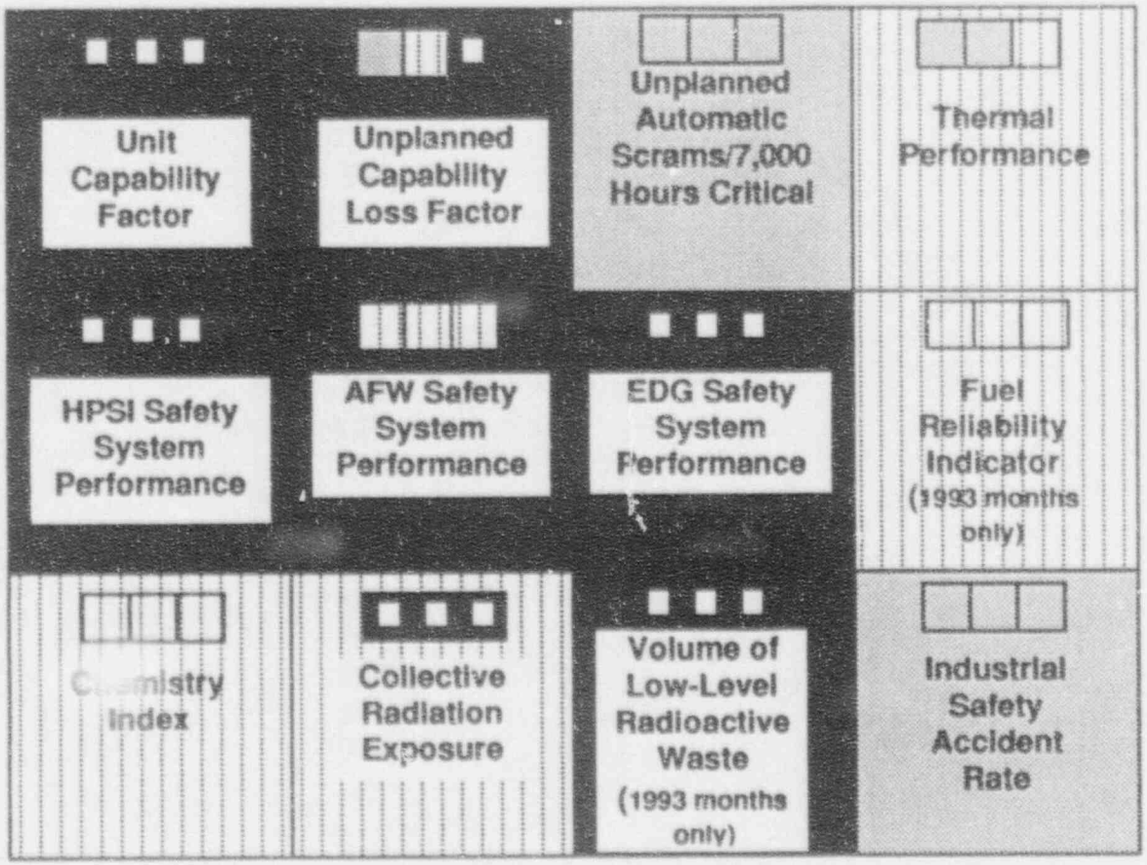
OPERATIONS SUMMARY (continued)

IER No.	Description
93-08	10 CFR 50.59 Safety Evaluation Program
93-23	Radiation Protection - Outage

The following LERs were submitted during this reporting period:

LER No.	Description
93-012	Inadequately Sized Motor Operated Valve Power Cables
93-013	Pressurizer Safety Valve Outside Lift Setting Acceptance Criterion

Source: Nuclear Licensing & Industry Affairs



12 Month Value Performance Categories

Performance in Industry Upper 10% and better than 1993 OPPD goal

Performance Better Than 1993 OPPD Goal

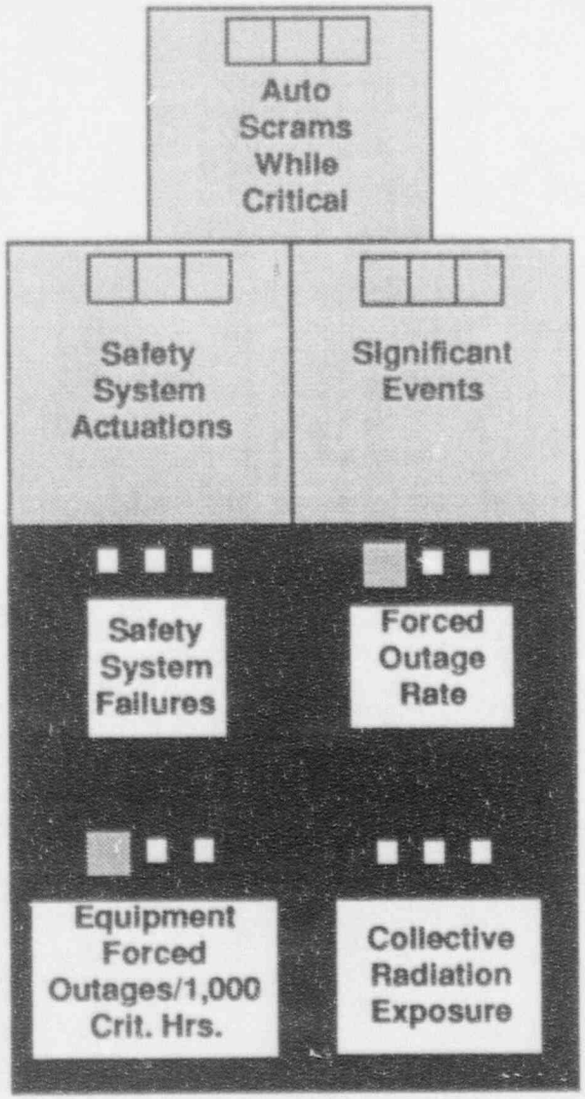
Performance Not Meeting 1993 OPPD Goal

July '93	August '93	September '93

October 1993 12 Month Value Performance

INPO PERFORMANCE INDICATORS

(Performance for the twelve months from November 1, 1992 through October 31, 1993.)



12 Month Value Performance Categories

- Performance Better Than Peer Average Trend
- Performance Better Than 1993 OPPD Goal
- Performance Not Meeting 1993 OPPD Goal or Peer Average Trend

July '93	August '93	September '93

October 1993
12 Month
Value
Performance

NRC PERFORMANCE INDICATORS

(Safety System Failures and Significant Events ratings are averages for April 1991 through March 1993. All other indicator values are for the twelve months from November 1, 1992 through October 31, 1993.)

FORT CALHOUN STATION PERFORMANCE INDICATORS REPORT
OCTOBER 1993 - SUMMARY

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 indicators are exhibiting positive trends for the reporting month:

Recordable Injury/Illness Cases Frequency Rate
(Page 3)

Emergency AC Power System Safety System Performance
(Page 9)

Emergency Diesel Generator Unit Reliability
(Page 11)

Diesel Generator Reliability (25 Demands)
(Page 12)

Emergency Diesel Generator Unreliability
(Page 13)

Number of Missed Surveillance Tests Resulting in Licensee Event Reports
(Page 19)

Forced Outage Rate
(Page 22)

Unplanned Safety System Actuations - (INPO Definition)
(Page 27)

Equipment Forced Outages per 1,000 Critical Hours
(Page 31)

Check Valve Failure Rate
(Page 34)

Cents Per Kilowatt Hour
(Page 40)

Percentage of Total MWOs Completed per Month Identified as Rework
(Page 46)

Hazardous Waste Produced
(Page 51)

Decontaminated Radiation Controlled Area
(Page 52)

Outstanding Modifications
(Page 58)

End of Positive Trend Report

ADVERSE TREND REPORT

A Performance Indicator with data representing three (3) consecutive months of declining performance; or four or more consecutive months performance that is trending towards declining as determined by the Manager - Station Engineering, constitutes an adverse trend per 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.

There were no performance indicators exhibiting adverse trends for the reporting month.

End of Adverse Trend Report.

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.

The following performance indicators need increased management attention for the reporting month:

Number of Personnel Errors Reported in LERs
(Page 5)
The percentage of total LERs submitted year-to-date that have been attributed to personnel errors for the reporting month (35.7%) exceeds the 1993 Fort Calhoun goal of a maximum of 12%.

Number of Control Room Equipment Deficiencies
(Page 14)
The total number of control room equipment deficiencies at the end of the reporting month (61) exceeds the 1993 Fort Calhoun monthly goal of a maximum of 45.

Violations Per 1,000 Inspection Hours
(Page 17)
The number of violations per 1,000 inspection hours for the 12 months from 10/1/92 through 9/30/93 is 2.02, which exceeds the 1993 and 1992 Fort Calhoun goals of a maximum of 1.5.

INDICATORS NEEDING INCREASED MANAGEMENT ATTENTION REPORT (continued)

Unplanned Automatic Reactor Scrams per 7,000 Hours Critical
(Page 26)
The number of unplanned automatic reactor scrams per 7,000 hours critical year-to-date (1.13) exceeds the 1993 goal of 0.

Unplanned Safety System Actuations (NRC Definition)
(Page 28)
The number of NRC unplanned safety system actuations year-to-date (2) exceeds the 1993 Fort Calhoun goal of 0.

In-Line Chemistry Instruments Out-of-Service
(Page 50)
The number of in-line chemistry instruments out-of-service for the reporting month (9) is above the 1993 monthly goal of a maximum of 5.

Document Review
(Page 55)
The number of document reviews more than 6 months overdue for the reporting month (4) exceeds the 1993 monthly goal of 0.

Temporary Modifications
(Page 57)
The number of temporary modifications >6 months old that are removable on-line for the reporting month (5) exceeds the 1993 monthly goal of 0.

End of Management Attention Report.

PERFORMANCE INDICATOR REPORT IMPROVEMENTS/CHANGES

This section lists significant changes made to the report and to specific indicators within the report since the previous month.

INPO Indicators
Approximate industry upper 10 percentile values based on the INPO 1993 Mid-Year Report have been added.

Contaminations ≥2,000 Counts/Minute per Probe Area
(Page 4)
This indicator was formerly titled "Contaminations >5,000 DPM/100 CM^2. The revision was necessary due to a change in Procedure RP-207.

Daily Thermal Output
This indicator was not included in the report due to the Cycle 15 Refueling Outage.

Equipment Forced Outages Per 1,000 Critical Hours
(Page 31)
This indicator has been revised to remove the June 1993 forced outage from the graph. Per LER 93-011 "Reactor Trip on Loss of Load During Switchyard Maintenance", this outage was not due to equipment failure; it was the result of human error.

End of Performance Indicator Report Improvements/ Changes Report

Table of Contents/Summary

DIVISION AND DEPARTMENT PERFORMANCE INDICATORS (continued) PAGE

ACTION PLANS, DEFINITIONS, SEP INDEX & DISTRIBUTION LIST PAGE

OPPD NUCLEAR ORGANIZATION GOALS

Vice President - 1993 Priorities

MISSION

The safe and reliable generation of electricity for OPPD customers through the professional use of nuclear technology. The Company shall conduct these operations prudently, efficiently and effectively to assure the health, safety and protection of all personnel, the general public and the environment.

GOALS

Goal 1: SAFE OPERATIONS

To ensure the continuation of a "safety culture" in the OPPD Nuclear Program and to provide a professional working environment, in the control room and throughout the OPPD nuclear organization, that assures safe operation.

1993 Priorities:
Improve SALP ratings.
Improve INPO rating.
Reduce 1993 NRC violations with no violations more severe than level 4.
No unplanned automatic reactor scrams or safety system actuations.

Goal 2: PERFORMANCE

To strive for Excellence in Operations utilizing the highest standards of performance at Fort Calhoun Station that result in safe reliable plant operation in power production.

1993 Priorities:
Improve Quality, Professionalism, and Teamwork.
Improve Plant Reliability.
Meet or exceed INPO key parameters and outage performance goals.
Reduce the number of human performance errors.

Goal 3: COSTS

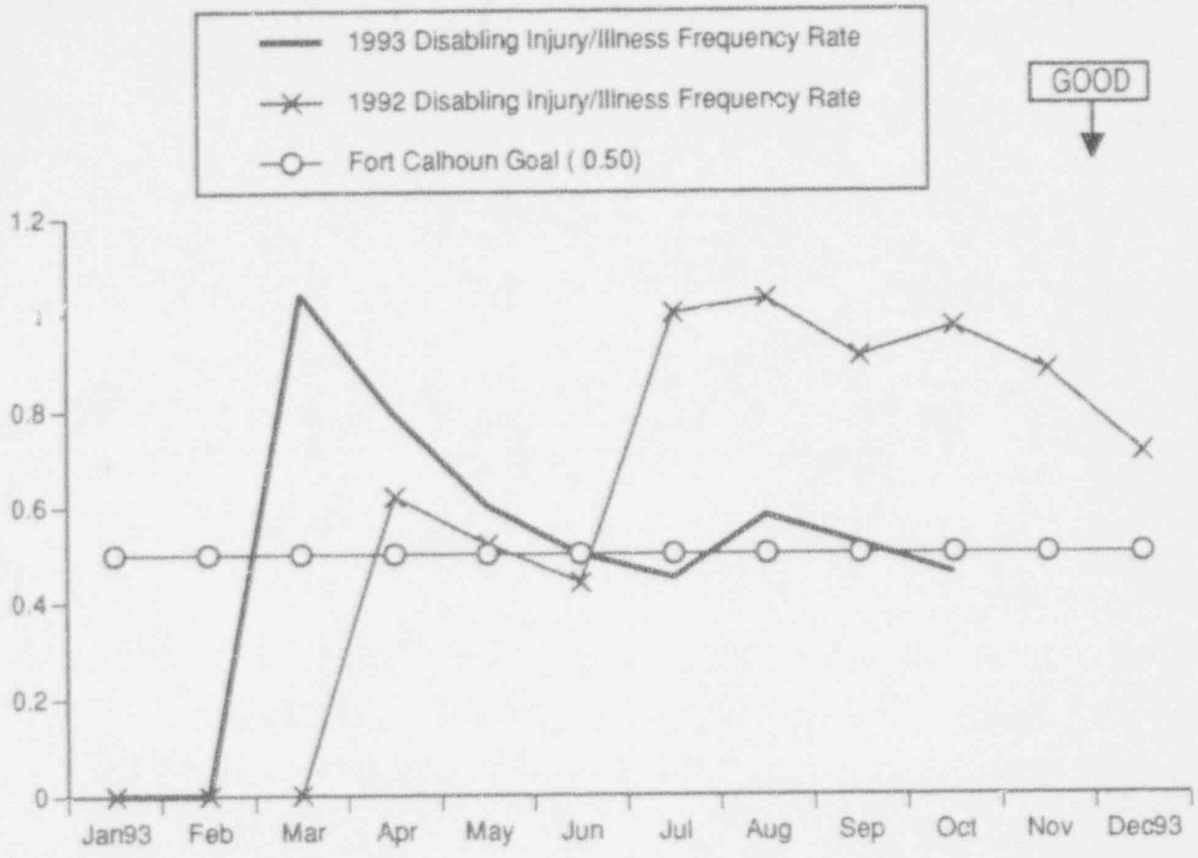
Operate Fort Calhoun Station in a manner that cost effectively maintains nuclear generation as a viable source of electricity.

1993 Priorities:
Maintain total O & M and Capital expenditures within budget.
Streamline work processes.

Goals Source: Scofield (Manager)

SAFE OPERATIONS

Goal: To ensure the continuation of a "safety culture" in the OPPD Nuclear Program and to provide a professional working environment in the control room and throughout the OPPD Nuclear Organization that assures safe operation.



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

This indicator shows the 1993 disabling injury/illness frequency rate. The 1992 disabling injury/illness frequency rate is also shown.

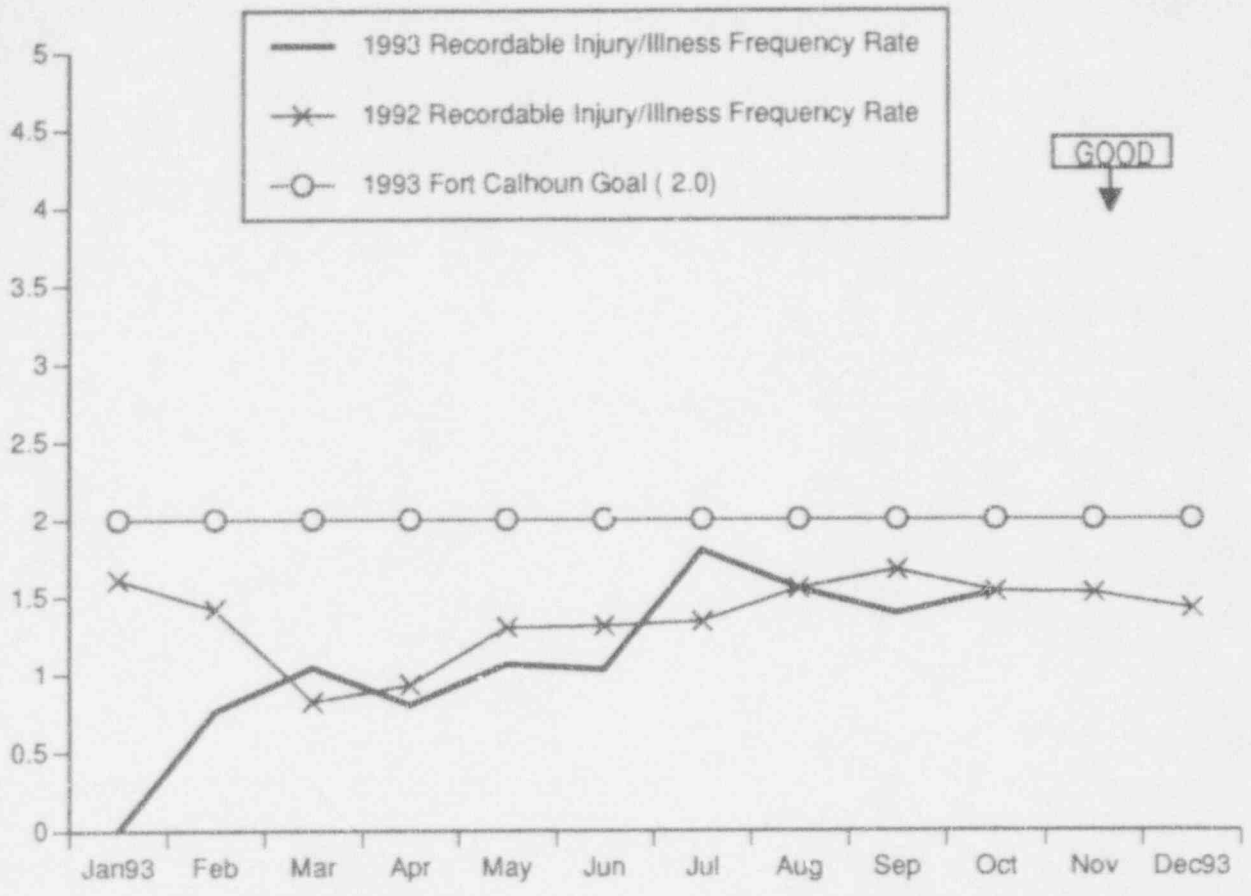
The disabling injury/illness frequency rate for January through October 1993 was 0.46. There were no lost time accidents reported for the month of October. The total number of lost time accidents that have been reported during 1993 is 3.

The disabling injury/illness frequency rate for the past twelve months is 0.38.

The 1993 Fort Calhoun goal for this indicator is a maximum value of 0.50.

Data Source: Sorenson/Skaggs (Manager/Source)
Accountability: Chase/Richard
Adverse Trend: None

SEP 25, 26 & 27



RECORDABLE INJURY/ILLNESS CASES FREQUENCY RATE

This indicator shows the 1993 recordable injury/illness cases frequency rate. The 1992 recordable injury/illness cases frequency rate is also shown.

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 cases frequency rate is computed on a year-to-date basis.

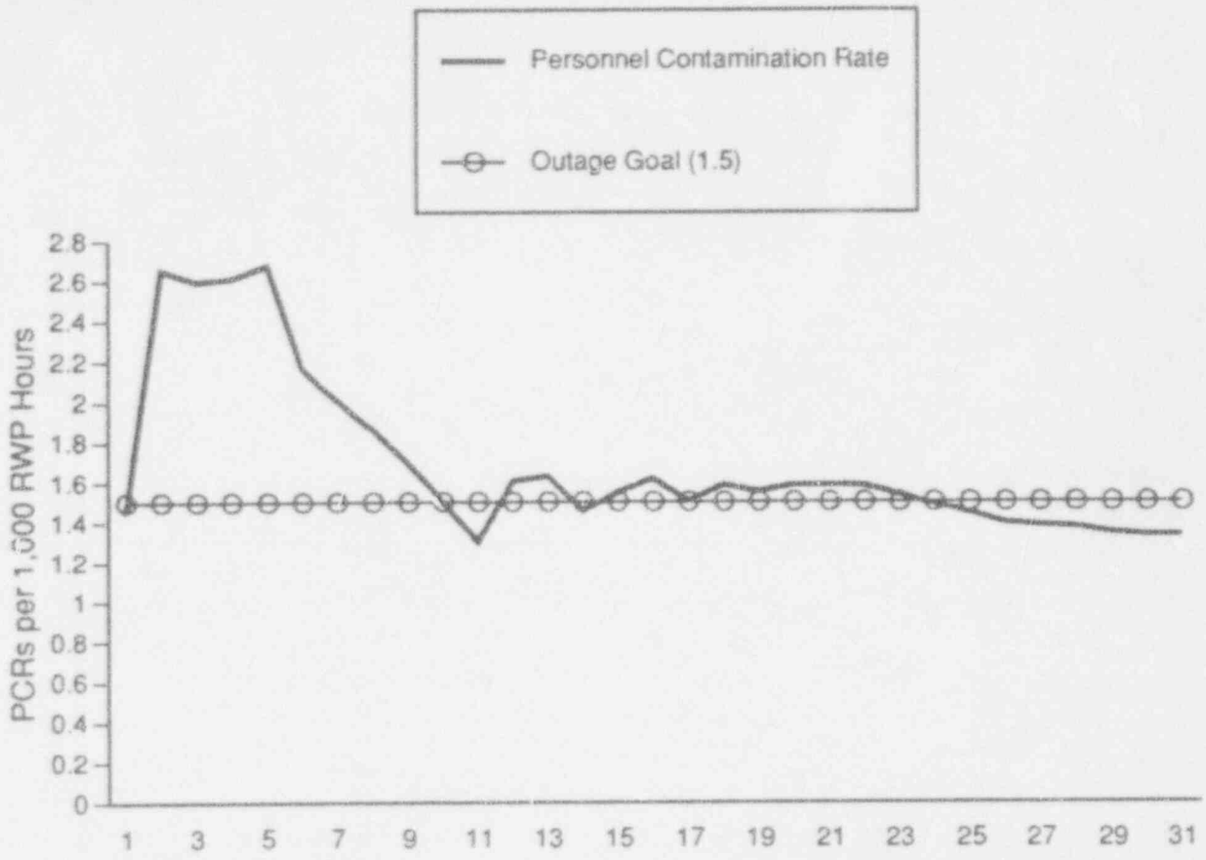
The recordable injury/illness rate for January through October 1993 was reported as 1.52. There were 2 recordable injury/illness cases, a fractured finger and a sprained foot, reported for the month of October. There have been 10 recordable injury/illness cases in 1993.

The recordable injury/illness rate for the past twelve months is 1.66.

The 1993 goal for this indicator is a maximum value of 2.0.

Data Source: Sorenson/Skaggs (Manager/Source)
Accountability: Richard
Positive Trend

SEP 15, 25, 26 & 27



CONTAMINATIONS ≥2,000 COUNTS/MINUTE PER PROBE AREA

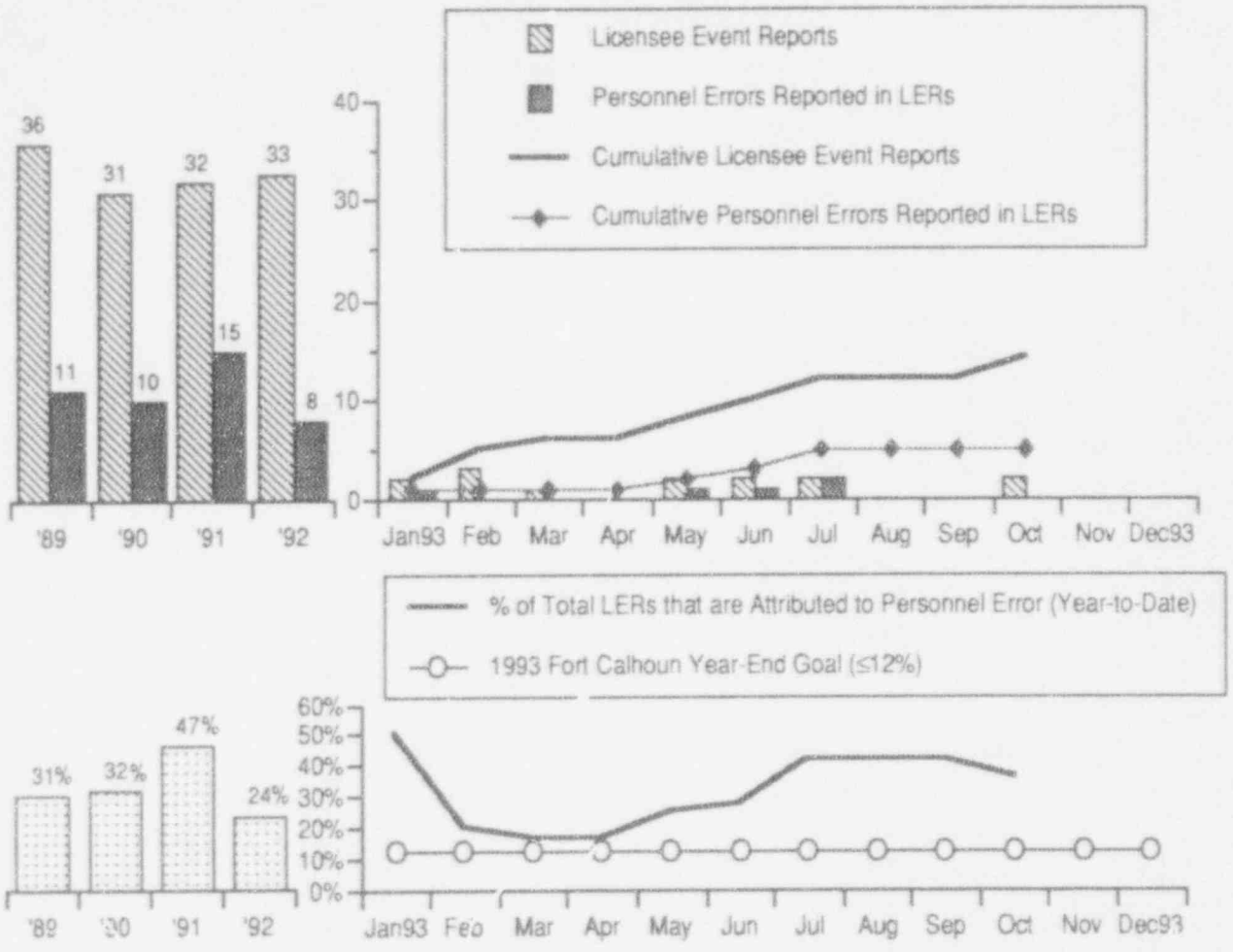
This indicator shows the Personnel Contamination Rate for contaminations ≥2,000 counts/minute per probe area for the reporting month. There were 80 outage contaminations by October 31, 1993.

There has been a total of 118 reportable/recordable contaminations in 1993. 35 of these contaminations were classified as non-outage and 83 were classified as outage contaminations. (3 outage contaminations occurred during the maintenance outage.)

The 1993 outage goal for contaminations ≥2,000 counts/minute per probe area is 1.5 PCR/1,000 RWP hours.

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

SEP 15 & 54



NUMBER OF PERSONNEL ERRORS REPORTED IN LERS

The top graph shows the number of Licensee Event Reports (LERs) submitted during each month in 1993, the LERs attributed to personnel error for each month and the cumulative totals for each item. The bottom graph shows the percentage of total LERs submitted that have been attributed to personnel error. The year-end totals for the four previous years are also shown for both graphs.

In October there were 2 LERs reported. The percentage of total LERs submitted year-to-date that have been attributed to personnel error was 35.7% at the end of October.

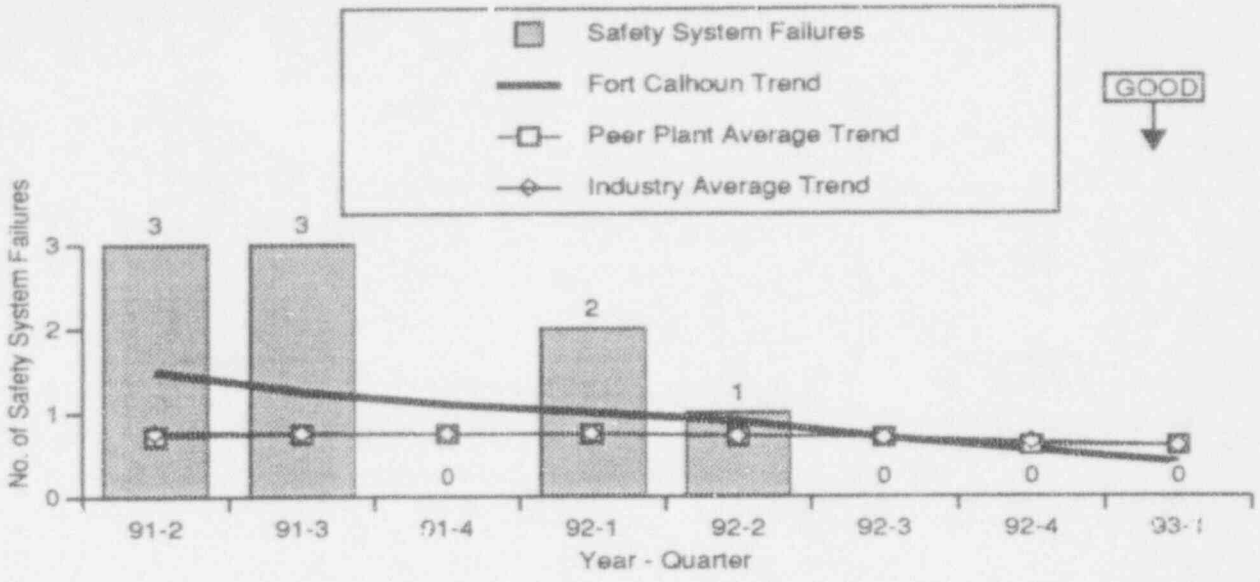
The following LERs have been attributed to personnel error in 1993:

LER 92-032	Failure to Satisfy Fire Watch Requirements for Impaired Halon System
LER 93-006	Failure to Maintain Continuous Fire Watch for Impaired Halon System
LER 93-007	Unplanned Emergency Diesel Generator Start and Reactor Trip Signal
LER 93-010	Failure to Address Low Halon Tank Pressure Following Surveillance Test
LER 93-011	Reactor Trip on Loss of Load During Switchyard Maintenance

The 1993 goal for this indicator is that a maximum of 12% of the total LERs submitted will be attributed to personnel error.

Data Source: Short/Cavanaugh (Manager/Source)
Accountability: Chase
Adverse Trend: None

SEP 15



SAFETY SYSTEM FAILURES

This indicator illustrates the number of NRC Safety System Failures as reported by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data in the biannual "Performance Indicators for Operating Commercial Nuclear Power Reactors" report.

The following NRC safety system failures occurred between the second quarter of 1991 and the first quarter of 1993:

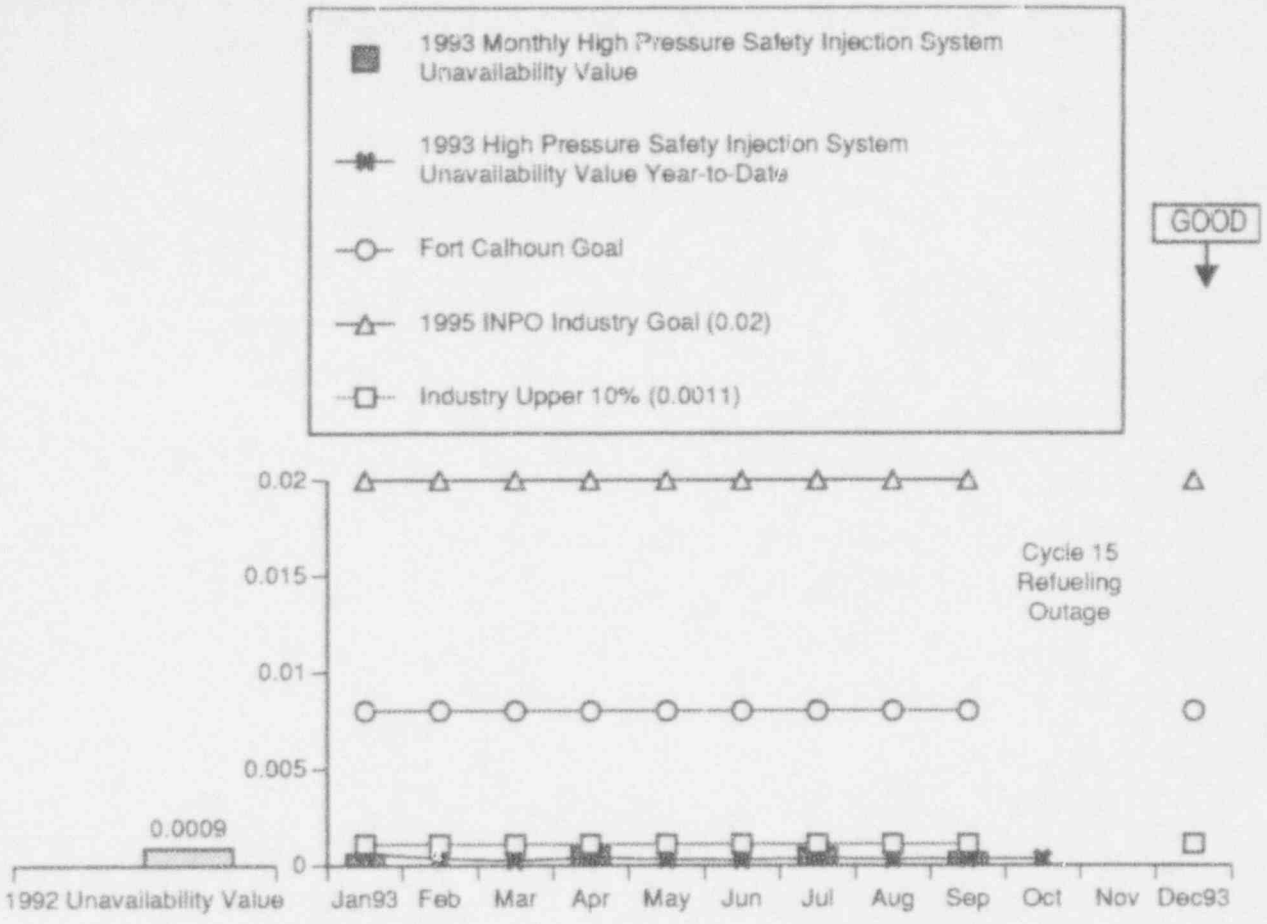
Second Quarter 1991: 1) Failure of high energy auxiliary steamlines in various equipment rooms could render equipment vital for safe shutdown inoperable. 2) All 4 channels of the pressurizer pressure low signal trip could have been nonconservatively calibrated due to an inadequate calibration procedure. 3) A steam generator blowdown was performed while the radiation monitor was inoperable. This was caused by the mode selector switch on the monitor being left in the calibrate position.

Third Quarter 1991: 1) Both EDGs could have been rendered unable to perform their design function due to radiator exhaust damper failure. The dampers had cracked pins in their couplings. 2) The station batteries were declared inoperable due to cracks developing in the cell casings. This was caused by inadequate design of the terminal post seals. 3) An error in an operating procedure could cause improper manipulation of nitrogen backup bottles for instrument air. This could cause a loss of the containment spray system.

First Quarter 1992: 1) Defective control switches in the 4KV switchgear could have rendered safety equipment inoperable. 2) All 4 channels of the SG DP trip for RPS had been calibrated nonconservatively. This occurred due to an incorrect procedure which specified a tolerance band that was too wide.

Second Quarter 1992: Fuse and breaker coordination problems for the DC buses could cause a loss of the entire bus if a fault occurred on one of the loads.

Data Source: Nuclear Regulatory Commission
Accountability: Chase
Adverse Trend: None



HIGH PRESSURE SAFETY INJECTION SYSTEM
SAFETY SYSTEM PERFORMANCE

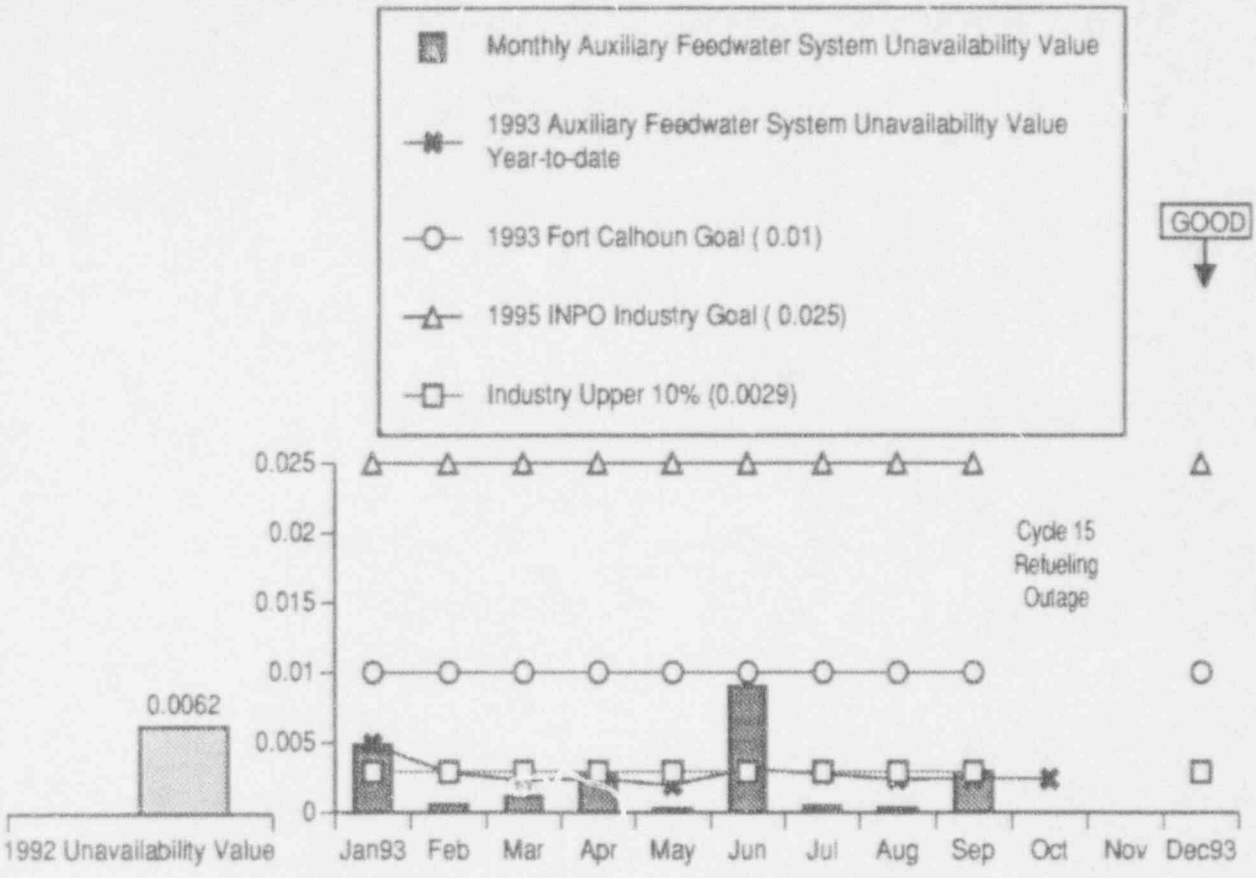
This indicator shows the High Pressure Safety Injection System unavailability value, as defined by INPO in the Safety System Performance Indicator Definitions, for the reporting month.

The High Pressure Safety Injection System unavailability value for the month of October 1993 was 0.0 due to the Cycle 15 Refueling Outage. The 1993 year-to-date HPSI unavailability value was 0.00033 at the end of October. The value for the last 12 months was 0.00026.

There has been a total of 27.73 hours of planned unavailability (for maintenance and surveillance tests) and no hours of unplanned unavailability for the HPSI system year-to-date.

The 1993 and 1992 Fort Calhoun goals for this indicator are a maximum of 0.008. The 1995 INPO industry goal is 0.02 and the industry upper ten percentile value (for the three year period from 7/90 through 6/93) is approximately 0.0011.

Data Source: Jaworski/Schaffer
Accountability: Jaworski/Schaffer
Adverse Trend: None



AUXILIARY FEEDWATER SYSTEM
SAFETY SYSTEM PERFORMANCE

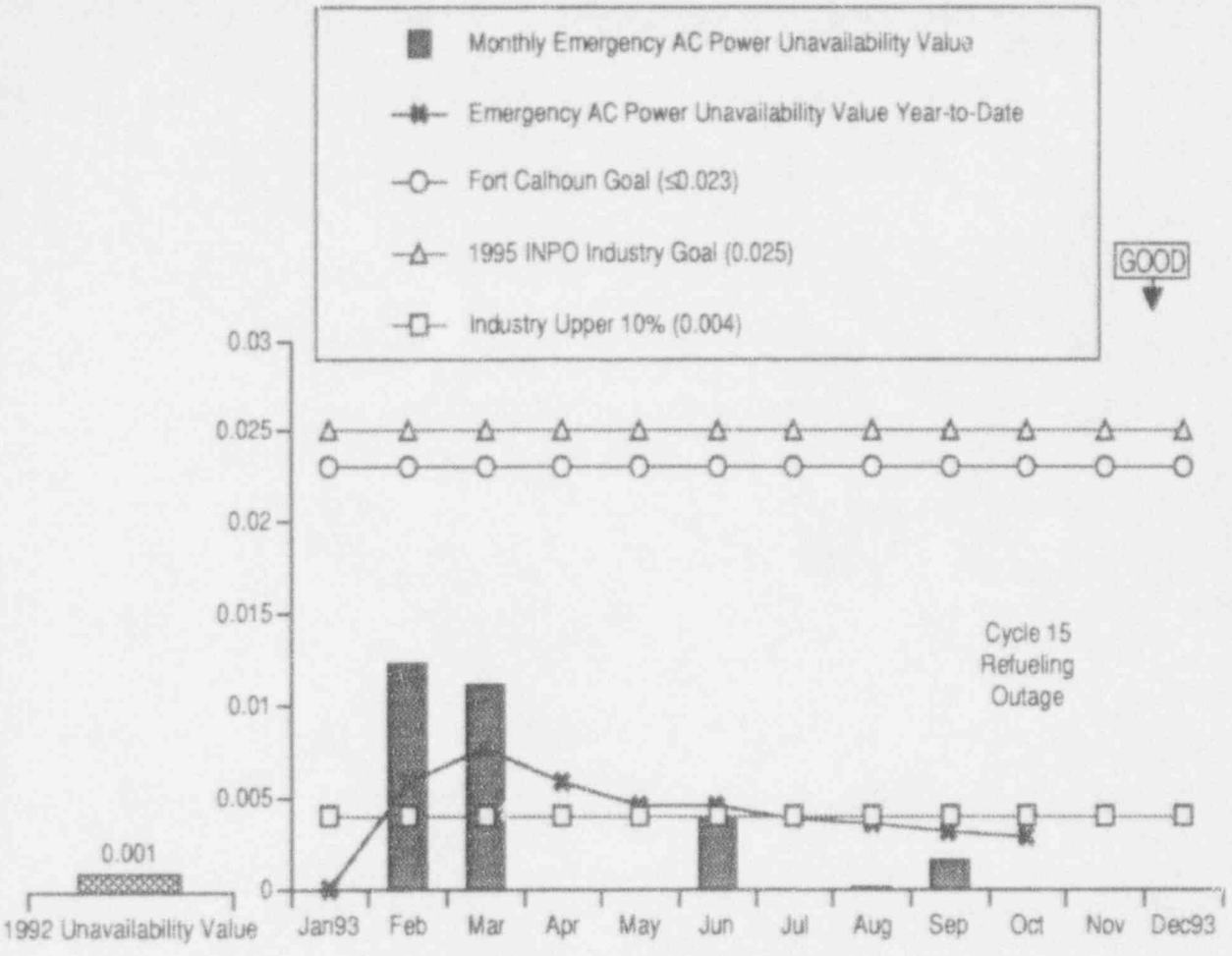
This indicator shows the Auxiliary Feedwater System Unavailability value, as defined by INPO in the Safety System Performance Indicator Definitions, for the reporting month.

The Auxiliary Feedwater System Unavailability Value for October 1993 was 0.0 due to the Cycle 15 Refueling Outage. The 1993 year-to-date AFW unavailability value was 0.0024 at the end of October. The value for the last 12 months is 0.0023.

There has been a total of 28.01 hours of planned unavailability (for maintenance and surveillance tests) and 2.02 hours of unplanned unavailability for the auxiliary feedwater system year-to-date.

The 1993 and 1992 Fort Calhoun year-end goals for this indicator are a maximum value of 0.01. The 1995 INPO industry goal is 0.025 and the industry upper ten percentile value (for the three year period from 7/90 through 6/93) is approximately 0.0029.

Data Source: Jaworski/Nay
Accountability: Jaworski/Nay
Adverse Trend: None



EMERGENCY AC POWER SYSTEM
SAFETY SYSTEM PERFORMANCE

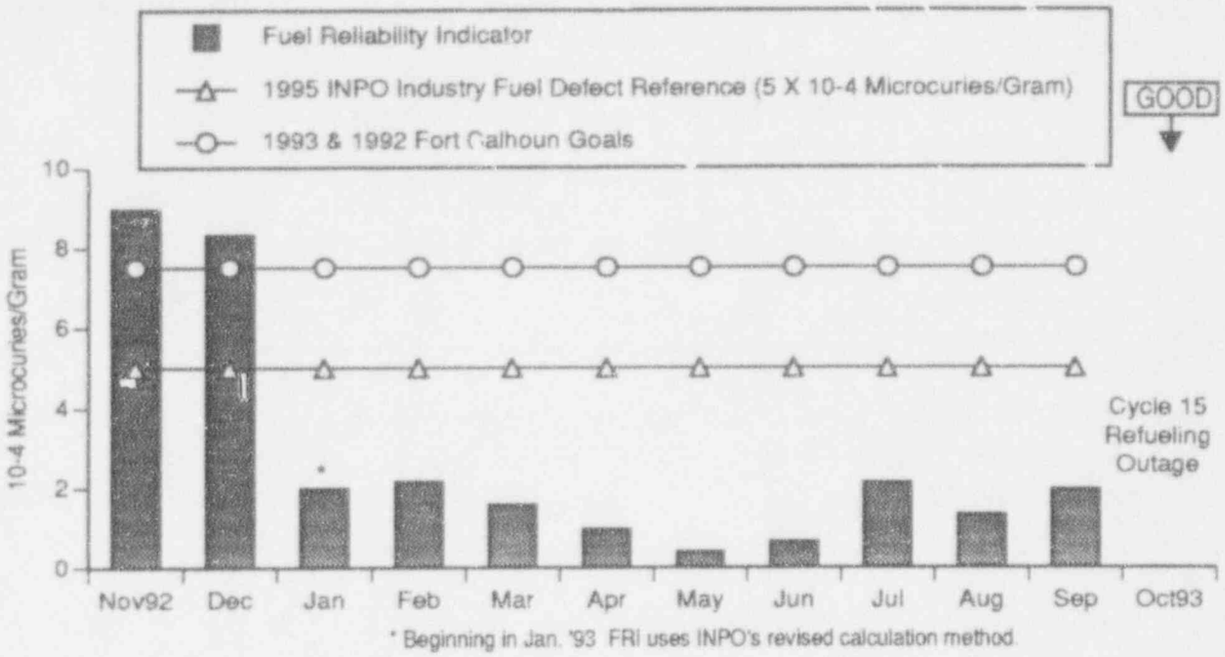
This indicator shows the Emergency AC Power System unavailability value, as defined by INPO in the Safety System Performance Indicator Definitions, for the reporting month.

The Emergency AC Power System unavailability value for October 1993 is 0.0. There were no hours of planned or unplanned unavailability for the month. The Emergency AC Power System unavailability value year-to-date is 0.0028. The value for the last 12 months is 0.0027.

There was a total of 41.04 hours of planned unavailability for surveillance tests and maintenance, and 0.22 hours of unplanned unavailability for the emergency AC power system year-to-date.

The 1993 Fort Calhoun goal for this indicator is ≤0.023. The 1992 goal was ≤0.024. The 1995 INPO industry goal is 0.025 and the industry upper ten percentile value (for the three year period from 7/90 through 6/93) is approximately 0.004.

Data Source: Jaworski/Ronning
Accountability: Jaworski/Ronning
Positive Trend



FUEL RELIABILITY INDICATOR

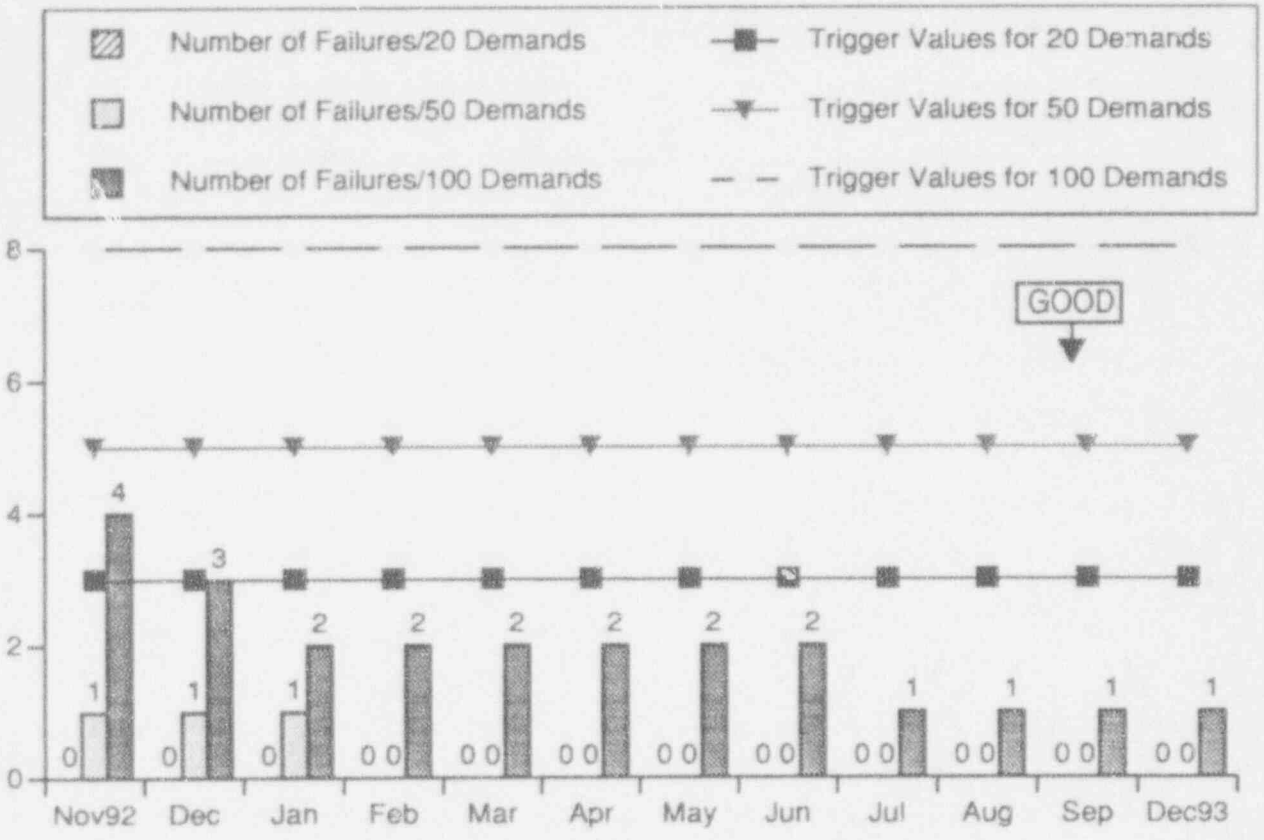
The Fuel Reliability Indicator (FRI) for October 1993 was not available because the plant was shutdown for the Cycle 15 Refueling Outage.

The Fuel Reliability Indicator (FRI) for September 1993 was 1.952 X 10^{-4} microcuries/gram. The purpose of the FRI is to monitor industry progress in achieving and maintaining a high level of fuel integrity. The September FRI value continues to indicate a defect free core. The September FRI was calculated based on fission product activities present in the reactor coolant during full power operation, September 1 through September 17.

Fission product activity data from plant full power operation and power reduction and shutdown, September 18 through 26, shows no Xenon-133 activity increases and no Iodine spiking present. This is another indication of a defect free core. A detailed fuel ultrasonic inspection and possible reconstitution program will not be necessary during the 1993 refueling outage. The last detected fuel failure was during Cycle 13.

The INPO September 1992 Report "Performance Indicators for U.S. Nuclear Utility Industry" (INPO No. 92-011) states that "...the 1995 industry goal for fuel reliability is that units should strive to operate with zero fuel defects. A value larger than 5.0 X 10^{-4} microcuries/gram indicates a high probability of unit operation with one or more fuel defects. The determination of current defect-free operation requires more sophisticated analysis by utility reactor engineers." The value of 5.0 X 10^{-4} microcuries/gram is not an INPO industry goal. It is defined as a "Fuel Defect Reference" number or a "Zero Leaker Threshold". Each utility will calculate whether the core is defect free or not.

Data Source: Holthaus/Guliani
Accountability: Chase/Spilker
Adverse Trend: None

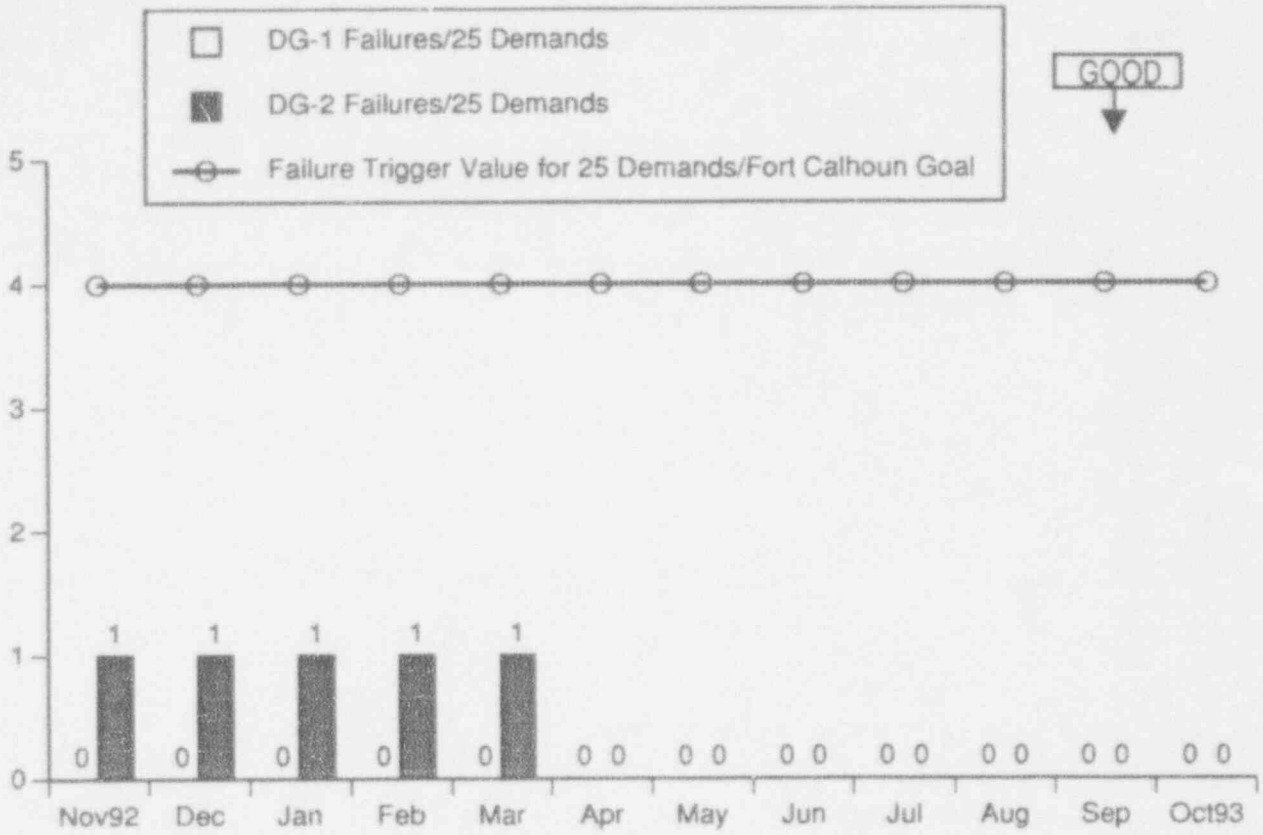


EMERGENCY DIESEL GENERATOR UNIT RELIABILITY

This bar graph shows three monthly indicators pertaining to the number of failures that were reported during the last 20, 50, and 100 emergency diesel generator demands at the Fort Calhoun Station. Also shown are trigger values which correspond to a high level of confidence that a unit's diesel generators have obtained a reliability of greater than or equal to 95% when the failure values are below the corresponding trigger values. The Fort Calhoun 1993 goal is to have fewer failures than these trigger values.

The demands counted for this indicator include the respective number of starts and the respective number of load-runs for both Diesel Generators combined. The number of start demands includes all valid and inadvertent starts, including all start-only demands and all start demands that are followed by load-run demands, whether by automatic or manual initiation. Load-run demands must follow successful starts and meet at least one of the following criteria: a load-run that is a result of a real load signal, a load-run test expected to carry the plant's load and duration as stated in the test specifications, and a special test in which a diesel generator was expected to be operated for a minimum of one hour and to be loaded with at least 50% of design load (see exceptions and other demand criteria in the Definition Section of this report).

Data Source: Jaworski/Ronning (Manager/Source)
Accountability: Jaworski/Ronning
Positive Trend



DIESEL GENERATOR RELIABILITY (25 DEMANDS)

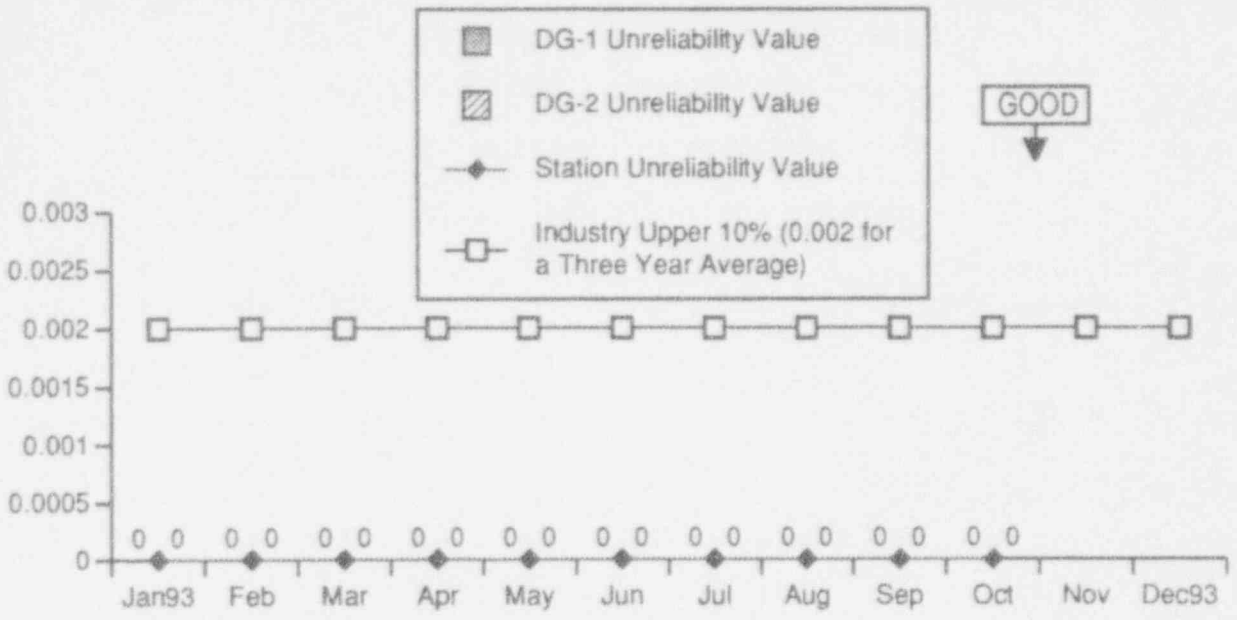
This indicator shows the number of failures experienced by each emergency diesel generator during the last 25 start demands and the last 25 load-run demands. A trigger value of 4 failures within the last 25 demands is also shown. This trigger value of 4 failures within 25 demands is the Fort Calhoun goal for 1992 and 1993.

It must be emphasized that in accordance with NUMARC criteria, certain actions will take place in the event that any one emergency diesel generator experiences 4 or more failures within the last 25 demands on the unit. These actions are described in the Definitions Section of this report. A System Engineering Instruction has been approved for the Fort Calhoun Station to institutionalize and formally approve/adopt the required NUMARC actions.

Diesel Generator DG-1 has not experienced any failures during the last 25 demands on the unit.

Diesel Generator DG-2 has not experienced any failures during the last 25 demands on the unit.

Data Source: Jaworski/Ronning (Manager/Source)
Accountability: Jaworski/Ronning
Positive Trend



EMERGENCY DIESEL GENERATOR UNRELIABILITY

The purpose of this indicator is to monitor the likelihood that emergency AC power generators will respond to off-normal events or accidents. It also provides an indication of the effectiveness of maintenance, operation and test practices in controlling generator unreliability.

The year-to-date station EDG unreliability value at the end of October 1993 was 0.0.

For DG-1: There were 2 start demands for the reporting month with no failures.
In addition, there were 3 load-run demands with no failures.

For DG-2: There were 6 start demands for the reporting month with no failures.
In addition, there were 2 load-run demands with no failures.

Emergency diesel generator unreliability is calculated as follows:

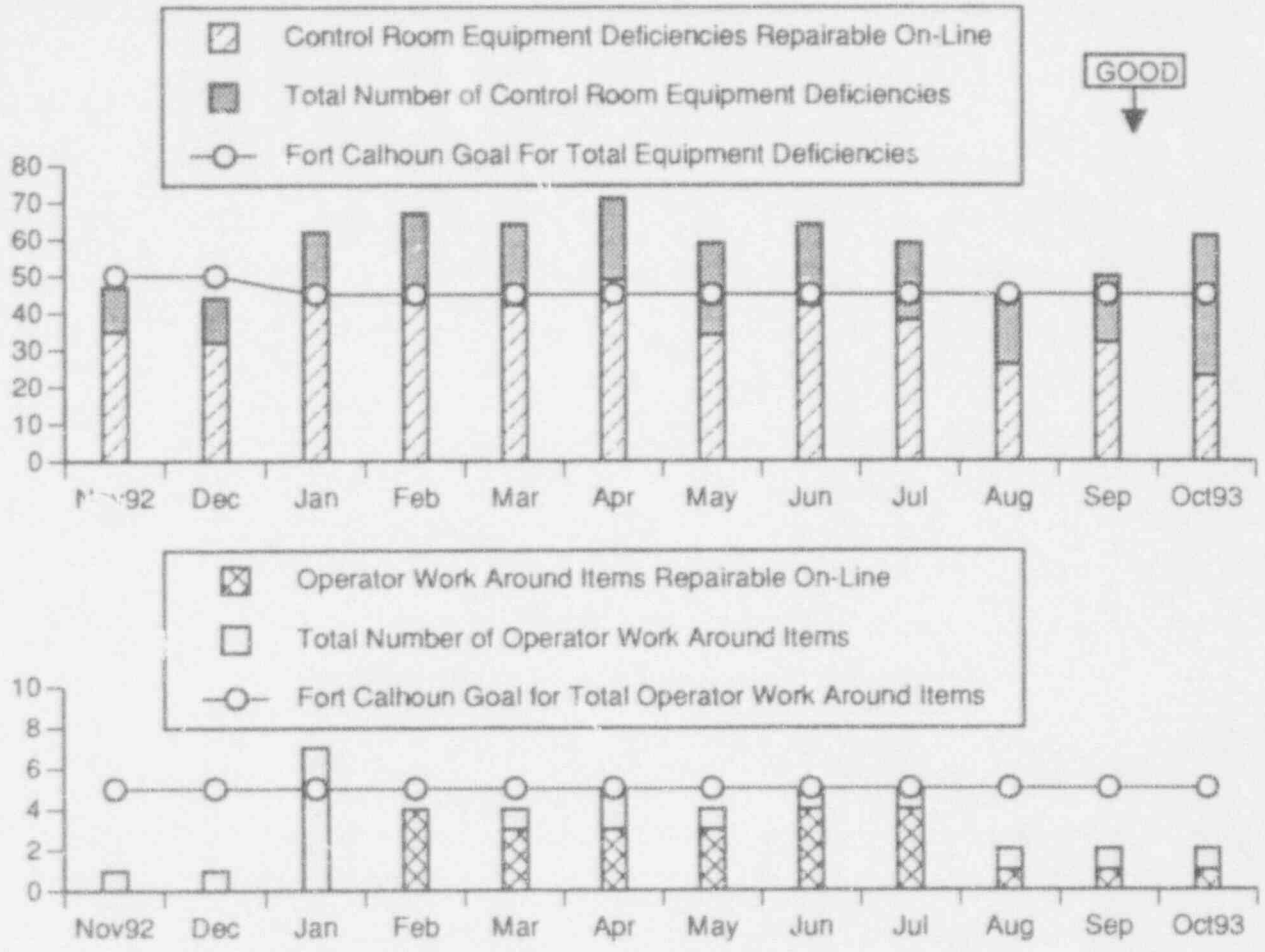
value per DG = SU + LU - (SU x LU)

where SU = Start Unreliability = $\frac{\text{number of unsuccessful starts}}{\text{number of valid start demands}}$

LU = Load-run Unreliability = $\frac{\text{number of unsuccessful load-runs}}{\text{number of valid load-run demands}}$

Station Value = average of DG-1 and DG-2 values

Data Source: Jaworski/Ronning (Manager/Source)
Accountability: Jaworski/Ronning
Positive Trend



NUMBER OF CONTROL ROOM EQUIPMENT DEFICIENCIES

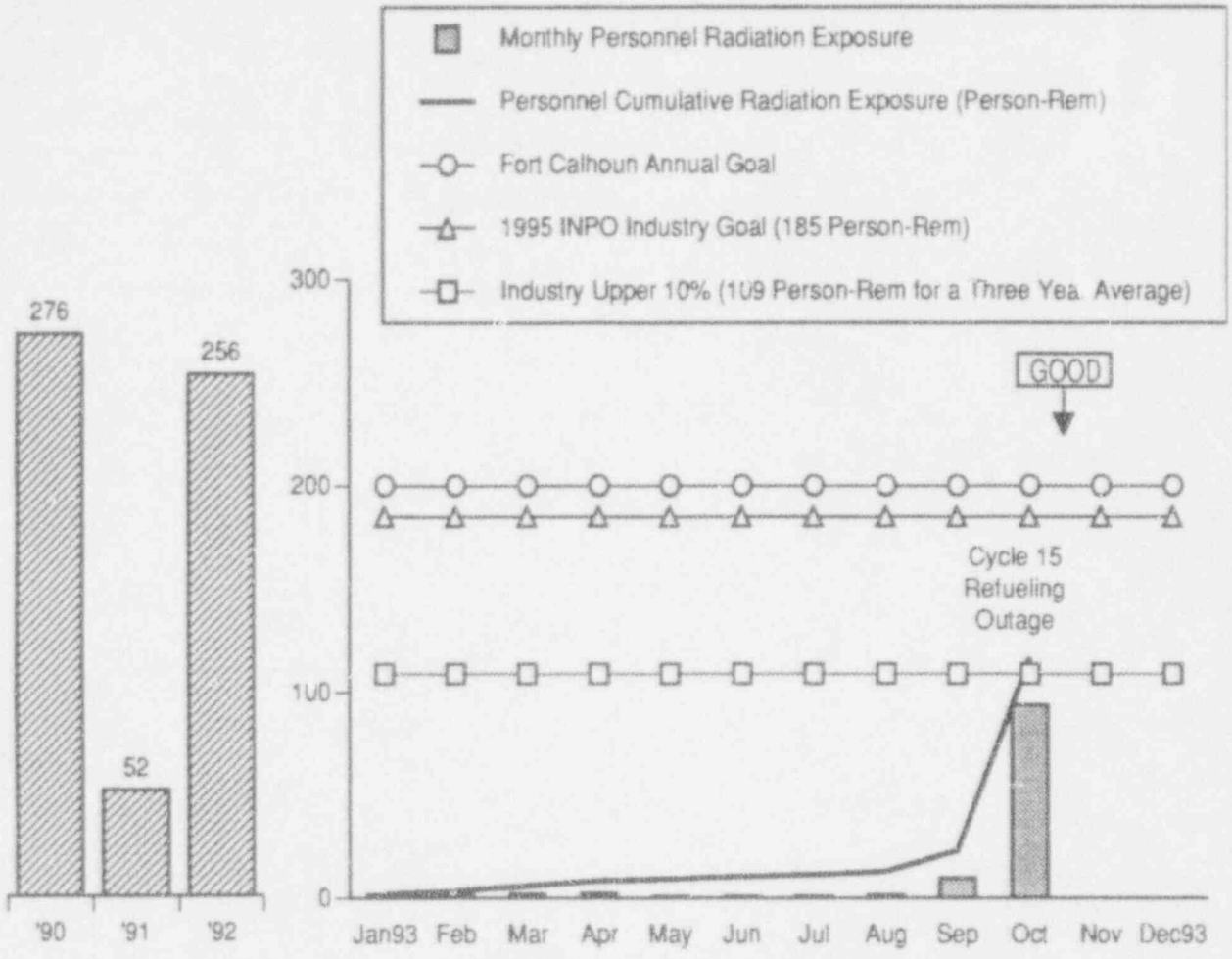
This indicator shows the number of control room equipment deficiencies that are repairable during plant operations (on-line), the total number of control room equipment deficiencies, the number of Operator Work Around (OWA) Items repairable on-line, the total number of OWAs and the 1993 Fort Calhoun goals.

There was a total of 61 control room equipment deficiencies at the end of October 1993. 23 of these deficiencies are repairable on-line and 38 require a plant outage to repair.

There were 2 identified Operator Work Around Items at the end of the month. 1 of these OWA items is repairable on-line and 1 requires an outage to repair.

The 1993 Fort Calhoun monthly goals are to have a maximum of 45 control room equipment deficiencies (total) and a maximum of 5 OWAs (total).

Data Source: Chase/Tills (Manager/Source)
Accountability: Chase/Bobba
Adverse Trend: None



COLLECTIVE RADIATION EXPOSURE

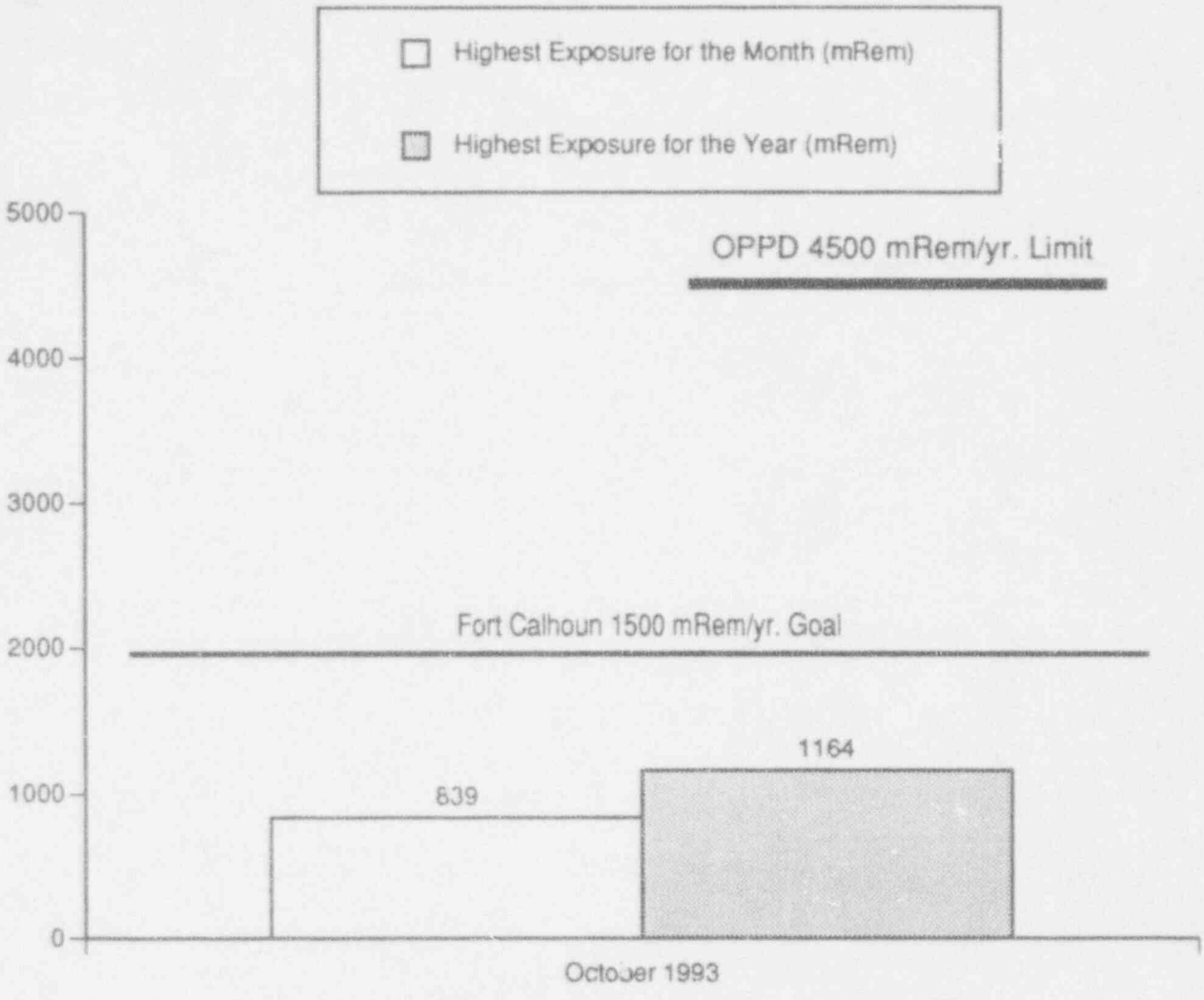
During October 1993, 93.861 person-rem was recorded by TLDs worn by personnel while working at the Fort Calhoun Station. The year-to-date exposure is 116.999 person-rem. The exposure for the last 12 months is 121.383 person-rem.

The Fort Calhoun goal for collective radiation exposure for 1993 is a maximum of 200 person-rem.

The 1995 INPO industry goal is 185 person-rem per year. The industry upper ten percentile value (for the three year period from 7/90 through 6/93) is approximately 109 person-rem per year. The three year average for Fort Calhoun Station from 7/90 through 6/93 was 121.518 person-rem per year.

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

SEP 54



MAXIMUM INDIVIDUAL RADIATION EXPOSURE

During October 1993, an individual accumulated 839 mRem, which was the highest individual exposure for the month.

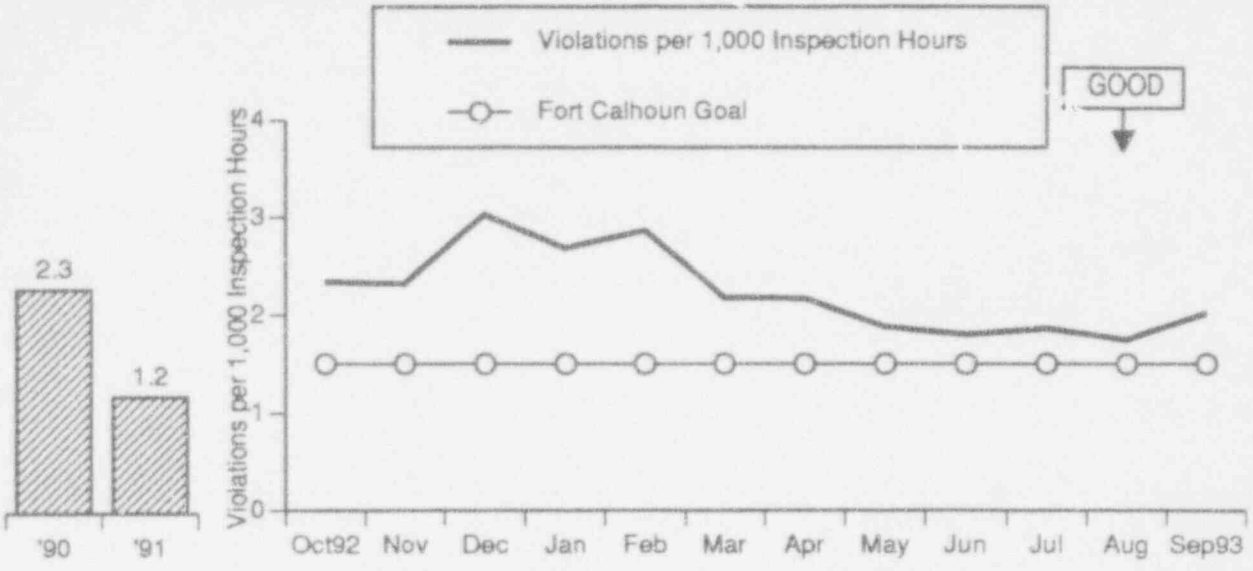
The maximum individual exposure for the year was 1,164 mRem at the end of October.

The OPPD limit for the maximum yearly individual radiation exposure is 4,500 mRem/year. The 1993 Fort Calhoun year-end goal is a maximum of 1,500 mRem.

Date Source: Chase/Williams (Manager/Source)

Accountability: Chase/Lovett

Adverse Trend: None



VIOLATIONS PER 1,000 INSPECTION HOURS

This indicator displays the number of NRC violations cited in inspection reports per 1,000 NRC inspection hours. This indicator is one month behind the reporting month due to the time involved with collecting and processing the data.

The violations per 1,000 inspection hours indicator was reported as 2.02 for the twelve months from October 1, 1992 through September 30, 1993.

The following inspections ended during this reporting period:

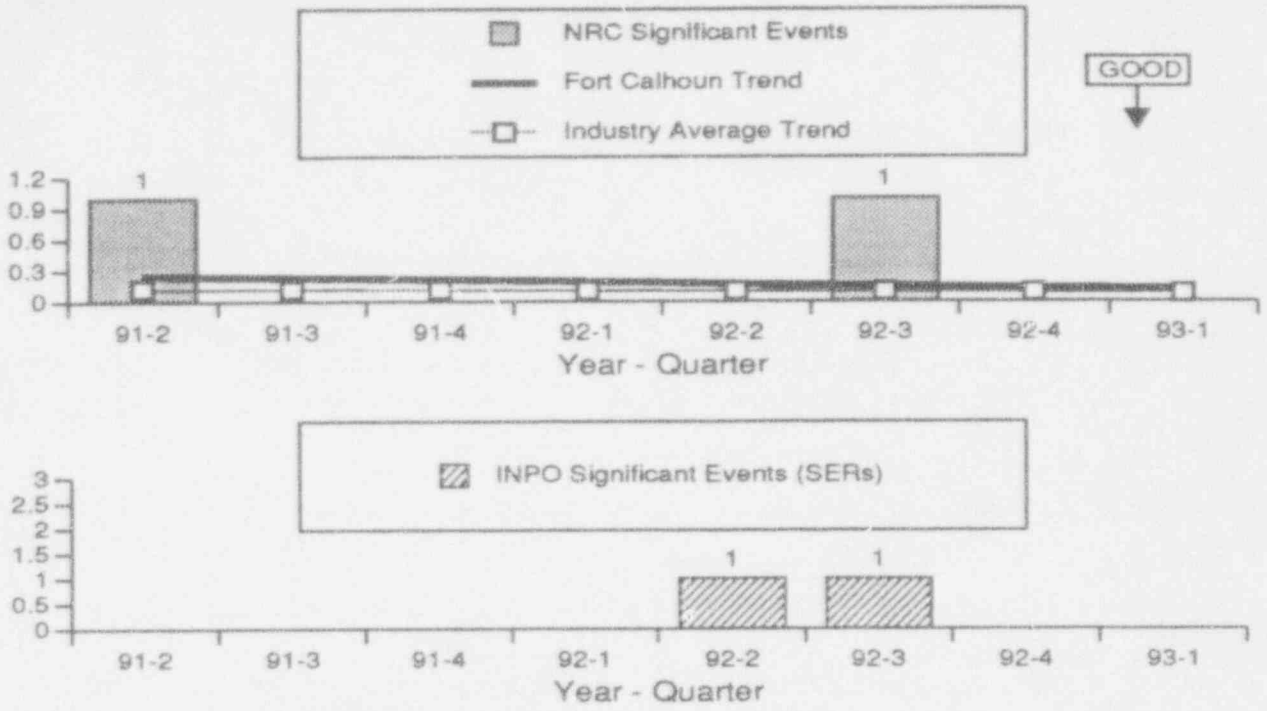
IER No.	Title	No. of Hours
93-08	10 CFR 50.59 Program	80
93-20	Monthly Resident Inspection	480
93-22	ISI Program Observation	40
93-23	Radiation Protection - Outage	32

To date, OPPD has received a total of 7 violations in 1993:

Level III Violations	(0)
Level IV Violations	(4)
Level V Violations	(0)
Non-Cited Violations (NCV)	(3)

The 1993 and 1992 Fort Calhoun goals for this indicator are a maximum of 1.5 violations per 1,000 inspection hours.

Data Source: Short/Cavanaugh (Manager/Source)
Accountability: Short
Adverse Trend: None



SIGNIFICANT EVENTS

This indicator illustrates the number of NRC and INPO Significant Events for Fort Calhoun Station as reported by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data in the biannual "Performance Indicators for Operating Commercial Nuclear Power Reactors" report and INPO's Nuclear Network.

The following NRC significant events occurred between the second quarter of 1991 and the first quarter of 1993:

Second Quarter 1991: Safety related equipment was not adequately protected from a high energy line break.

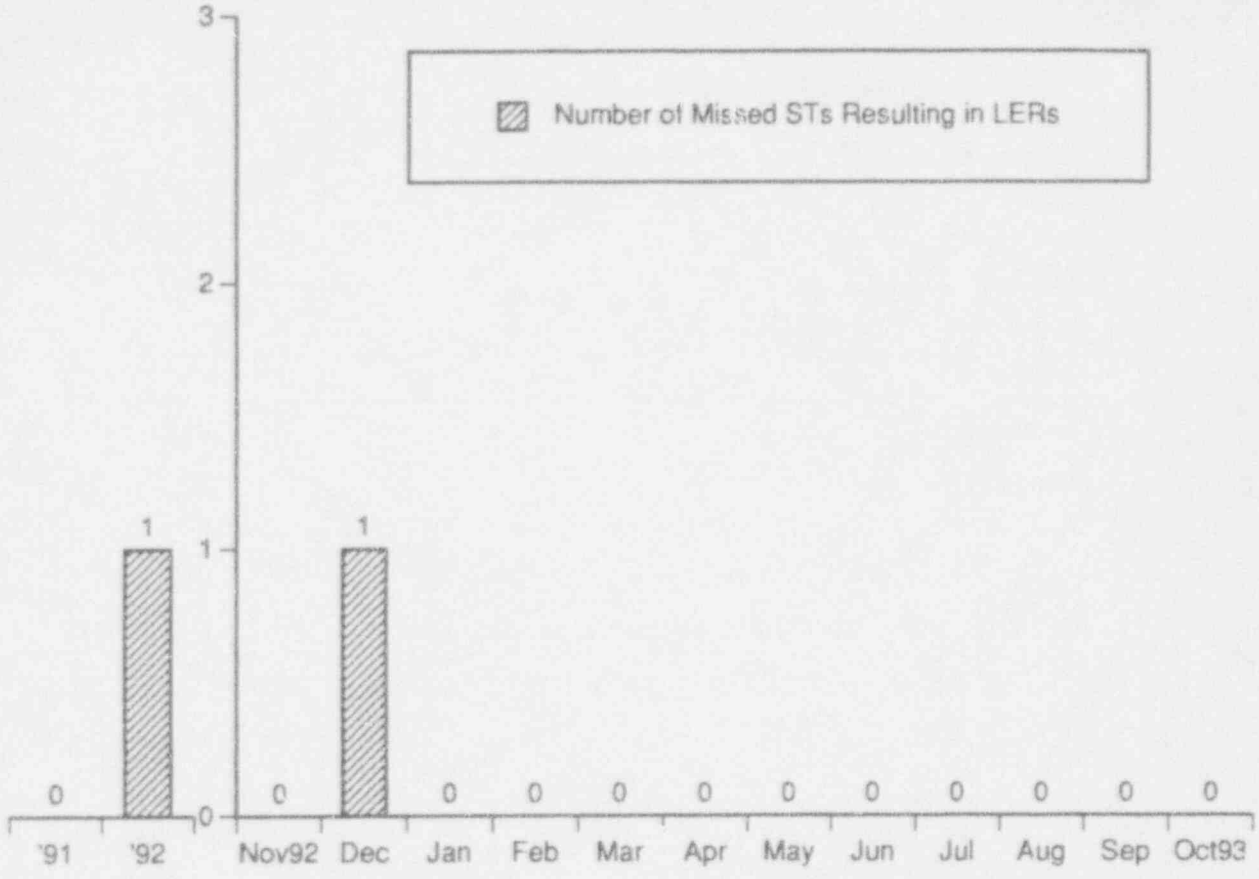
Third Quarter 1992: The failure of a Pressurizer Code safety valve to reseat initiated a LOCA with the potential to degrade the reactor coolant pressure boundary.

The following INPO significant events, as reported in Significant Event Reports (SERs), occurred between the second quarter of 1991 and the first quarter of 1993:

Second Quarter 1992: Personnel and accessible building areas were contaminated with transuranic, alpha-emitting radionuclides.

Third Quarter 1992: The failure of a nonessential inverter during troubleshooting caused a turbine load rejection. This resulted in a high reactor coolant pressure automatic scram and the opening of the pressure relief valves and one of two pressurizer safety valves. One pressurizer safety valve subsequently reopened at a lower reactor coolant system pressure and remained partially open, resulting in a release of reactor coolant to containment via the pressurizer quench tank.

Data Source: Nuclear Regulatory Commission & INPO
Accountability: Chase
Adverse Trend: None



NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS

This indicator shows the number of missed Surveillance Tests (STs) that result in Licensee Event Reports (LERs) during the reporting month. The graph on the left shows the yearly totals for the indicated years.

There were no missed surveillance tests resulting in LERs during October 1993.

During the month of January 1993 it was discovered that during December 1992 an ASME Section XI Code required surveillance was not completed nor corrective maintenance performed as a result of AC-10A falling into the "Alert Range" (LER 93-003 Failure to Satisfy Inservice Testing Requirements for Raw Water Pump).

The 1993 and 1992 Fort Calhoun goals for this indicator are zero.

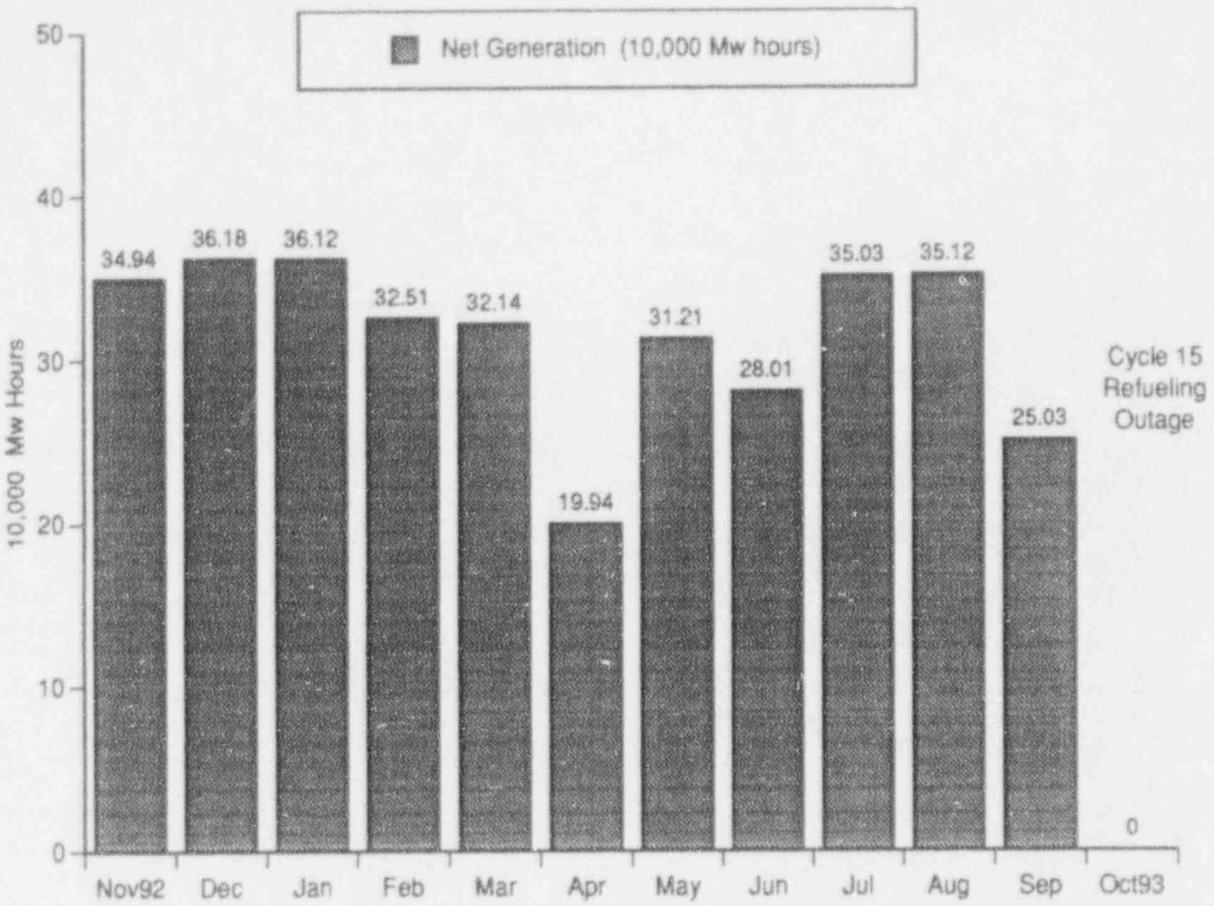
Data Source: Monthly Operating Report & Plant Licensee Event Reports (LERs)

Accountability: Chase/Jaworski

Positive Trend SEP 60 & 61

PERFORMANCE

Goal: To strive for Excellence in Operations utilizing the highest standards of performance at Fort Calhoun Station that result in safe, reliable plant operation in power production.



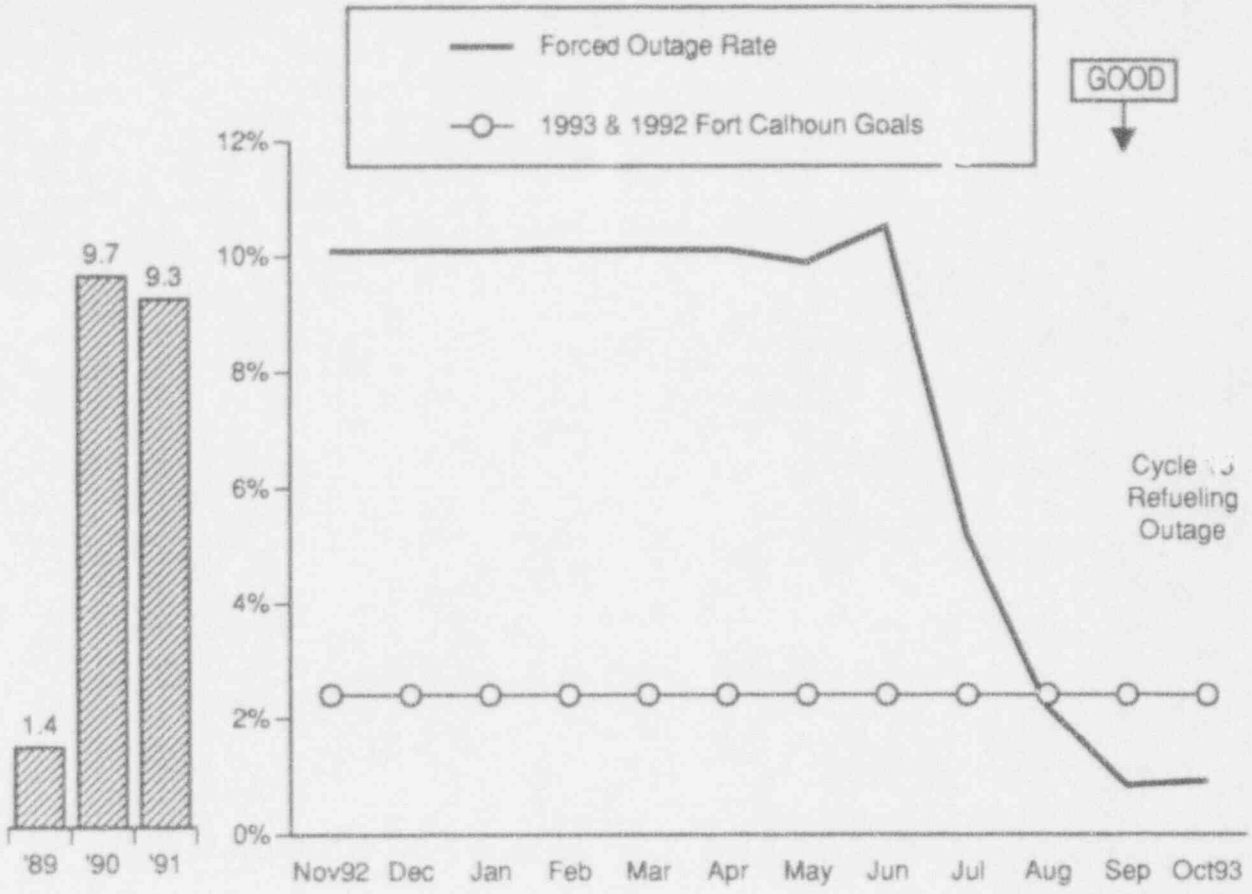
STATION NET GENERATION

Planned energy losses for September and October 1993 are attributable to the shutdown for the Cycle 15 refueling outage, which began on September 25.

Unplanned energy losses for the months of June and July were attributable to a forced outage that began on June 24 when the inadvertent jarring of a 345 KV fault relay in the switchyard caused a turbine and reactor trip. The plant returned to 100% power on July 2nd.

Planned energy losses for the months of April and May were the result of a maintenance outage and operating at 77% power to conserve fuel.

Data Source: Station Generation Report
Accountability: Chase
Adverse Trend: None



FORCED OUTAGE RATE

The forced outage rate (FOR) was reported as 0.92% for the twelve months from November 1, 1992 to October 31 1993. The slight increase in the FOR from September to October occurs because there are no generator on-line hours this month due to the Cycle 15 Refueling Outage.

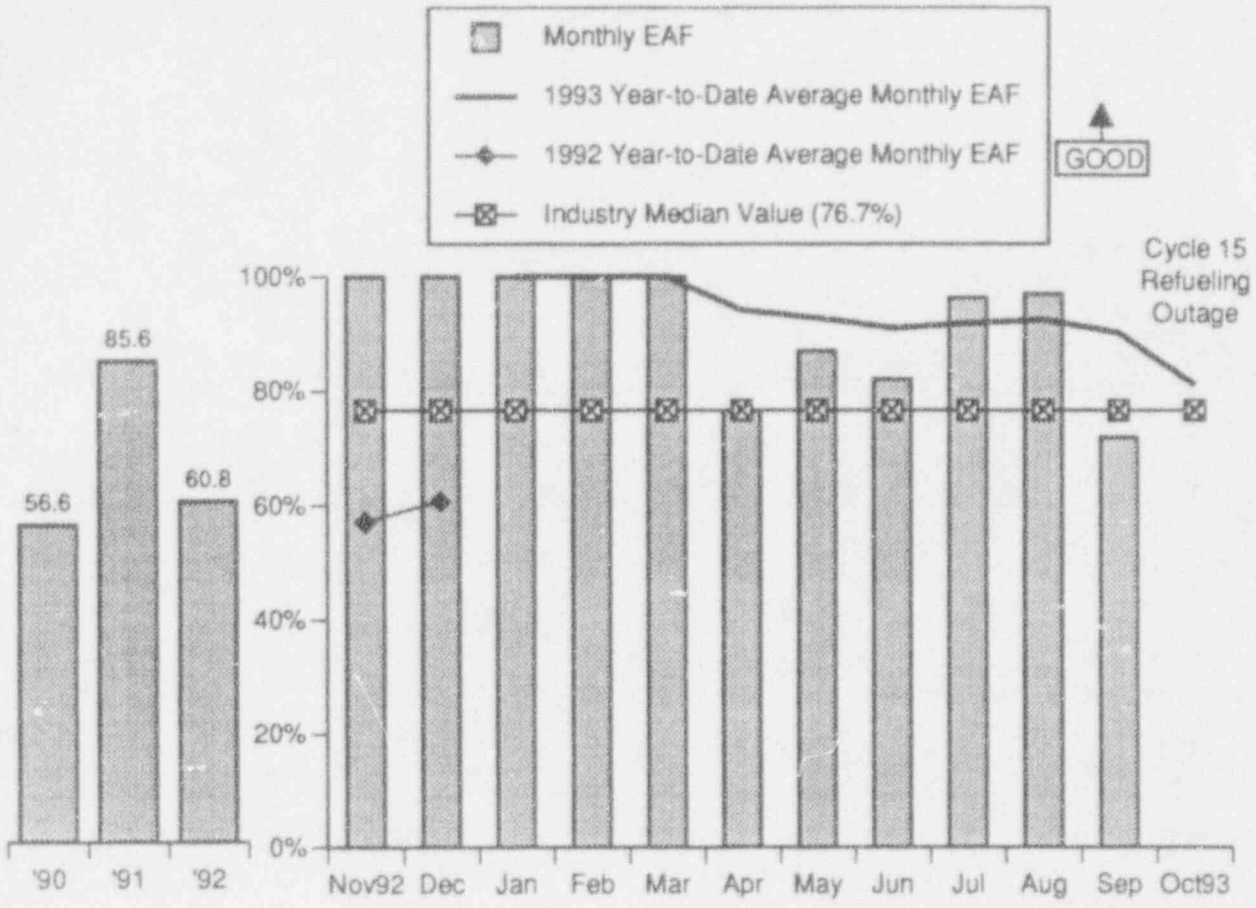
There was one forced outage during the month of June 1993. This outage, which occurred when the inadvertent jarring of a 345 KV fault relay in the switchyard caused a turbine and reactor trip, lasted 70.6 hours.

The 1993 and 1992 Fort Calhoun goals for the Forced Outage Rate are a maximum of 2.4%.

Data Source: Monthly Operations Report & NERC GAD Forms

Accountability: Chase

Positive trend



EQUIVALENT AVAILABILITY FACTOR

This indicator shows the plant monthly Equivalent Availability Factor (EAF), the year-to-date average monthly EAF for 1993, and the EAF for the previous 3 years.

The EAF for October 1993 was reported as 0.0% due the Cycle 15 Refueling Outage, which began on September 25. The year-to-date average monthly EAF was reported as 81.1% at the end of October.

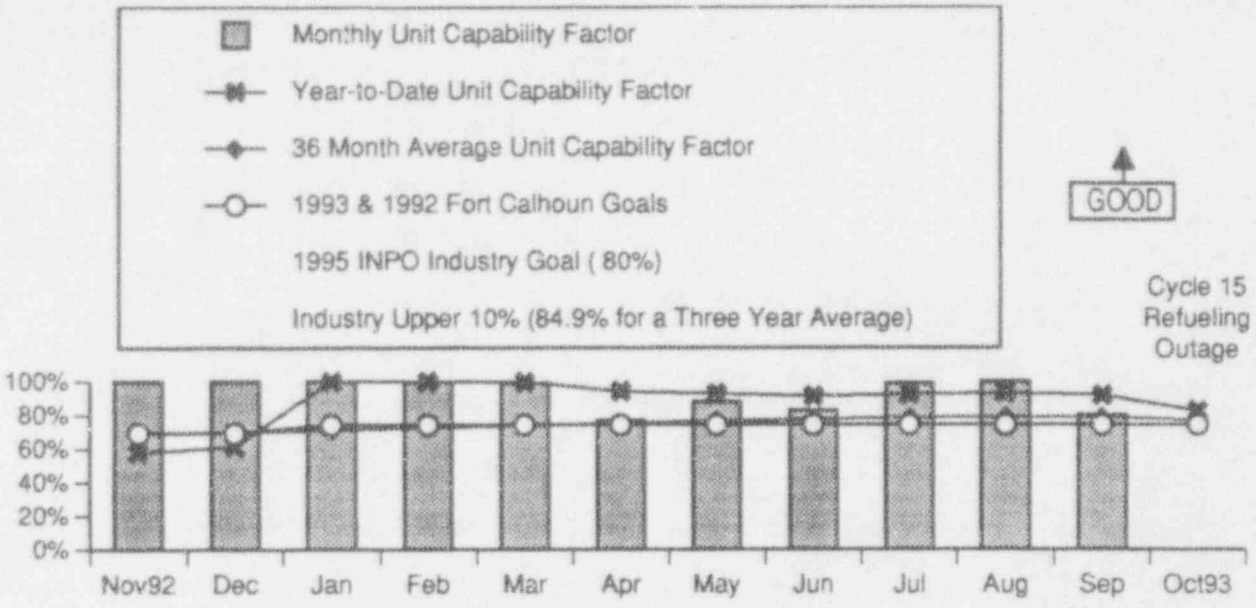
The April, May and June 1993 EAF values are the result of a maintenance outage and a forced outage that occurred when the inadvertent jarring of a 345 KV fault relay in the switchyard caused a turbine and reactor trip.

The industry median EAF value for the three year period from 7/90 through 6/93 was 76.7%.

Data Source: Dietz/Parra (Manager/Source)

Accountability: Chase

Adverse Trend: None



UNIT CAPABILITY FACTOR

This indicator shows the plant monthly Unit Capability Factor (UCF) value, the 1993 and 1992 year-to-date UCFs, the goals, the 36 month average UCFs, the 1995 INPO industry goal and the approximate industry upper ten percentile value. UCF is defined as the ratio of the available energy generation over 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.

The UCF for October 1993 was reported as 0.0%. Energy losses for the month were due to the Cycle 15 Refueling Outage, which began on September 25. The year-to-date UCF was reported as 82.4%. The 36 month average UCF was reported as 76.8% at the end of October. The UCF for the last 12 months was 85.4%.

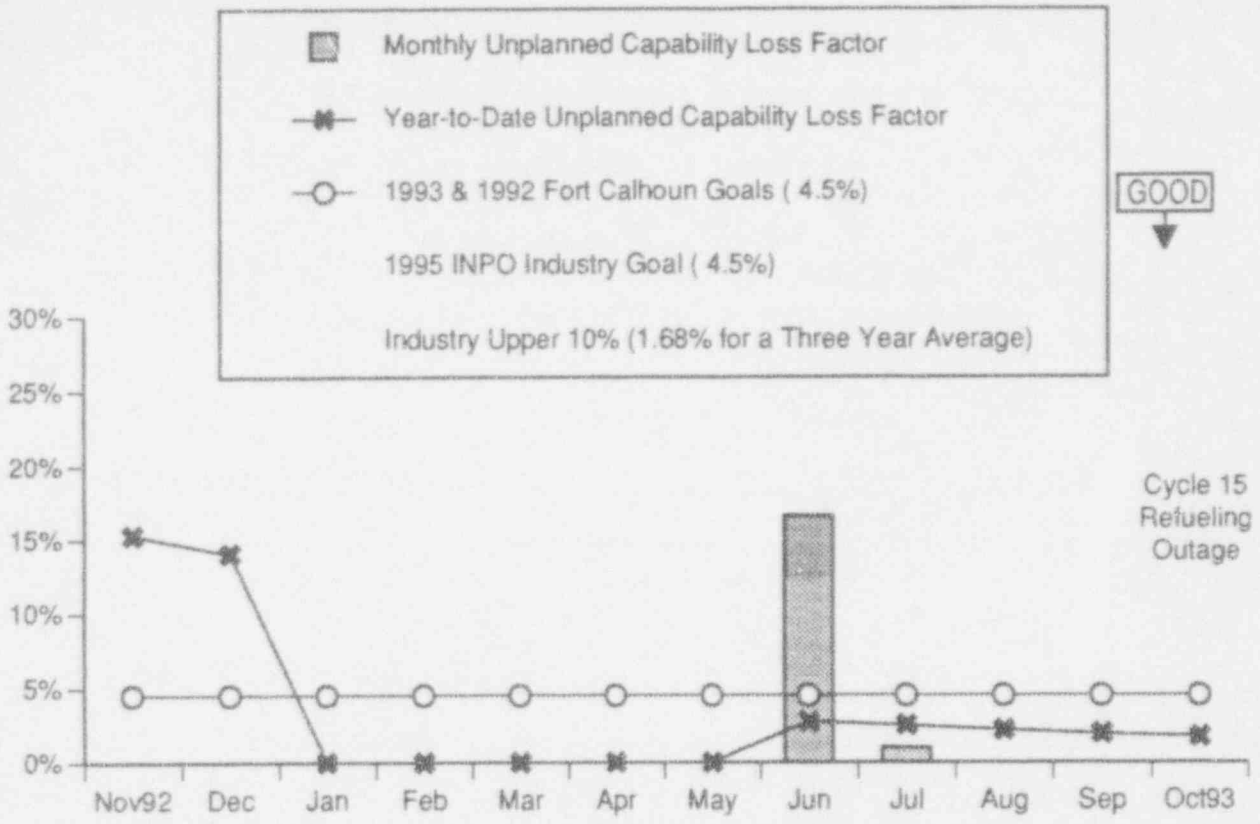
The UCF for June 1993 was reported as 82.6%. Energy losses for the month were due to Moderator Coefficient Testing and a forced outage from June 24 through June 27.

The UCF for May 1993 was reported as 88%. Energy losses for the month were due to the maintenance outage that began on April 24 and continued through May 1 and the subsequent rampup. The UCF was reported as 77.1% for the month of April 1993. Planned energy losses for April were the result of the maintenance outage from April 24 through 30.

The 1995 INPO industry goal is 80% and the industry upper ten percentile value (for the three year period from 7/90 through 6/93) is approximately 85.4%.

The 1993 Fort Calhoun goal for Unit Capability Factor is 74.1%. The basis for this goal is 56 days for the Cycle 15 Refueling Outage, 20 days rampup (10 full power equivalent days), unplanned loss of 11.5 full power equivalent days, and 10 day ramp up (5 full power equivalent days), mini outage of 7 full power equivalent days, and 10 day ramp up (5 full power equivalent days). Based on the station operating record through the end of Cycle 14; assuming no forced outages after the refueling outage, and the 56 day outage with 20 day rampup; the maximum possible 1993 UCF is 77.4%.

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



UNPLANNED CAPABILITY LOSS FACTOR

This indicator shows the plant monthly Unplanned Capability Loss Factor (UCLF), the 1993 and 1992 year-to-date UCLFs, the goals, the 1995 INPO industry goal and the approximate industry upper ten percentile value. UCLF is defined as 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), expressed as a percentage.

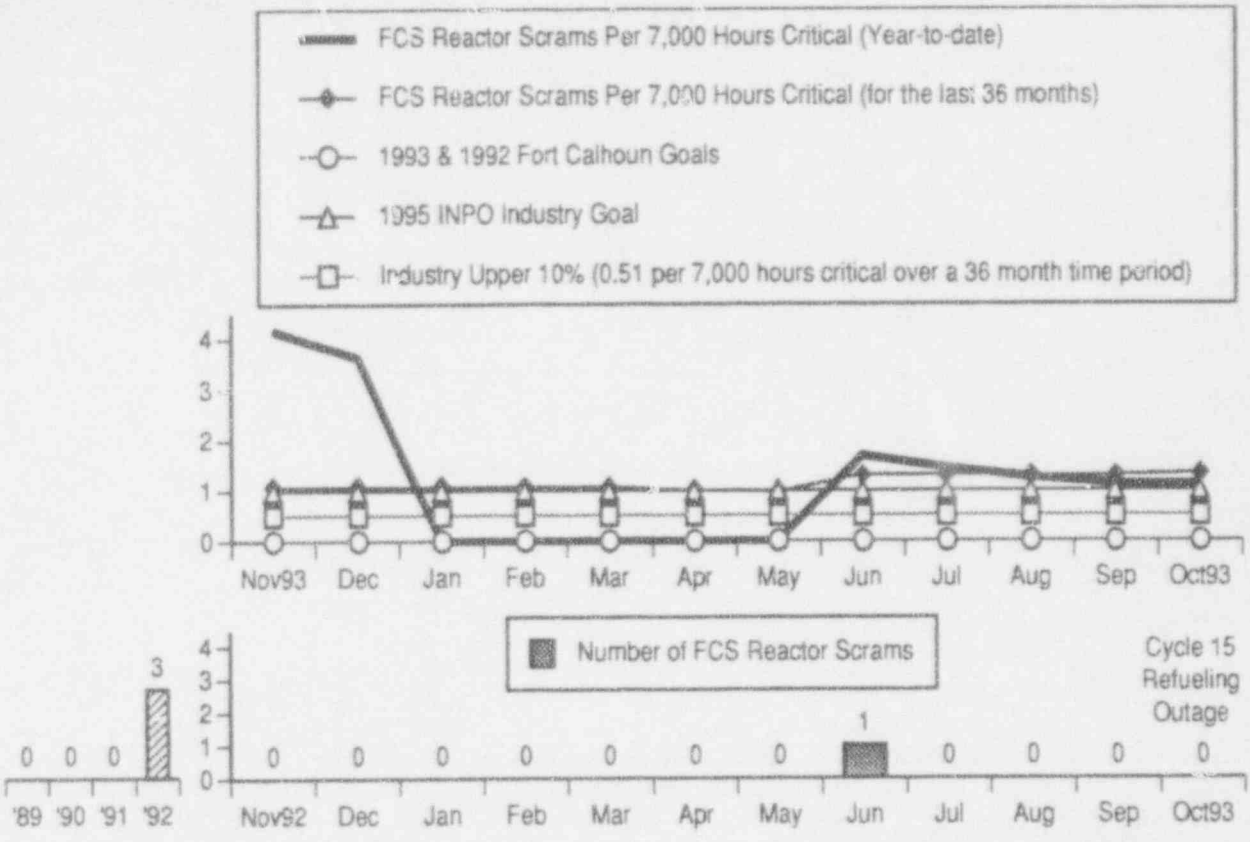
The UCLF was reported as 0.0% for the month of October 1993. The year-to-date UCLF for 1993 was 1.74%. The 36 month average UCLF was reported as 10.11% at the end of October. The UCLF for the last 12 months was 1.45%.

The UCLF was reported as 16.6% for the month of June 1993. Unplanned energy losses for the month were the result of a forced outage that occurred as a result of the inadvertent jarring of a 345 KV fault relay in the switchyard.

The 1995 INPO industry goal is 4.5% and the industry upper ten percentile value (for the three year period from 7/90 through 6/93) is approximately 1.65%.

The 1993 Fort Calhoun goal for Unplanned Capability Loss Factor is 4.5%. The basis for this goal is an unplanned loss of 11.5 full power equivalent days and 10 day rampup (5 full power equivalent days).

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



UNPLANNED AUTOMATIC REACTOR SCRAMS PER 7,000 HOURS CRITICAL

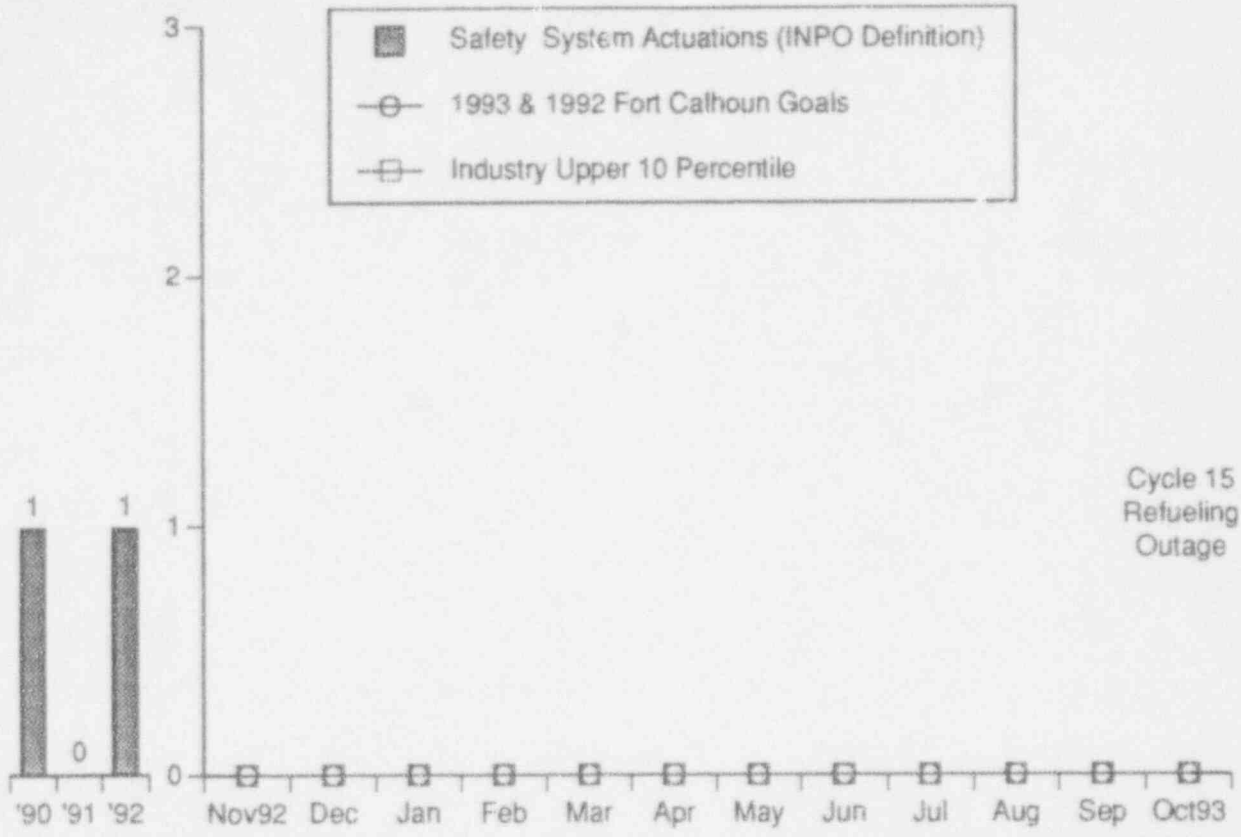
The upper graph shows the number of unplanned automatic reactor scrams per 7,000 hours critical (as defined in INPO's 12/92 publication "Detailed Descriptions of International Nuclear Power Plant Performance Indicators and Other Indicators") for Fort Calhoun Station. This value is calculated by multiplying the total number of scrams in a specified time period by 7,000 hours, then dividing that number by the total number of critical hours in the same time period. The lower graph shows the number of unplanned automatic reactor scrams that occurred during each month for the last twelve months.

The year-to-date station value is 1.13 at the end of October 1993. The value for the last 12 months is 0.91. The value for the last 36 months is 1.33.

An unplanned automatic reactor scram occurred on June 24, 1993 when the inadvertent jarring of a 345 KV fault relay in the switchyard caused a turbine and reactor trip.

The 1993 and 1992 goals for unplanned automatic reactor scrams per 7,000 hours critical have been set at zero. The 1995 INPO industry goal is a maximum of one unplanned automatic reactor scram per 7,000 hours critical. The industry upper ten percentile value is approximately 0.51 scrams per 7,000 hours critical for the 36 month time period from 7/90 through 6/93.

Data Source: Monthly Operations Report & Plant Licensee Event Reports (LERs)
Accountability: Chase
Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

There were no unplanned safety system actuations during the month of October 1993. The Cycle 15 Refueling Outage, which began on September 25, was in progress throughout the month.

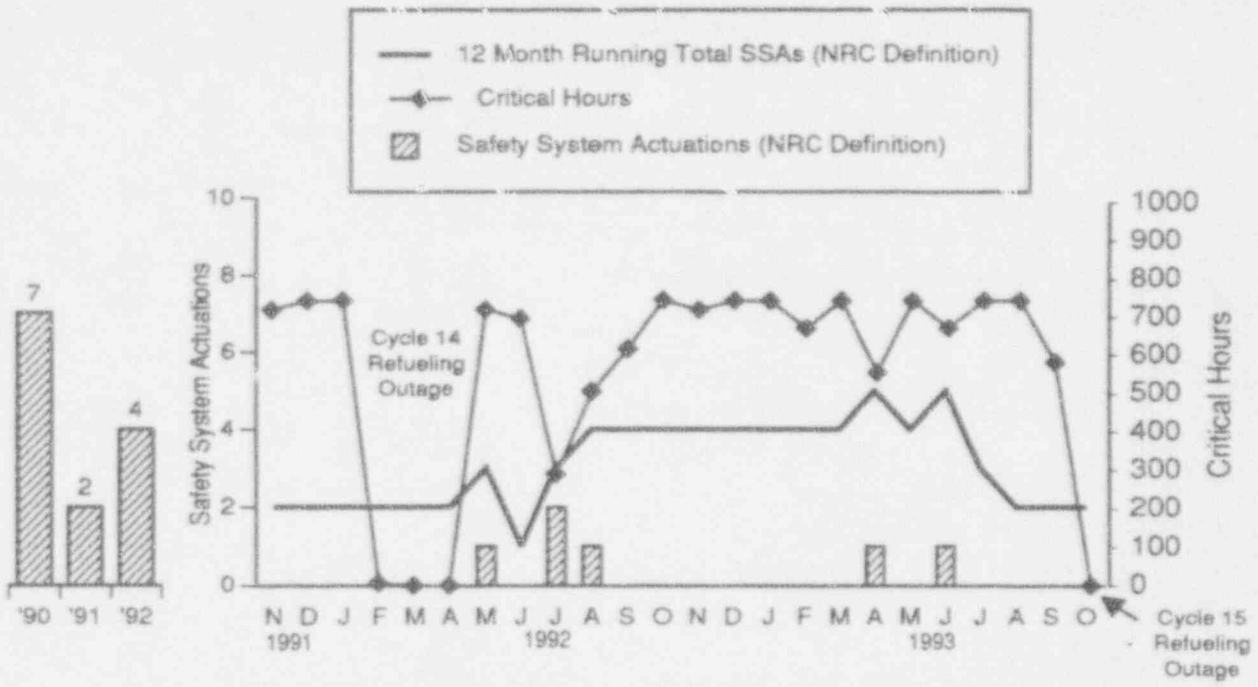
The last unplanned safety system actuation occurred during the month of July 1992 and was due to the loss of an inverter and the subsequent reactor trip on 7/3/92.

The 1993 and 1992 goals for the number of unplanned safety system actuations are zero.

Data Source: Monthly Operations Report & Plant Licensee Event Reports (LERs)

Accountability: Jaworski/Foley/Ronning

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (NRC DEFINITION)

This indicator shows the number of unplanned safety system actuations (SSAs), which includes the High and Low Pressure Safety Injection Systems, the Safety Injection Tanks, and the Emergency Diesel Generators. The NRC classification of SSAs includes actuations when major equipment is operated and when the logic systems for these safety systems are challenged.

The last unplanned safety system actuation occurred during June 1993 when the inadvertent jarring of a 345 KV fault relay in the switchyard caused a turbine and reactor trip.

An unplanned safety system actuation occurred on April 30, 1993 when a non-licensed operator mistakenly opened the wrong potential fuse drawer causing a low voltage alarm on bus 1A1, a loadshed on bus 1A1 and an auto start of an EDG.

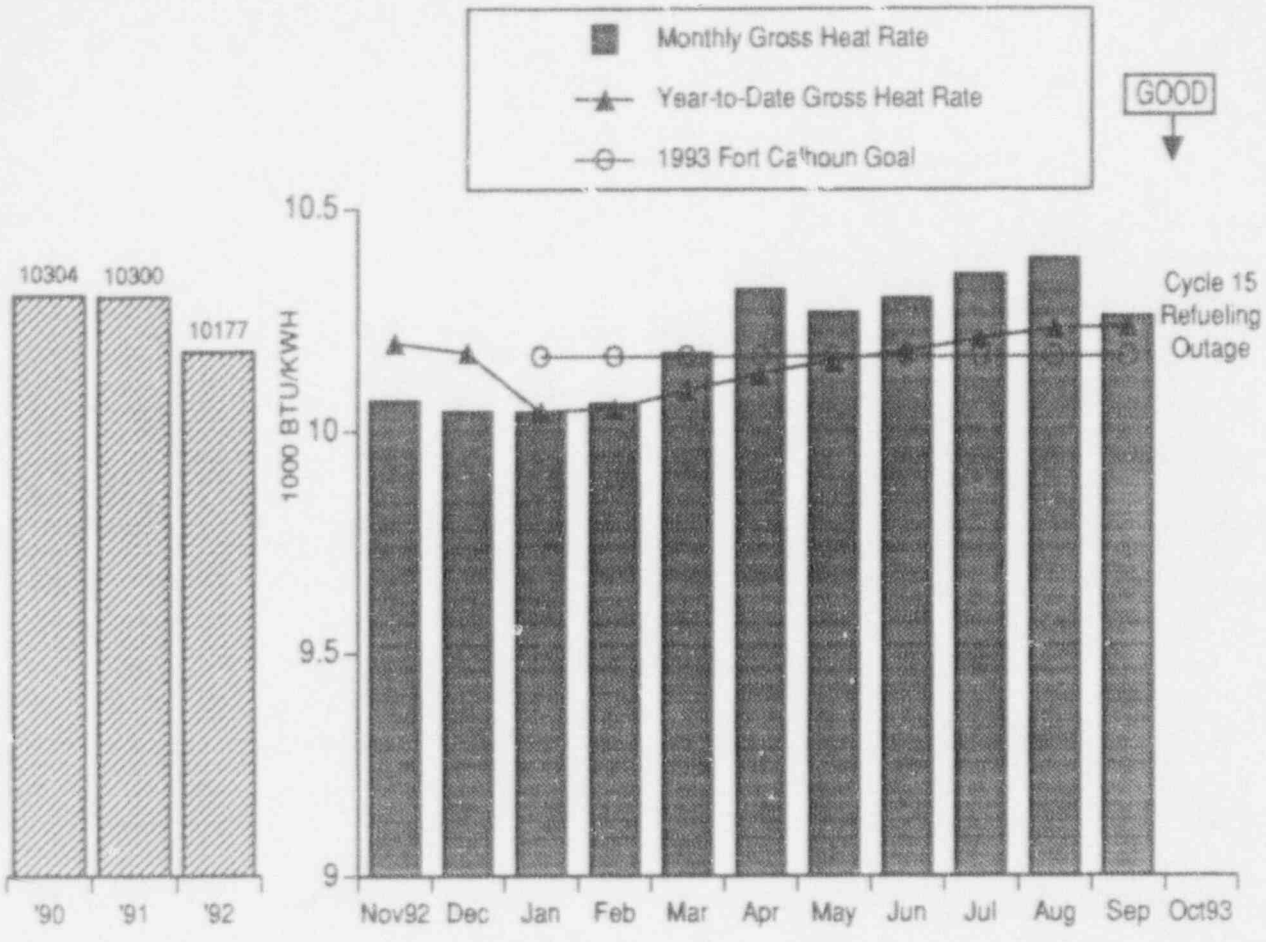
An unplanned safety system actuation occurred on August 22, 1992 due to the failure of an AC/DC converter in the Turbine Electro Hydraulic Control system. Pressurizer safety valve RC-142 then opened prior to reaching design pressure during a plant transient and trip.

Two unplanned safety system actuations occurred in July 1992: 1) On July 3 there was an inverter failure and the subsequent reactor trip; 2) On July 23 there was an unplanned diesel generator start when an operator performing a surveillance test inadvertently pushed the normal start button instead of the alarm acknowledge button.

An unplanned safety system actuation occurred on May 14, 1992 when the turbine generator tripped on a false high level moisture separator trip signal which caused a simultaneous reactor trip and subsequent anticipatory start signal to both diesel generators.

There have been 0.50 unplanned safety system actuations/quarter for the last 12 months. The 1993 and 1992 Fort Calhoun goals for this indicator are 0.

Data Source: Monthly Operations Report & Plant Licensee Event Reports (LERs)
Accountability: Jaworski/Foley/Ronning
Adverse Trend: None



GROSS HEAT RATE

This indicator shows the Gross Heat Rate (GHR) for the reporting month, the year-to-date GHR, the 1993 goal and the year-end GHR for the previous 3 years.

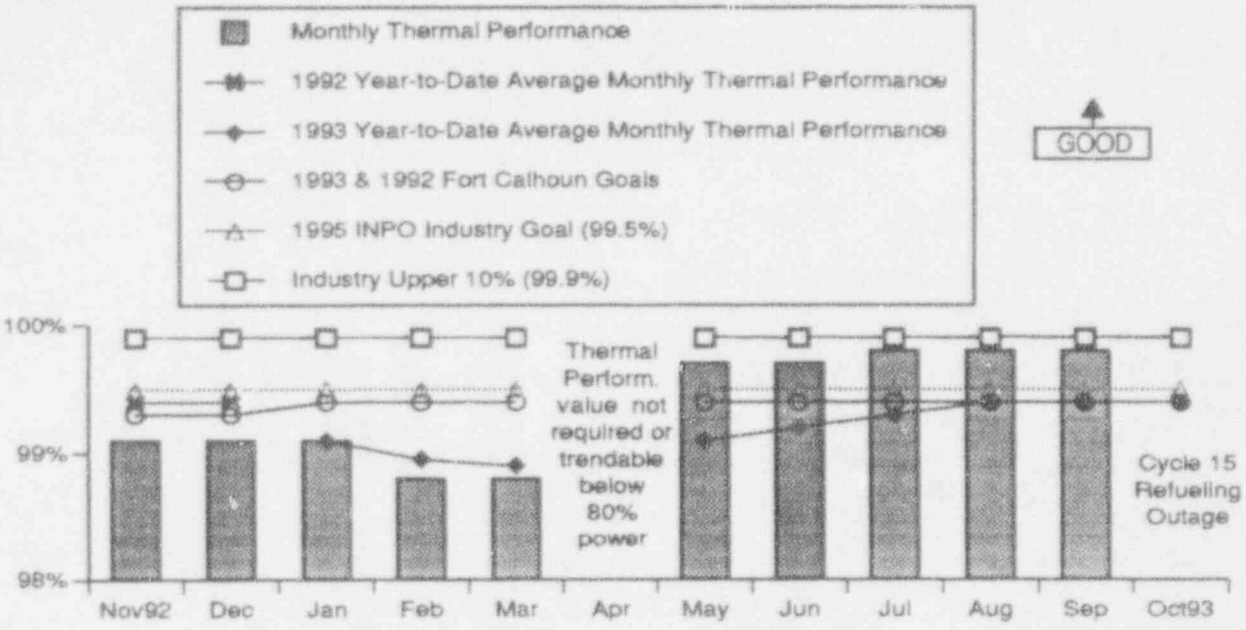
The gross heat rate for Fort Calhoun Station was not calculated for the month of October 1993 because the station was shutdown throughout the month for the Cycle 15 Refueling Outage.

The GHR varies with fluctuations in river water temperature. In general, the GHR improves during the winter months and degrades during the summer. This is because the gross heat rate is not normalized to the design river water temperature of 60 degrees Fahrenheit.

The year-to-date gross heat rate was reported as 10,234 BTU/KWH at the end of September.

The 1993 year-end gross heat rate goal is a maximum of 10,168 BTU/KWH.

Data Source: Holthaus/Gray (Manager/Source)
Accountability: Chase/Jaworski
Adverse Trend: None



THERMAL PERFORMANCE

This indicator shows the Thermal Performance value for the reporting month, the year-to-date average thermal performance value, the 1993 and 1992 Fort Calhoun goals, the 1995 INPO industry goal and the approximate industry upper ten percentile value.

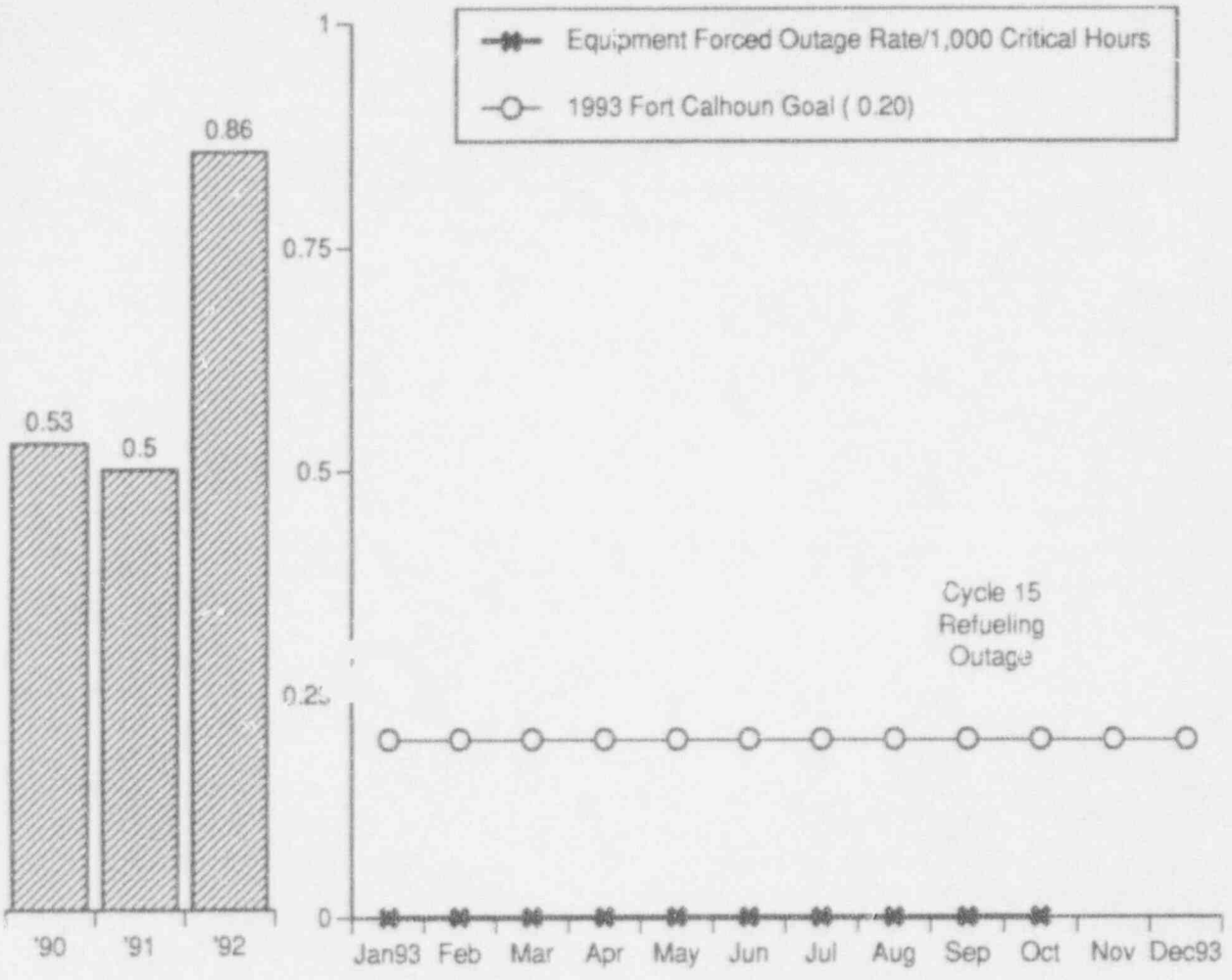
The thermal performance value for the month of October 1993 was not calculated due to the Cycle 15 Refueling Outage. The average monthly thermal performance value from January through October (excluding April and October) was 99.4%. The average monthly value for the last 12 months (excluding April and October) is 99.4%.

The thermal performance value for April 1993 could not be calculated (per INPO guidance) because the plant was operated at less than 80% power from April 1 through 23 prior to the maintenance outage.

The decline in thermal performance values through March was attributed to circulating water flow reductions possibly caused by condenser fouling and/or circ. water pump degradation. Inspection of CW-1B during the "B" cell outage on 4/93 showed no abnormal degradation of the pump impeller. Inspections during the April maintenance outage indicated considerable fouling of condenser tubes, a leaking divider plate gasket in FW-4B, and a torn backwash valve seat. The condenser was cleaned and equipment repairs made.

The 1993 Fort Calhoun Goal for this indicator is a minimum of 99.4%. The 1992 goal was a minimum of 99.3%. The 1995 INPO industry goal is 99.5% and the industry upper ten percentile value (for the one year period from 7/92 through 6/93) is approximately 99.9%.

Data Source: Jaworski/Popek
Accountability: Jaworski/Popek
Adverse Trend: None



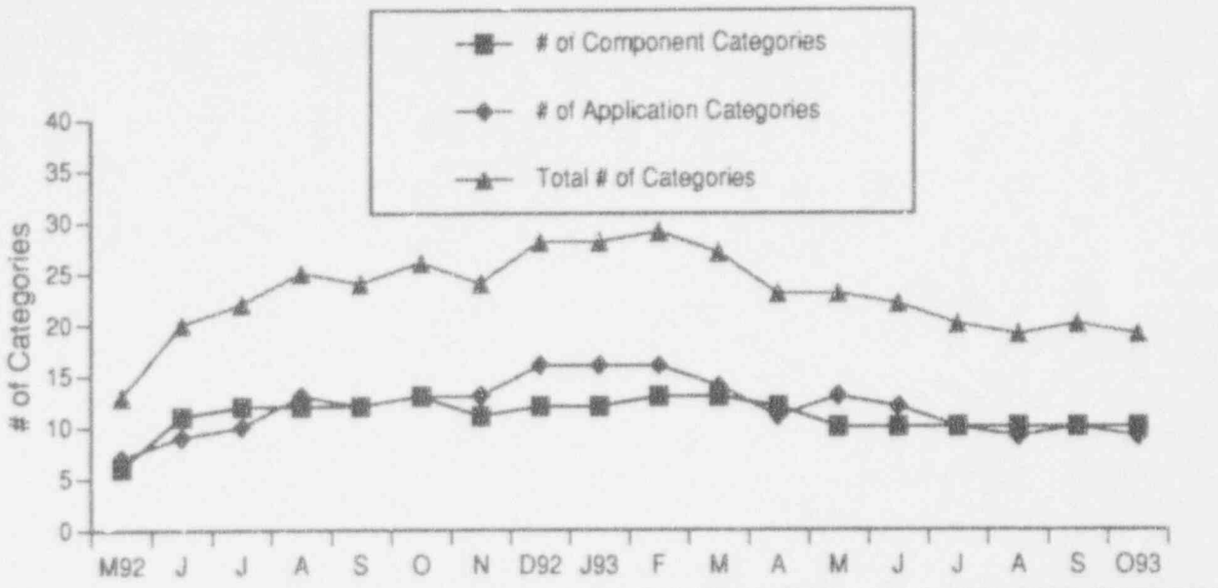
EQUIPMENT FORCED OUTAGES PER 1,000 CRITICAL HOURS

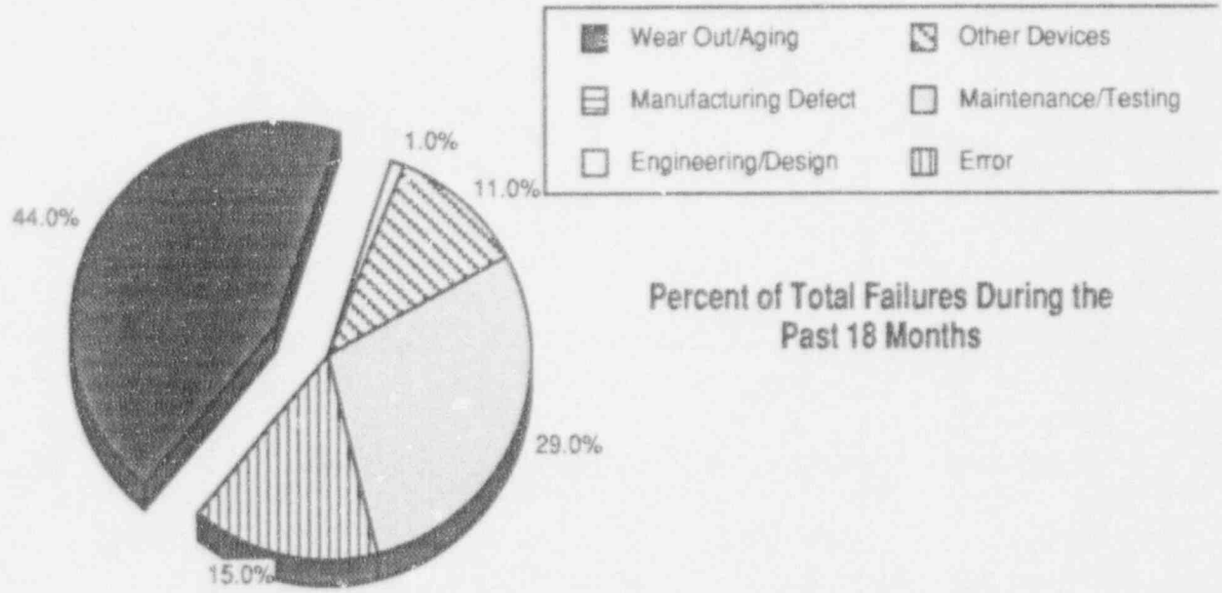
The equipment forced outage rate per 1,000 critical hours was 0.0 for the months from January through October 1993. The value for the last 12 months is 0.0.

The last equipment forced outage occurred in August and continued through September 1992. It was due to the failure of an AC/DC converter in the Turbine Electro Hydraulic control System.

The 1993 Fort Calhoun goal for this indicator is a maximum value of 0.20.

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





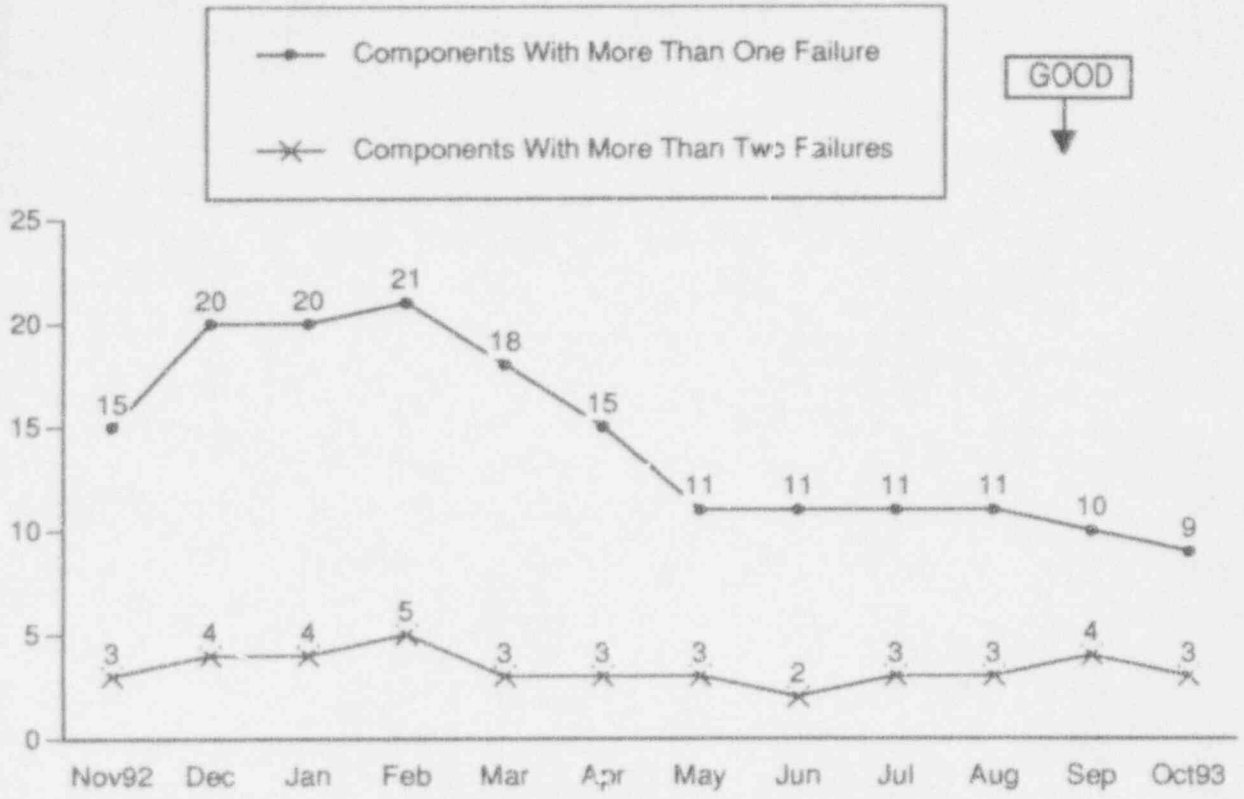
Percent of Total Failures During the Past 18 Months

COMPONENT FAILURE ANALYSIS REPORT (CFAR) SUMMARY

The top chart illustrates the number of component categories, application categories and total categories in which the Fort Calhoun Station has significantly higher (1.645 standard deviations) failure rates than the industry failure rates during the past 18 months (from February 1992 through July 1993). Fort Calhoun Station reported a higher failure rate in 10 of the 87 component categories (valves, pumps, motors, etc.) during the past 18 months. The station reported a higher failure rate in 9 of the 173 application categories (main steam stop valves, auxiliary/emergency feedwater pumps, control element drive motors, etc.) during the past 18 months.

The pie chart depicts the breakdown by INPO cause categories (see the "Definitions" section of this report for descriptions of these categories) for the 87 failure reports that were submitted to INPO by Fort Calhoun Station during the past 18 months. Of these, the failure cause was known for 75. The pie chart reflects known failure causes.

Data Source: Jaworski/Dowdy (Manager/Source)
Accountability: Jaworski/Dowdy
Adverse Trend: None



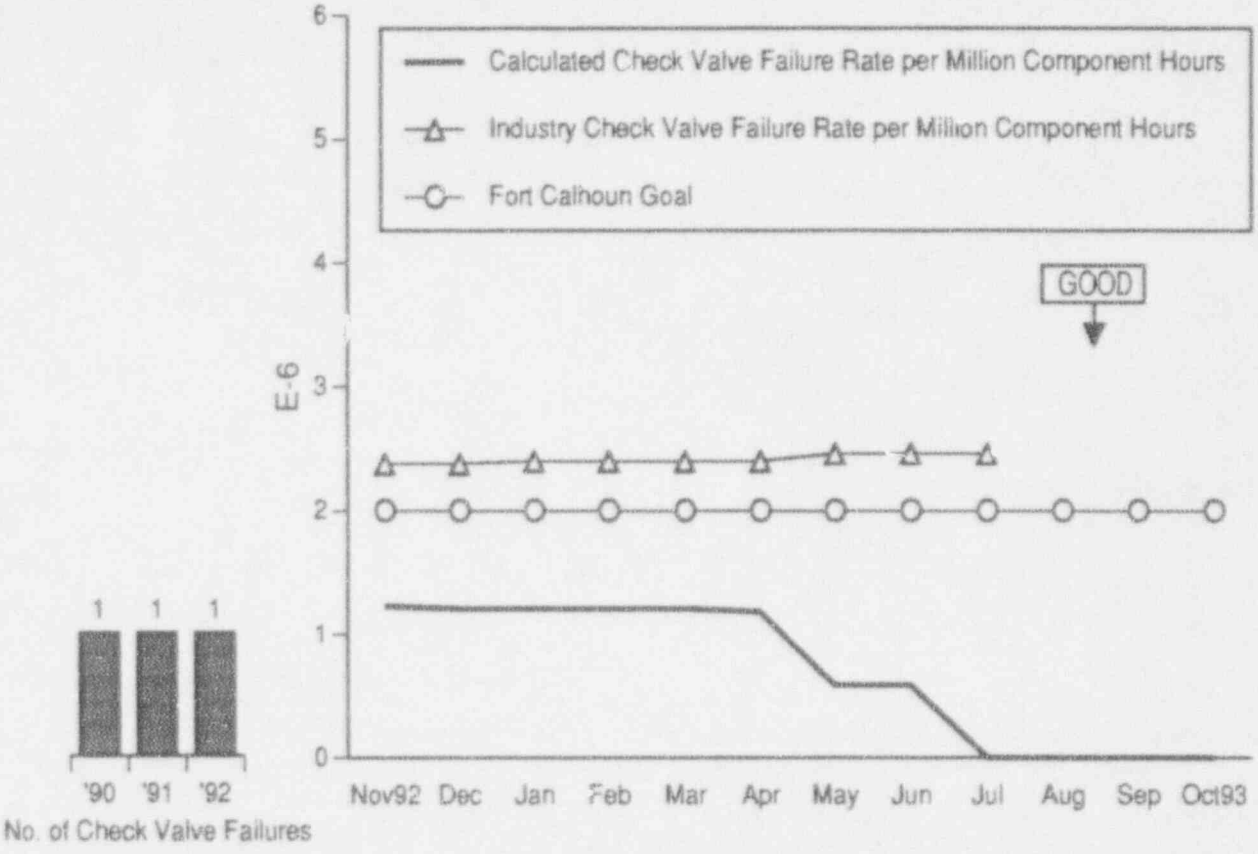
REPEAT FAILURES

The Repeat Failures Indicator (formerly called the "Maintenance Effectiveness" performance indicator) was developed in response to guidelines set forth by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data (NRC/AEOD). The NRC requirement for a Maintenance Effectiveness Performance Indicator has been dropped, but station management considers it useful to continue to track repetitive component failures using the Nuclear Plant Reliability Data System (NPRDS).

This indicator shows the number of NPRDS components with more than one failure during the last eighteen months and the number of NPRDS components with more than two failures during the last eighteen months.

During the last 18 reporting months there were 9 NPRDS components with more than 1 failure. 3 of the 9 had more than two failures. The tag numbers of the components with more than two failures are AC-10C, FW-4C and CH-1B. Recommendations and actions to correct these repeat component failures are listed in the quarterly Component Failure Analysis Report. One failure of FW-4C was classed as "incipient" per INPO guidelines (i.e., an imperfection in the state or condition of a component that could result in a degraded or immediate failure if corrective action is not taken) and should not be of concern.

Data Source: Jaworski/Dowdy (Manager/Source)
Accountability: Chase/Bobba
Adverse Trend: None



CHECK VALVE FAILURE RATE

This indicator shows the calculated Fort Calhoun check valve failure rate, the Fort Calhoun goal and the industry check valve failure rate. This rate is based upon failures during the previous 18 months. The number of check valve failures at Fort Calhoun Station for the previous three years are shown on the left.

The data for the industry check valve failure rate is three months behind the reporting month due to the time involved in collecting and processing the data.

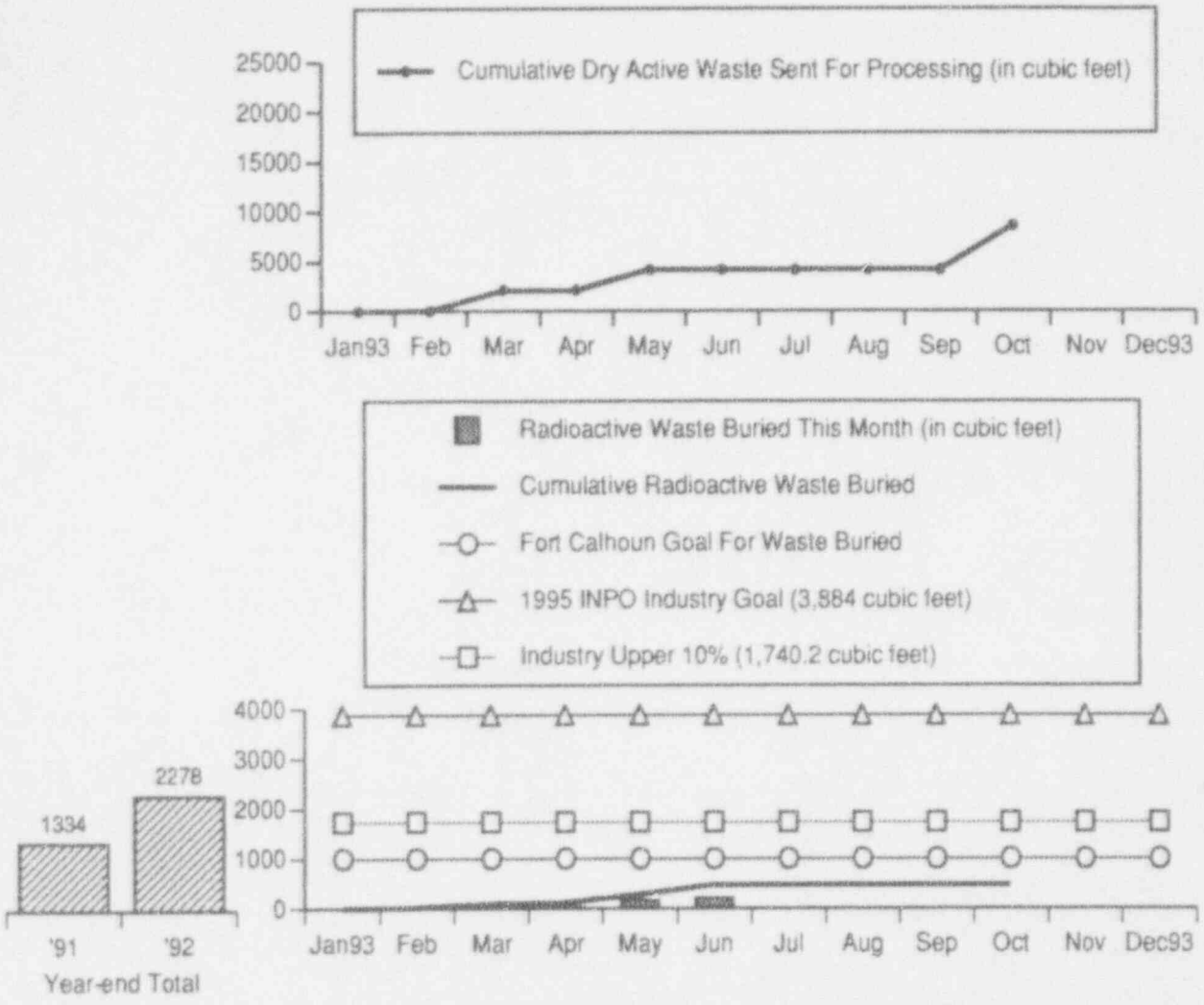
For July 1993, the Fort Calhoun Station reported an actual check valve failure rate of 0.0, while the industry reported an actual failure rate of 2.46 E-6. At the end of October 1993, the Fort Calhoun Station reported a calculated check valve failure rate of 0.0.

The 1993 and 1992 Fort Calhoun goals for this indicator are a maximum failure rate of 2.00 E-6.

Data Source: Jaworski/Dowdy (Manager/Source)

Accountability: Jaworski/Rollins

Positive Trend SEP 43



VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

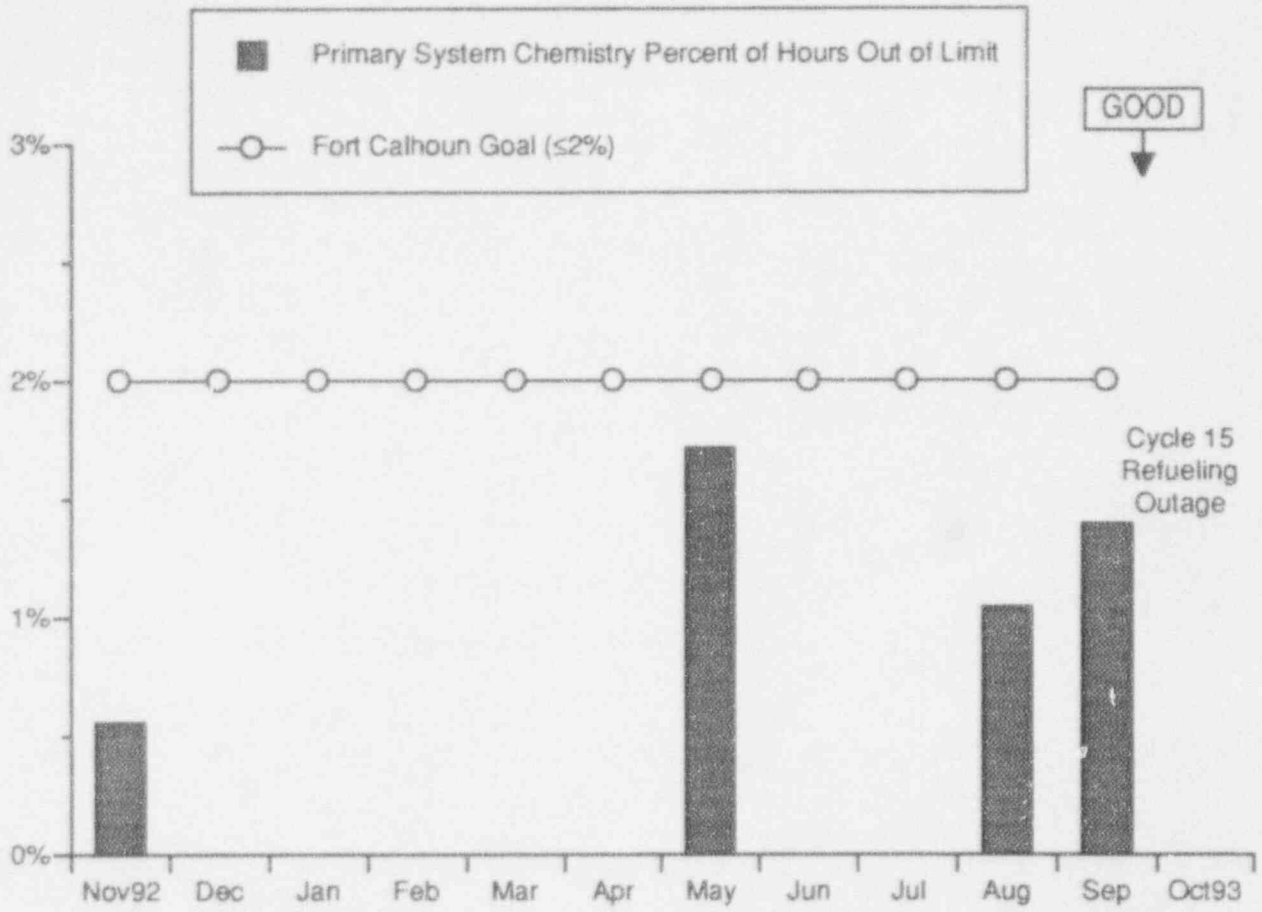
The upper graph shows the volume of dry radioactive waste sent for processing. The lower graph shows the volume of the monthly radioactive waste buried, the cumulative annual total for radioactive waste buried, and the year-end totals for radioactive waste buried the previous 2 years.

Cumulative amount of solid radwaste shipped off-site for processing (cubic feet)	8,580.0
Amount of solid radwaste shipped off-site for processing during October (cubic feet)	4,420
Volume of Solid Radwaste Buried during October (cubic feet)	0.0
Cumulative volume of solid radioactive waste buried in 1993 (cubic feet)	478.9
Amount of solid radioactive waste in temporary storage (cubic feet)	0.0

The 1993 Fort Calhoun goal for the volume of solid radioactive waste which has been buried is 1,000 cubic feet. The 1995 INPO industry goal is 110 cubic meters (3,884 cubic feet) per year. The industry upper ten percentile value from 7/90 through 6/93 is approximately 49.27 cubic meters (1,740.22 cubic feet) per year.

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

SEP 54



PRIMARY SYSTEM CHEMISTRY PERCENT OF HOURS OUT OF LIMIT

The Primary System Chemistry Percent of Hours Out of Limit indicator tracks the primary system chemistry performance by monitoring six key chemistry parameters. The key parameters are: lithium, dissolved oxygen, chlorides, fluoride, hydrogen and suspended solids. 100% equates to all six parameters being out of limit for the month.

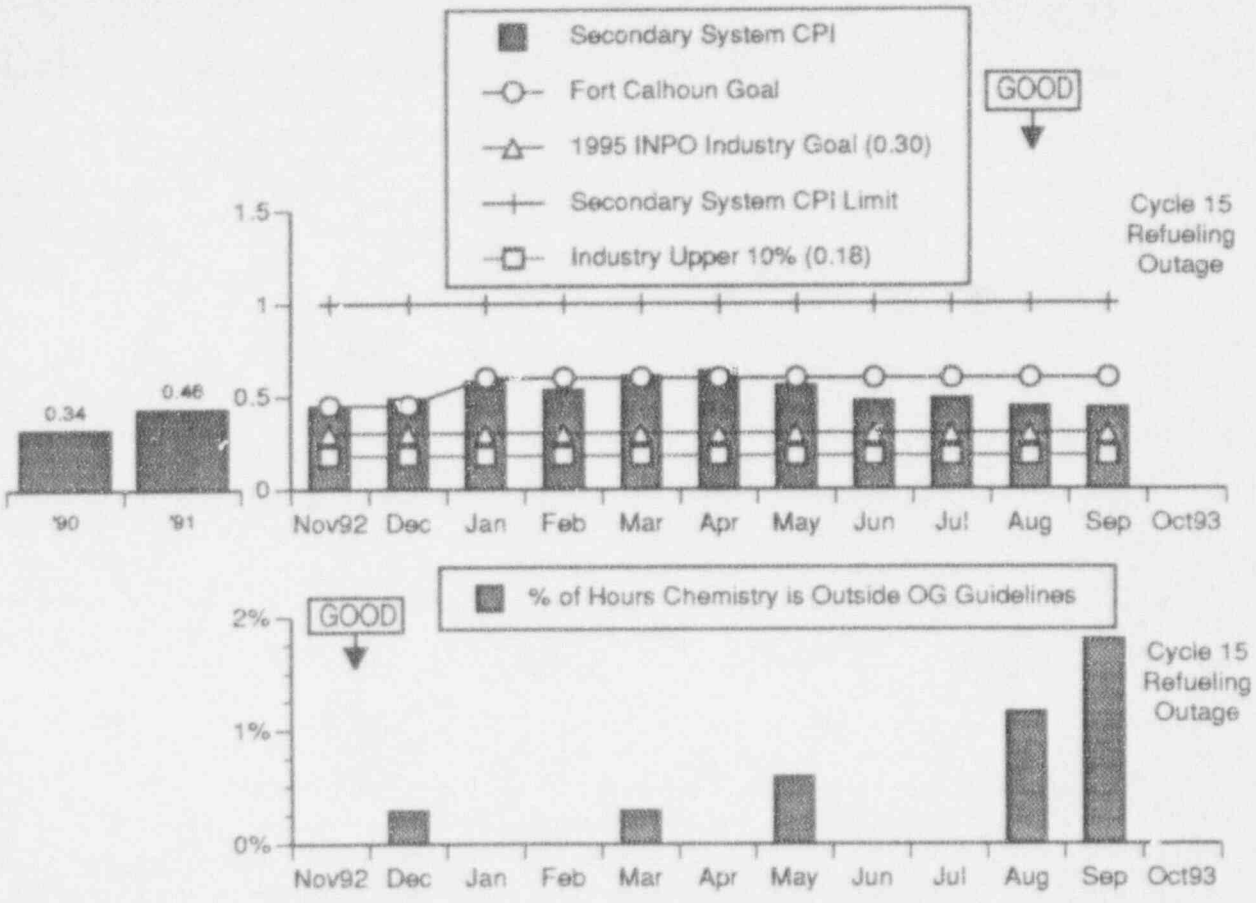
The Primary System Chemistry Percent of Hours Out of Limit was not reported for the month of October 1993 because the plant was shutdown throughout the month for the Cycle 15 Refueling Outage.

The 1993 and 1992 Fort Calhoun monthly goals for this indicator are a maximum of 2% Hours Out of Limit.

Data Source: Glantz (Source)

Accountability: Chase/Smith

Adverse Trend: None



SECONDARY SYSTEM CHEMISTRY

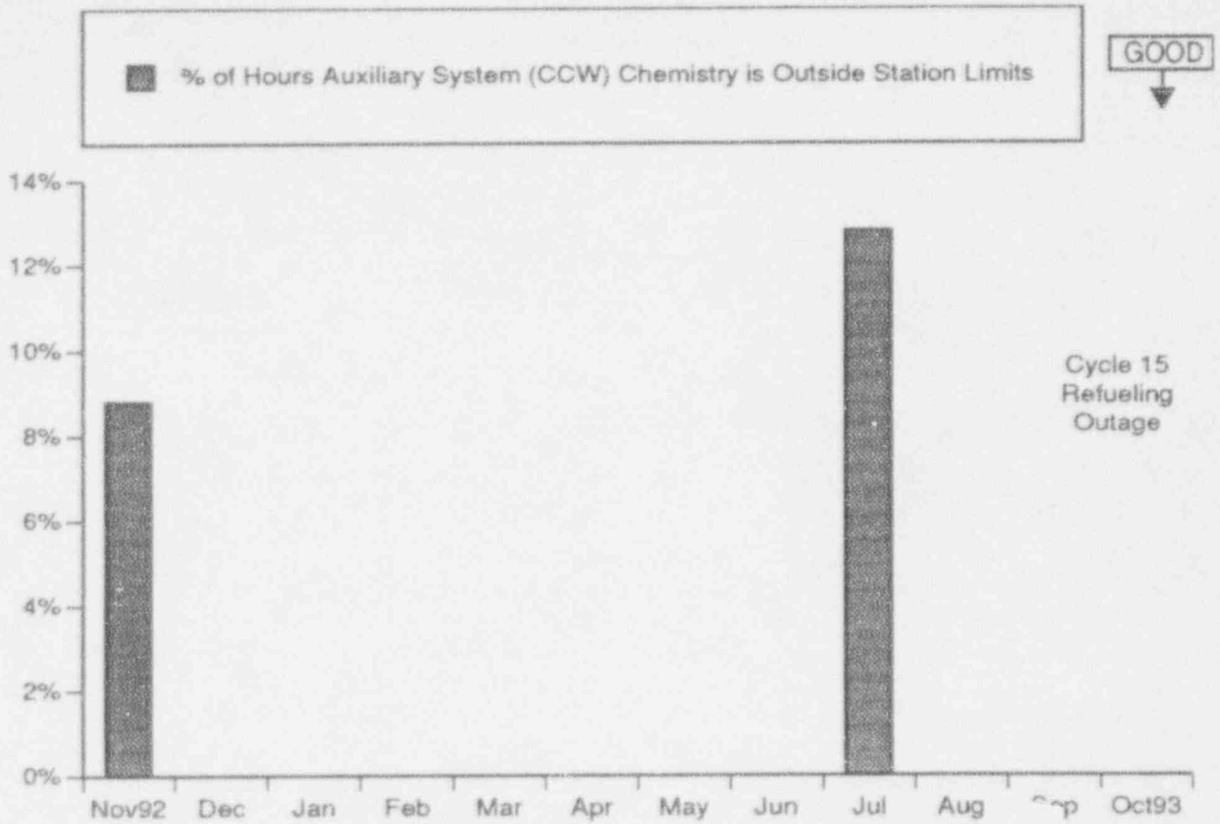
The top graph, Secondary System Chemistry Performance Index (CPI), is calculated using the following three parameters: cation conductivity in steam generator blowdown, sodium in steam generator blowdown, and condensate pump discharge dissolved oxygen. The bottom graph shows the percent of total hours of 13 parameters exceeding the Owners Group (OG) guidelines during power operation.

The CPI and percent of hours outside the OG guidelines were not reported for the month of October 1993 because the plant was shutdown throughout the month for the Cycle 15 Refueling Outage. The average monthly CPI for the last 12 months (excluding October) is 0.519.

The 1993 Fort Calhoun monthly goal for the CPI is a maximum value of 0.60. The INPO 1995 Industry goal is 0.30. The Fort Calhoun goal is based on site specific chemistry treatment, i.e. morpholine. The INPO goal does not consider the influence of morpholine and the by-products of morpholine from thermal decomposition.

The industry upper ten percentile value for this indicator was approximately 0.18 for the twelve months from 7/92 through 6/93.

Data Source: Glantz (Source)
Accountability: Chase/Smith
Adverse Trend: None



AUXILIARY SYSTEM (CCW) CHEMISTRY PERCENT OF HOURS OUTSIDE STATION LIMITS

The Auxiliary System Chemistry Percent of Hours Outside Station Limits indicator tracks the monthly percent of hours that the Component Cooling Water (CCW) system is outside the station chemistry limit.

The auxiliary system chemistry percent of hours outside station limits was not reported for the month of October 1993 because the plant was shutdown throughout the month for the Cycle 15 Refueling Outage.

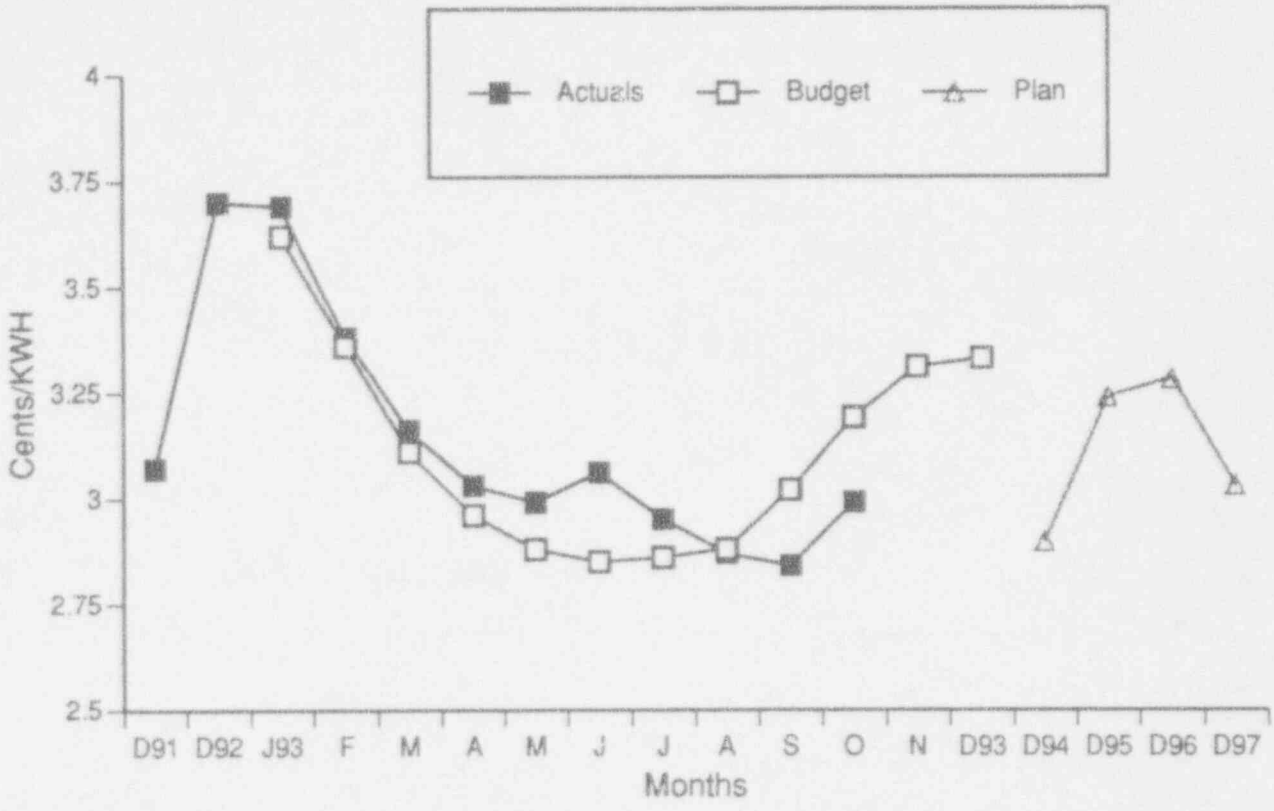
The high value of 12.8% reported for the month of July 1993 is a result of the CCW nitrate concentration dropping to 670 ppm on July 25. A chemistry instruction and MWO were written to correct the problem and the chem. add was completed on July 29 to return the nitrite concentration to within specifications. The minimum specification is 700 ppm and is conservative, so no system degradation was expected to have taken place during this time period.

The high value (8.8%) reported for November 1992 was attributable to nitrites, which were lower than specifications. Prior to November 1992, the last outside of station limits condition occurred in June 1991 and was due to a low nitrite level in CCW coolant.

Data Source: Glantz (Source)
Accountability: Chase/Smith
Adverse Trend: None

COST

Goal: To operate Fort Calhoun Station in a manner that cost effectively maintains nuclear generation as a viable source of electricity.



CENTS PER KILOWATT HOUR

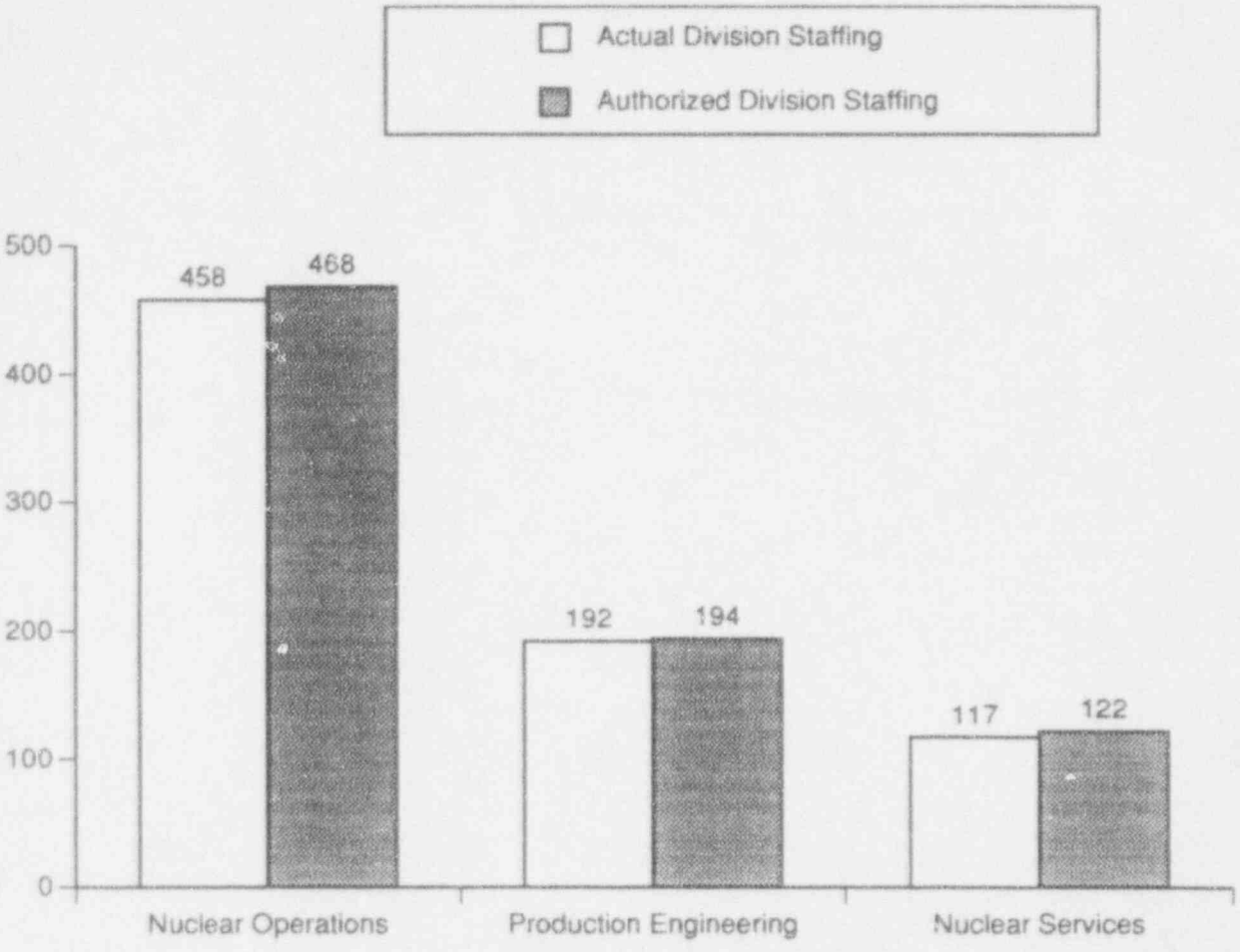
The purpose of this indicator is to quantify the economical operation of Fort Calhoun Station.

The cents per kilowatt hour indicator represents the budget and actual cents per kilowatt hour on a 12 month rolling average for the current year. The basis for the budget curve is the approved 1993 budget. The basis for the actual curve is the Financial and Operating Report.

The December 31 amounts are also shown for the prior years 1991 and 1992. In addition, the report shows the plan amounts for the years 1994 through 1997 for reference. The basis for the dollars are the Nuclear Long Range Financial Plan and the 1993 Corporate Planning and Budget Review. The basis for the generation is provided by Nuclear Fuels.

The unit price before August 1993 was averaging higher than budget due to the forced outages experienced in July and August 1992. The increase in June 1993 is due to the forced outage. Unit price is lower than budget in September since the 1992 forced outages are out of the 12 month average and the one-week delay in the refueling outage allowed for more generation and lower outage costs than budgeted in September.

Data Source: Scofield/Jamieson (Manager/Source)
Accountability: Scofield
Positive Trend



STAFFING LEVEL

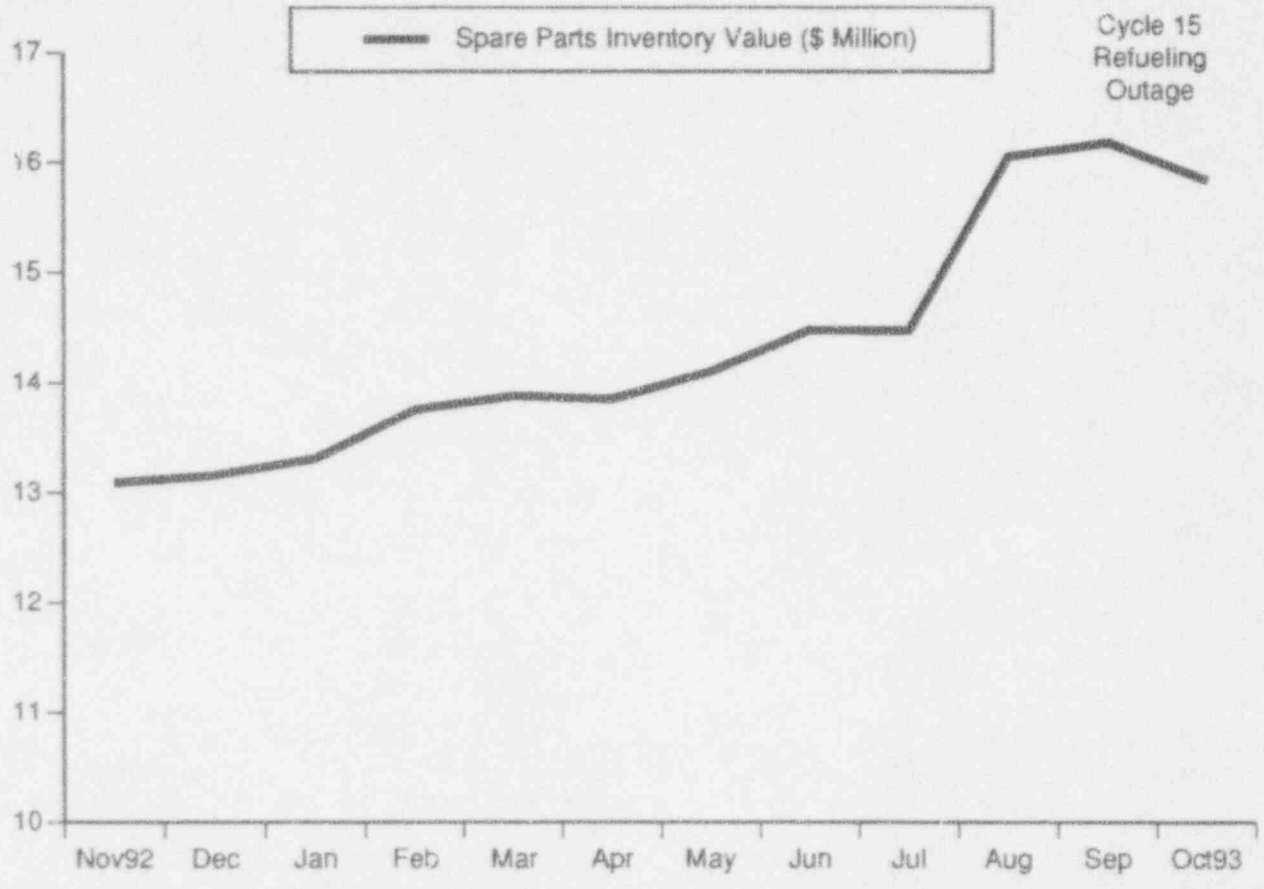
The authorized and actual staffing levels at the end of October 1993 are shown for the three Nuclear Divisions.

Data Source: Ponec (Manager & Source)

Accountability: Ponec

Adverse Trend: None

SEP 24



SPARE PARTS INVENTORY VALUE

The spare parts inventory value at the Fort Calhoun Station at the end of October 1993 was reported as $15,833,040.

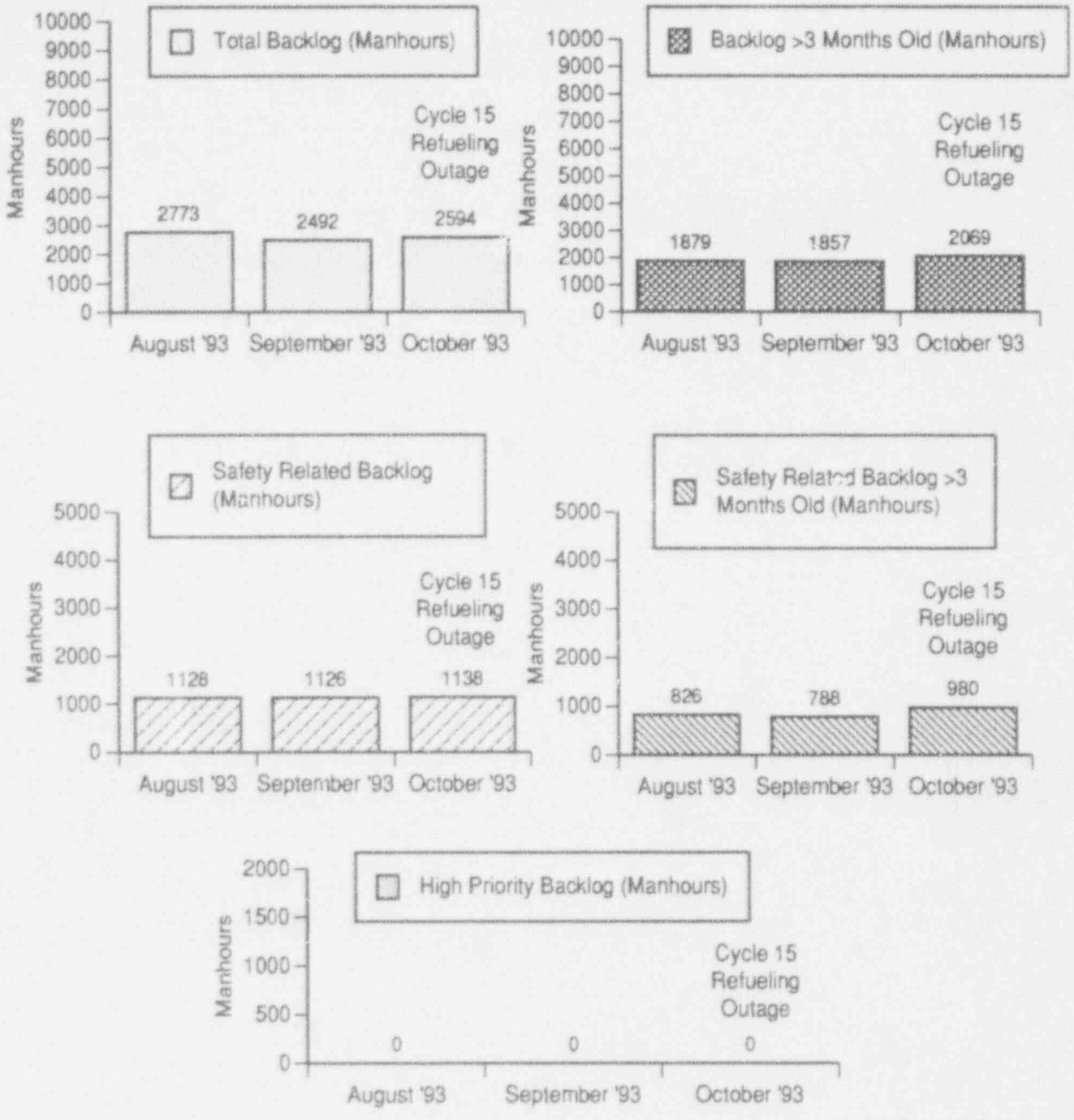
Data Source: Steele/Huliska (Manager/Source)

Accountability: Willrett/McCormick

Adverse Trend: None

DIVISION AND DEPARTMENT PERFORMANCE INDICATORS

These indicators may be deleted from this report if the responsible group contacts the Manager - Station Engineering to request their removal. Indicators referencing SEP items require documentation to ensure that the original intent and scope of the SEP item will not be altered by removal of the indicator from this report.



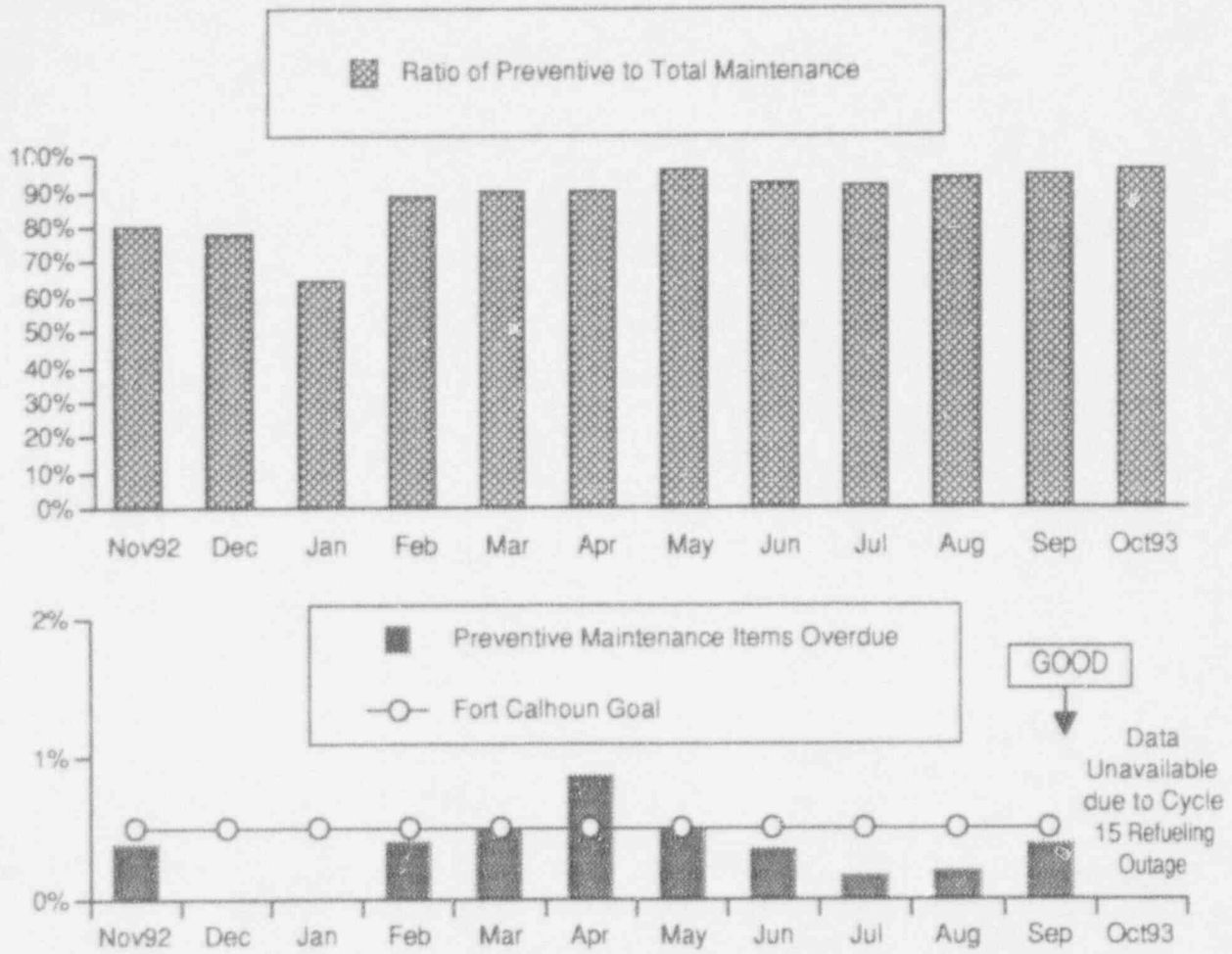
MAINTENANCE WORKLOAD BACKLOGS (CORRECTIVE NON-OUTAGE)

This indicator shows the estimated manhours for corrective non-outage MWOs remaining open at the end of the reporting month, along with a breakdown by several key categories.

Action plans for adverse trends will not be addressed until after January 1, 1994 because of the inability to perform non-outage work during the Cycle 15 Refueling Outage.

Data Source: Chase/Schmitz (Manager/Source)
Accountability: Chase/Bobba
Adverse Trend: None

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.

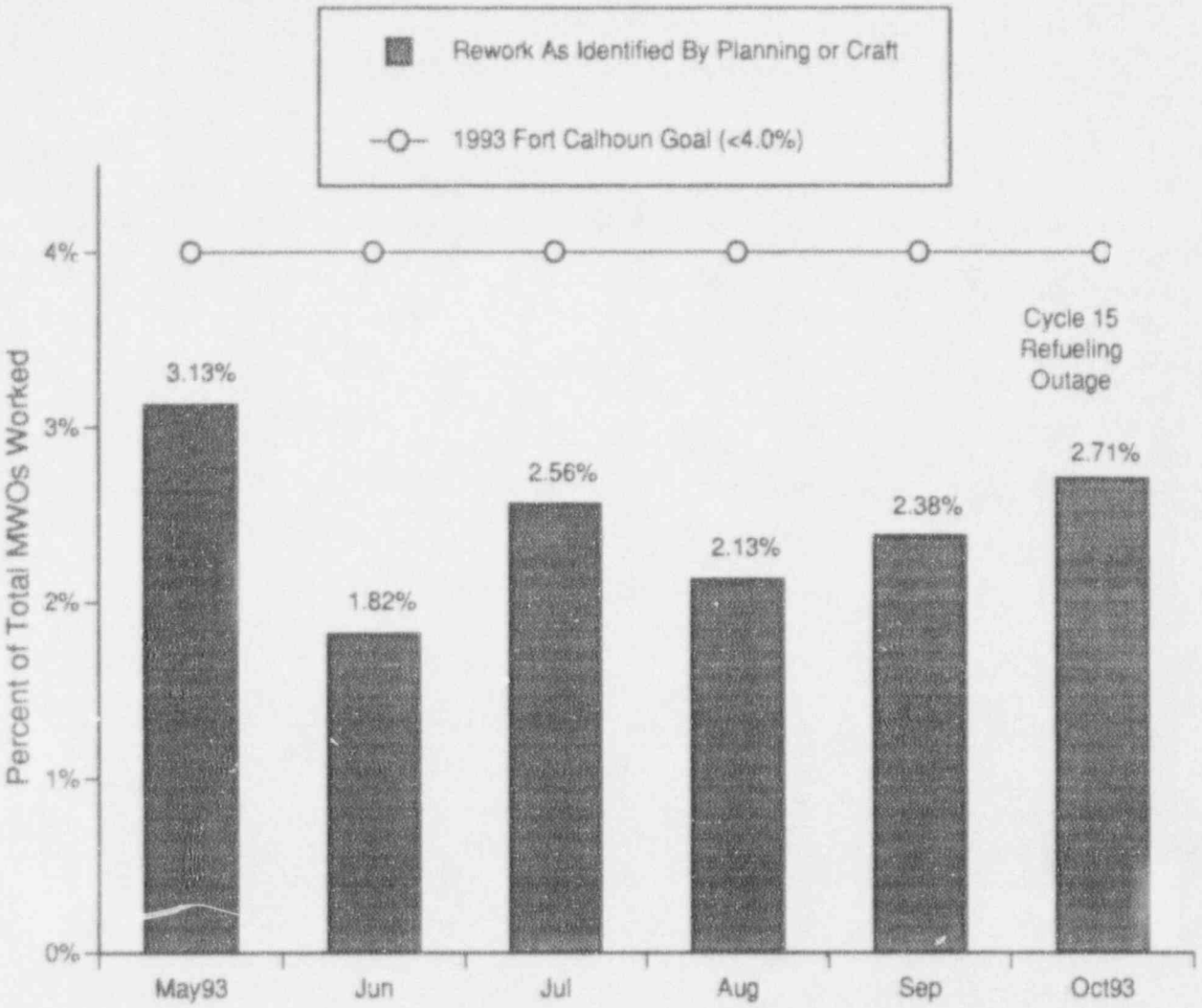
The ratio of preventive to total maintenance was 95.35% in October 1993.

The lower graph shows the percentage of preventive maintenance items overdue. Due to the the Cycle 15 Refueling Outage, data for the month of October was unavailable.

The 1993 and 1992 Fort Calhoun goals are to have less than 0.5% per month of the preventive maintenance items overdue.

Accountability: Chase/Bobba
Data Source: Chase/Schmitz/Brady(Manager/Sources)
Adverse Trend: None

SEP 41



PERCENTAGE OF TOTAL MWOs COMPLETED PER MONTH IDENTIFIED AS REWORK

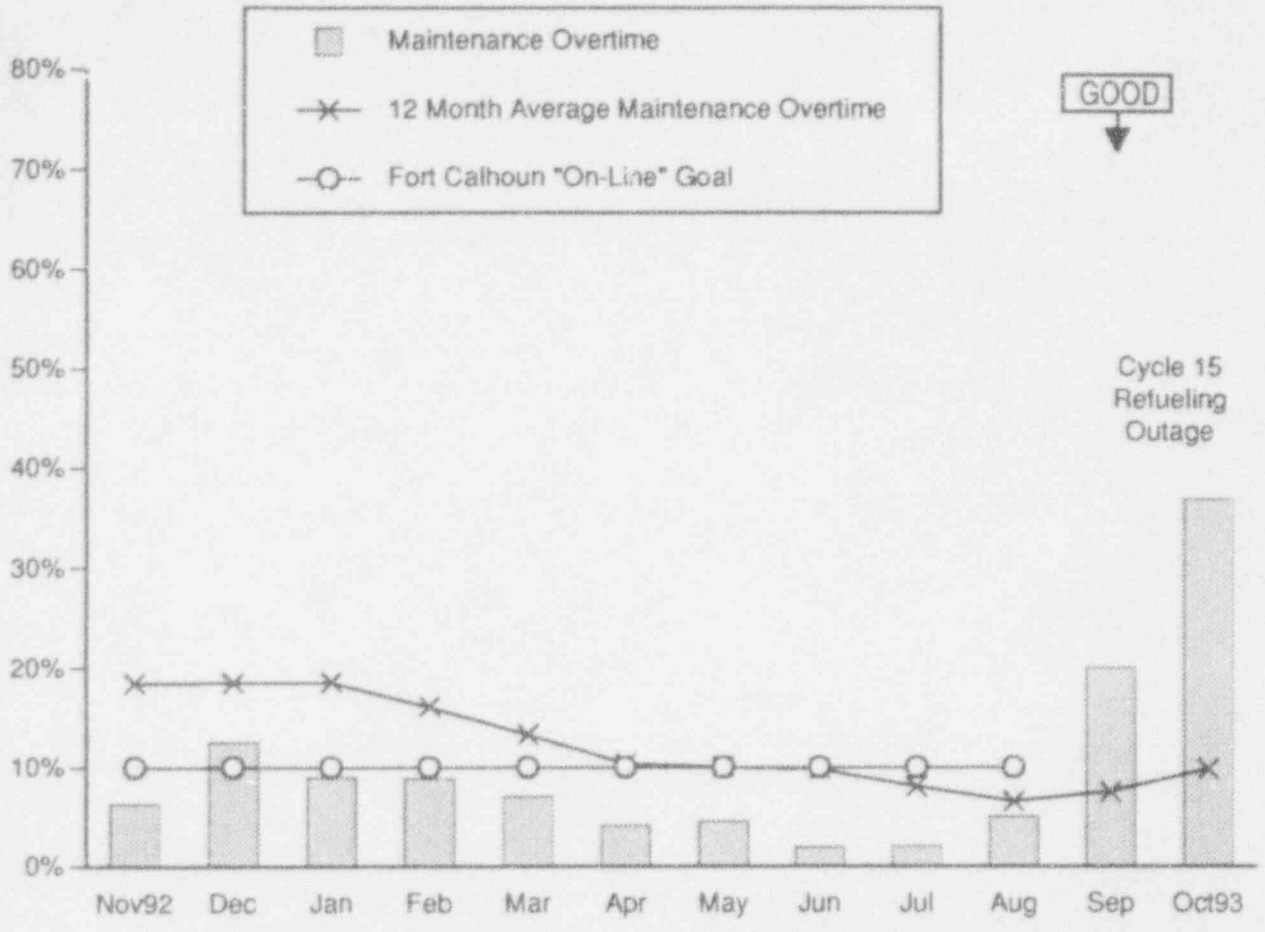
This graph indicates the percentage of total MWOs completed per month identified as rework. Rework activities are identified by maintenance planning and craft.

The 1993 goal for this indicator is to maintain less than 4% rework per month.

Data Source: Bobba/Schmitz (Manager/Source)

Accountability: Chase/Bobba

Positive Trend



MAINTENANCE OVERTIME

The Maintenance Overtime Indicator monitors the ability to perform the desired maintenance activities with the allotted resources.

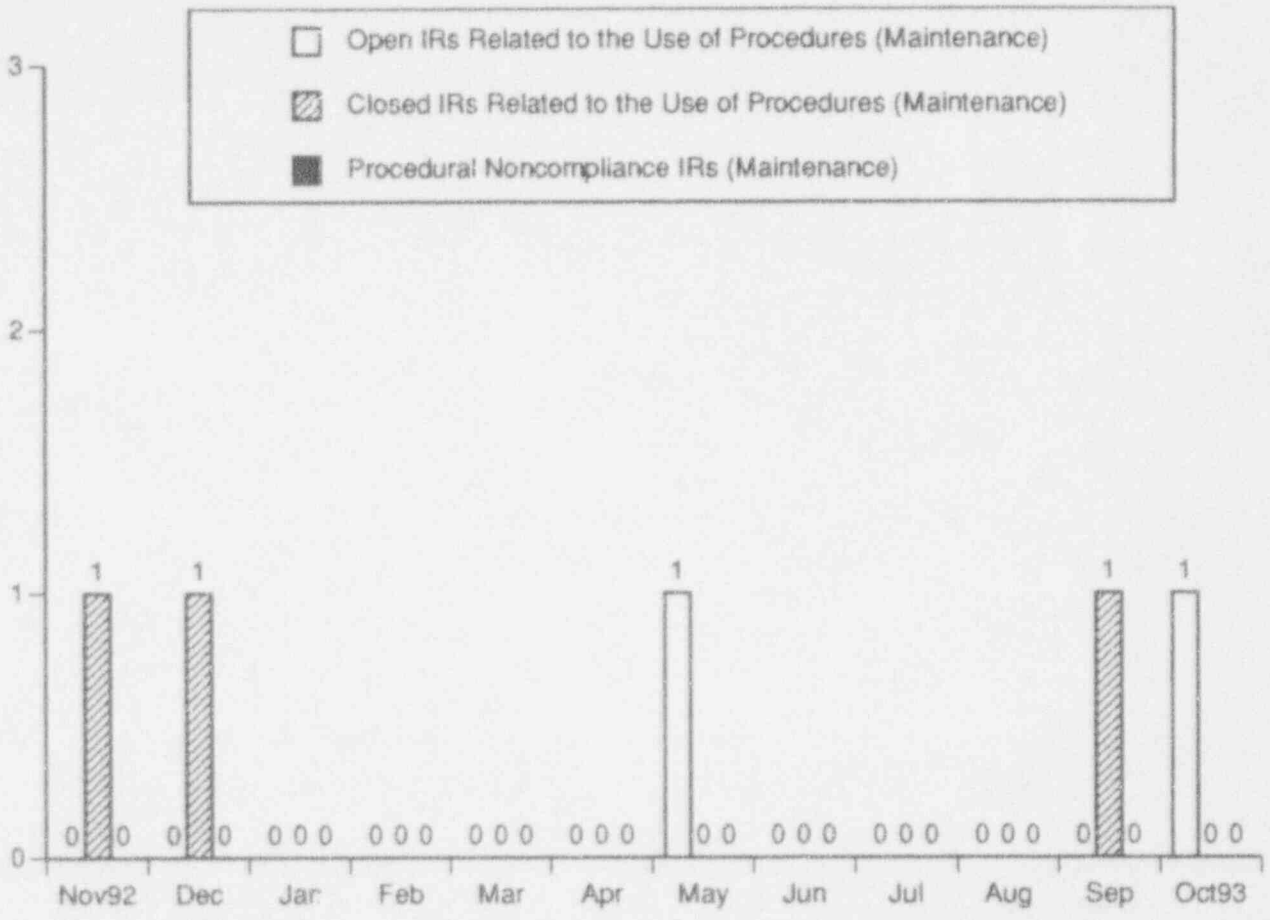
The percent of overtime hours with respect to normal hours was reported as 36.8% for the month of October 1993. The 12 month average percentage of overtime hours with respect to normal hours was reported as 9.83% at the end of the month.

The 1993 and 1992 Fort Calhoun goals for the "on-line" percentage of maintenance overtime hours worked are a maximum of 10%.

Data Source: Chase/Schmitz (Manager/Source)

Accountability: Chase/ Bobba

Adverse Trend: None



PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

This indicator shows the number of open Maintenance Incident Reports (IRs) that are related to the use of procedures, the number of closed IRs that are related to the use of procedures, and the number of open and closed IRs that received procedural noncompliance cause codes for each of the last twelve months.

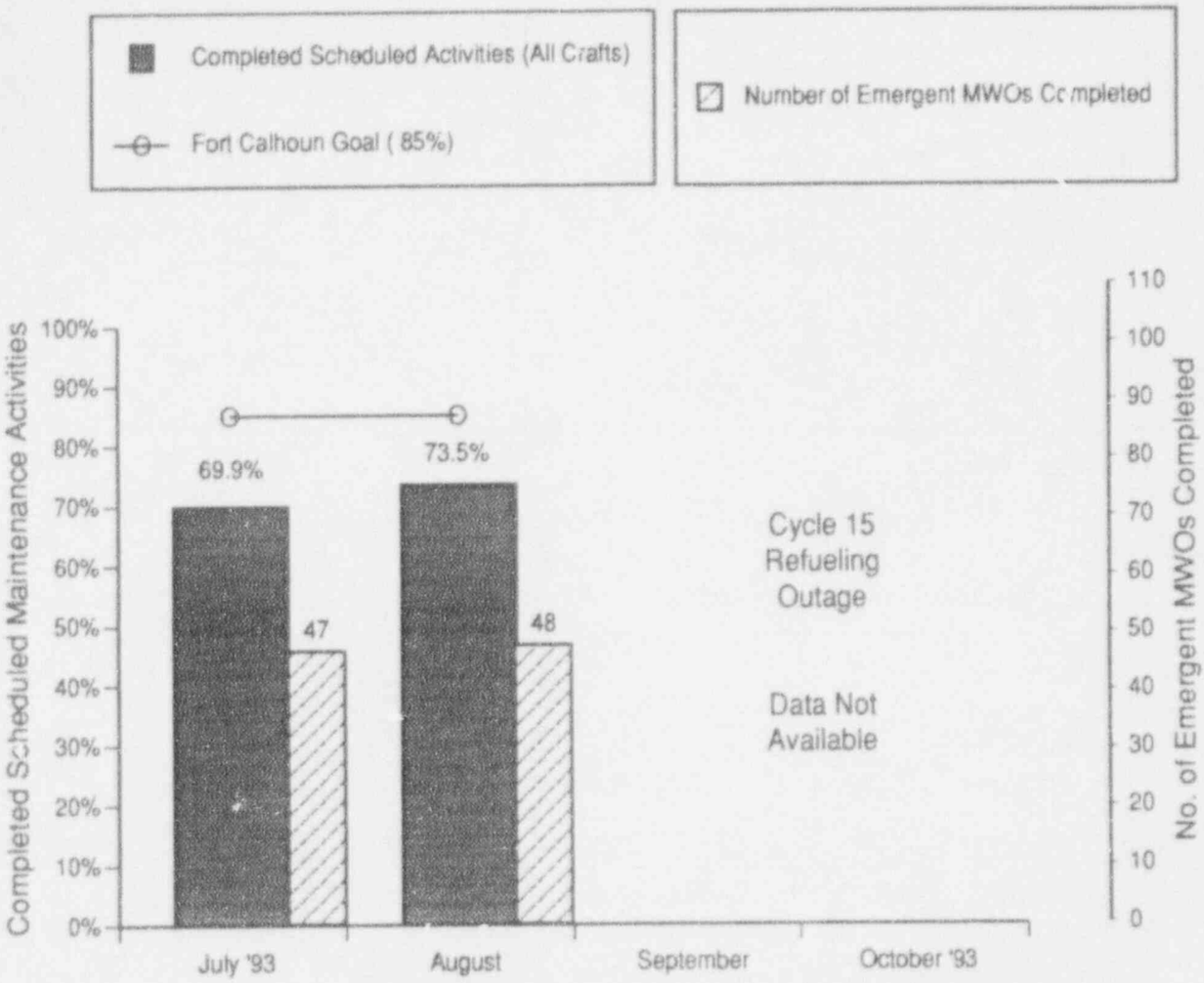
There were no procedural noncompliance incidents for maintenance reported for the month of October 1993.

Data Source: Chase/Keister (Manager/Source)

Accountability: Chase/Bobba

Adverse Trend: None

SEP 15, 41 & 44



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (ALL MAINTENANCE CRAFTS)

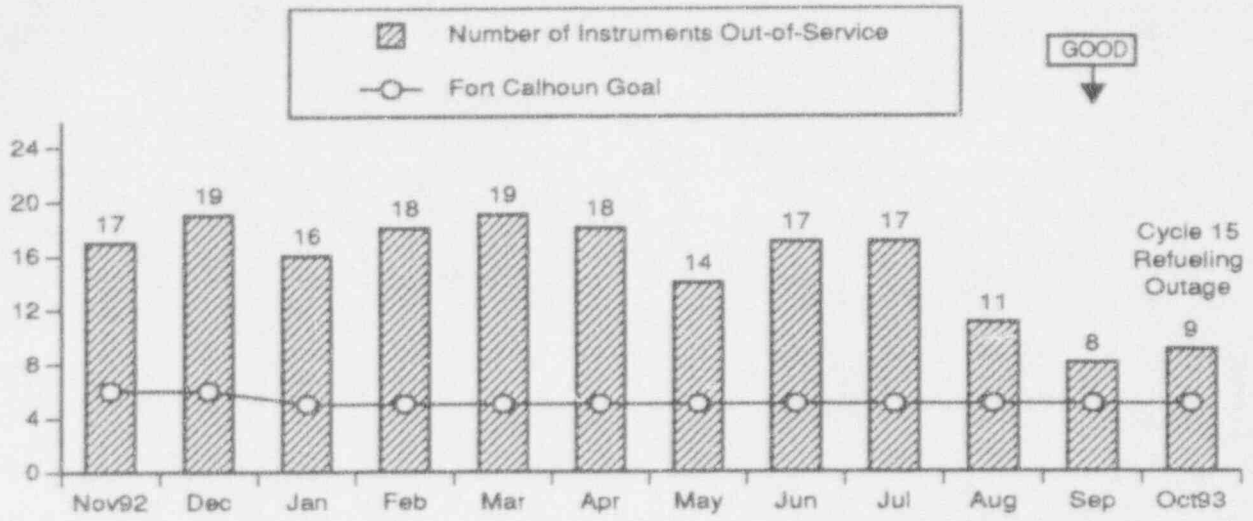
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning all Maintenance Crafts. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities. The number of emergent MWOs completed for the month is also shown.

Because of the Cycle 15 Refueling Outage, data for this indicator will not be available until after the first month on-line during Cycle 15.

The 1993 Fort Calhoun Station monthly goal for the percent of completed scheduled maintenance activities is a minimum of 85%.

Data Source: Chase/Schmitz (Manager/Source)
Accountability: Chase/Bobba
Adverse Trend: None

SEP 33



IN-LINE CHEMISTRY INSTRUMENTS OUT-OF-SERVICE

This indicator shows the total number of in-line chemistry system instruments out-of-service at the end of the reporting month. The chemistry systems involved in this indicator include the Secondary System and the Post Accident Sampling System (PASS).

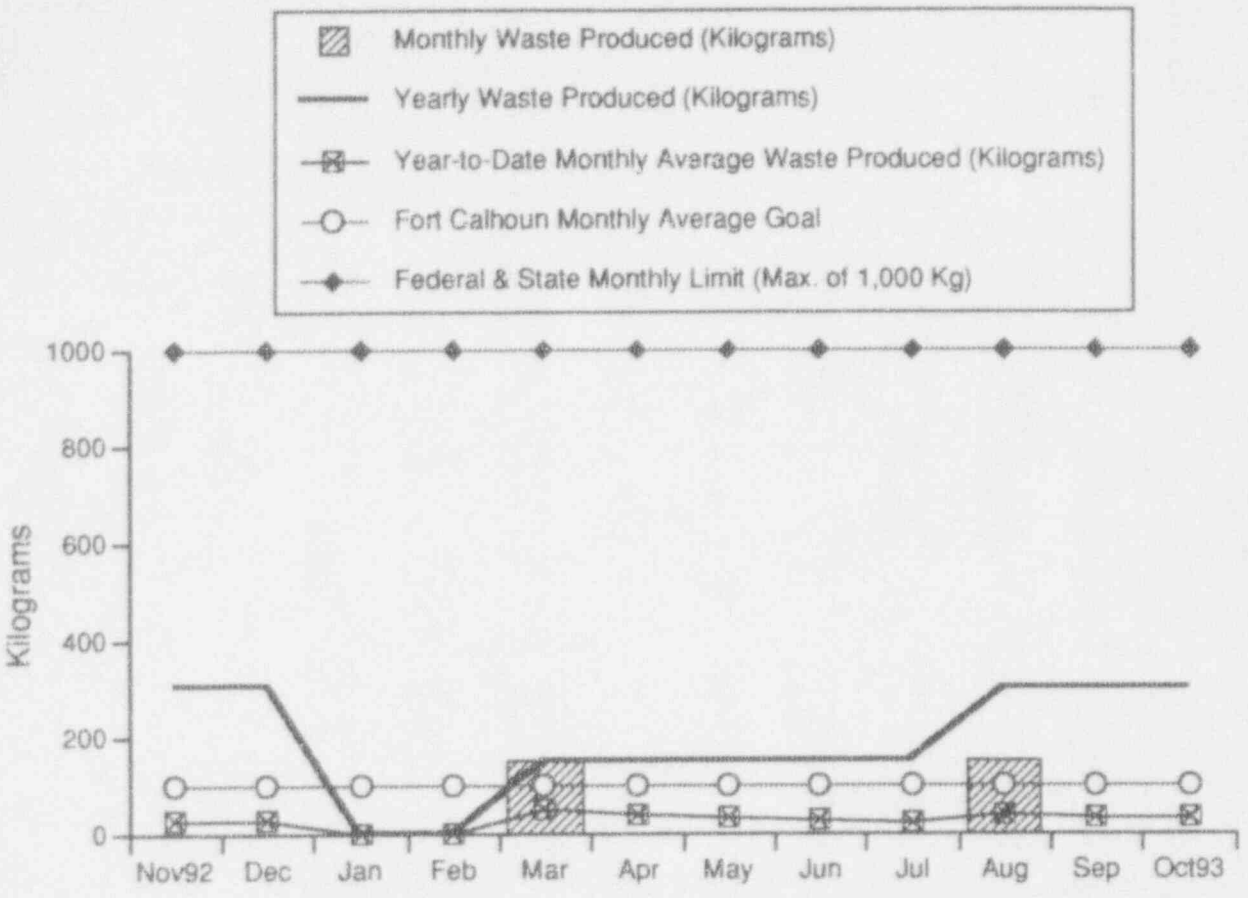
At the end of October 1993 there was a total of 9 in-line chemistry instruments out-of-service. Of these 9 instruments, 8 were from the Secondary System and 1 was from PASS.

The trend for PASS instruments for this reporting period has not changed. The trend for Secondary instruments this reporting period has increased by 1 because of malfunction of waste gas hydrogen analyzer. Secondary instruments that are NOT used during the outage, but were operable prior to the outage are still counted as operable, and those instruments that were not working prior to the outage are still counted as inoperable. The inoperable secondary instruments are as follows: 2 instruments (CPD and FH-6) remain out-of-service at the AI-125/126 panel and are awaiting replacement under an ECN. 1 instrument is out-of-service on AI-107 because of recorder failure and 2 are out-of-service because of failed function checks and awaiting repair. 1 instrument is out of service on AI-105 because of malfunction.

The entire instrument channel is considered inoperative if: 1) the instrument is inoperative, 2) the chart recorder associated with the instrument is inoperative, or 3) the alarm function associated with the instrument is inoperative. If any of the functions listed above are not operational, then the instrument is not performing its intended function.

The 1993 Fort Calhoun goal for the number of in-line chemistry system instruments that are out-of-service has been set at a maximum of 5. The 1992 goal was a maximum of 6. Six out-of-service chemistry instruments make up 10% of all the chemistry instruments that are counted for this indicator.

Data Source: Chase/Renaud (Manager/Source)
Accountability: Chase/Jaworski
Adverse Trend: None



HAZARDOUS WASTE PRODUCED

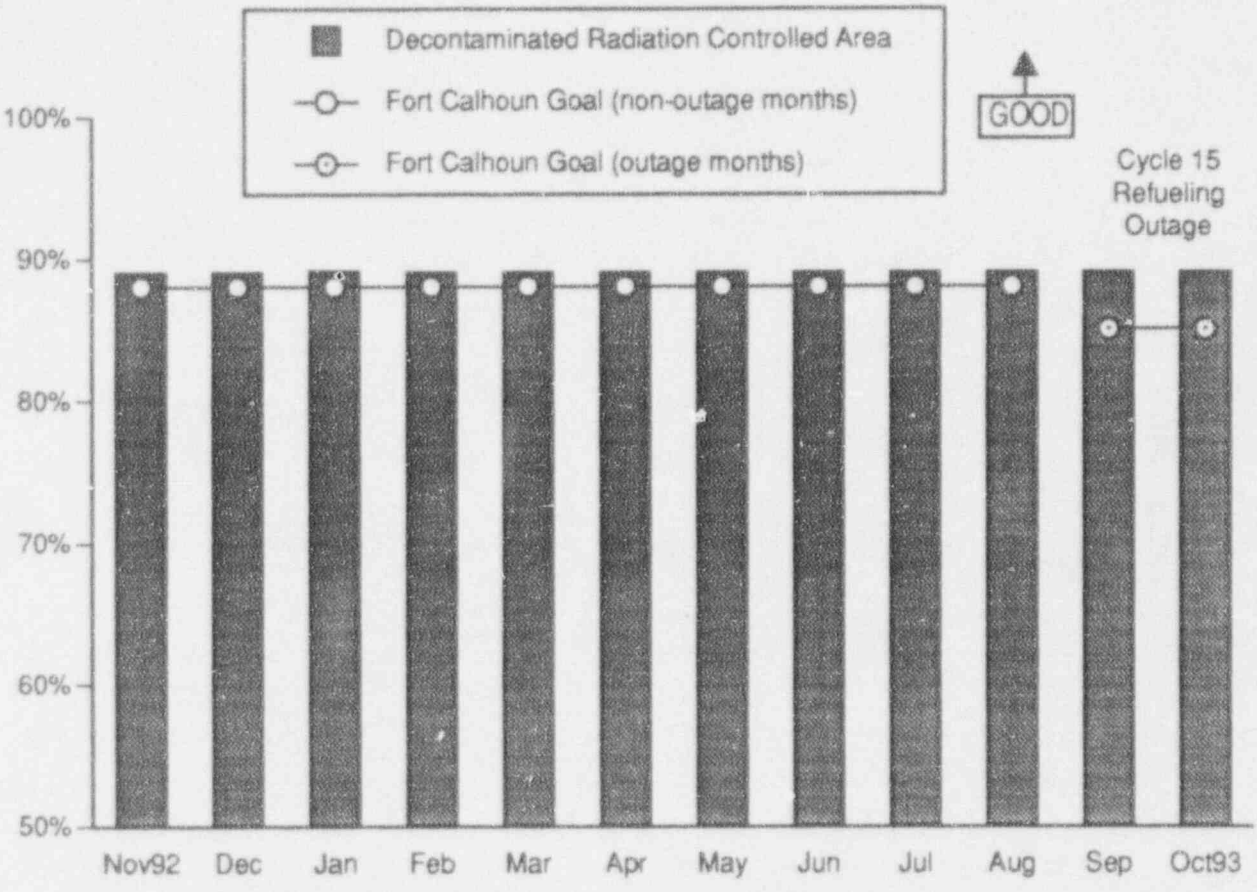
This indicator shows the total amount of hazardous waste produced by the Fort Calhoun Station each month, the monthly average goal and the year-to-date total for hazardous waste produced. This hazardous waste consists of non-halogenated hazardous waste, halogenated hazardous waste, and other hazardous waste produced.

During the month of October 1993, 0.0 kilograms of non-halogenated hazardous waste was produced, 0.0 kilograms of halogenated hazardous waste was produced, and 0.0 kilograms of other hazardous waste was produced. The yearly total for hazardous waste produced is 299 kilograms. The year-to-date monthly average for hazardous waste produced is 29.9 kilograms.

Hazardous waste is counted based upon a full drum of waste.

The 1993 and 1992 monthly average goals for hazardous waste produced are a maximum of 100 kilograms.

Date Source: Chase/Henning (Manager/Source)
Accountability: Chase/Henning
Positive Trend



DECONTAMINATED RADIATION CONTROLLED AREA

This indicator shows the percentage of the RCA that is decontaminated (clean) based on the total square footage. The 1993 non-outage goal is a minimum of 88% decontaminated RCA and the outage goal is a minimum of 85% decontaminated RCA. The 1992 non-outage goal was a minimum of 88% decontaminated RCA.

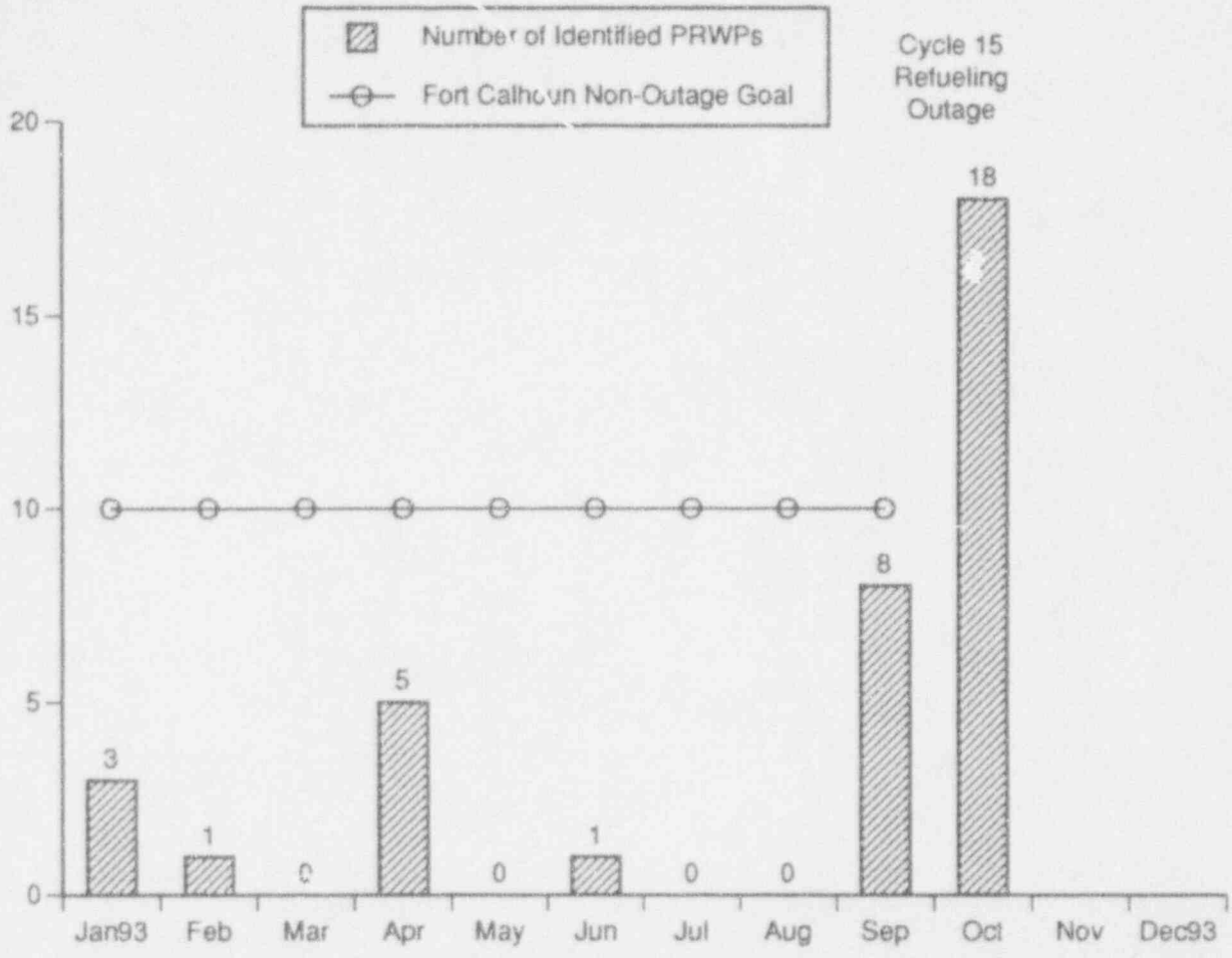
At the end of the reporting month, 89% of the total square footage of the RCA was not contaminated.

Data Source: Chase/Gundal (Manager/Source)

Accountability: Chase/Lovett

Positive Trend

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 PRWPs are identified through supervisory review of the Radiological Occurrence Reports and Personnel Contamination Reports written during the reporting month.

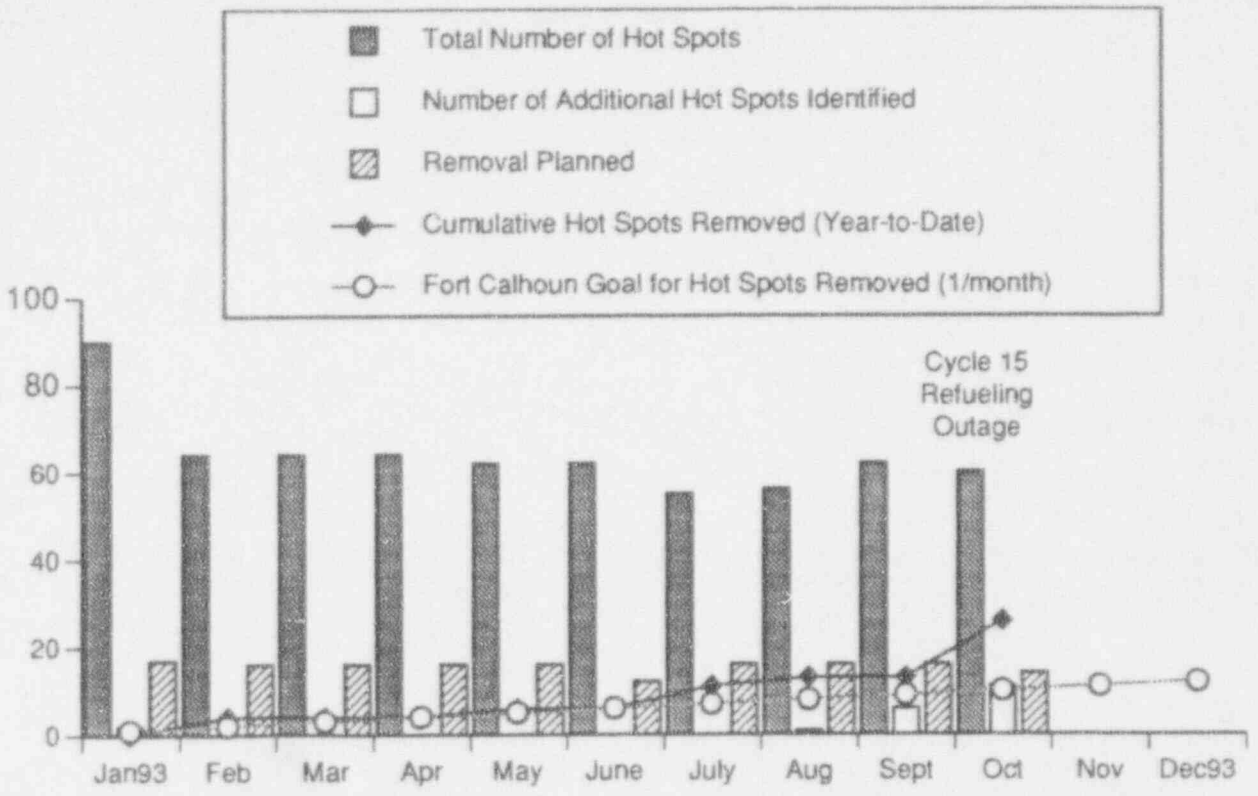
The number of PRWPs which are identified each month should indirectly provide a means to qualitatively assess supervisor accountability for their workers' radiological performance.

During the month of October 1993, there were 18 PRWPs (10 PCRs and 8 RORs) identified.

The 1993 monthly non-outage goal for the number of PRWPs is a maximum of 10 per month.

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

SEP 52



NUMBER OF HOT SPOTS

This indicator shows the total number of hot spots which have been identified to exist in the Fort Calhoun Station and have been documented through the use of a hot spot identification sheet. A hot spot is defined as a small localized source of high radiation. A hot spot occurs when the contact dose rate of an item or piece of equipment is at least 5 times the General Area dose rate and the item or piece of equipment's dose rate is equal to or greater than 100 mRem/hour in rad areas.

At the end of October 1993, there was a total of 60 hot spots identified. There were 11 new hot spots identified during the month. 10 of these new hot spots were located in containment, and 1 was in Room 59.

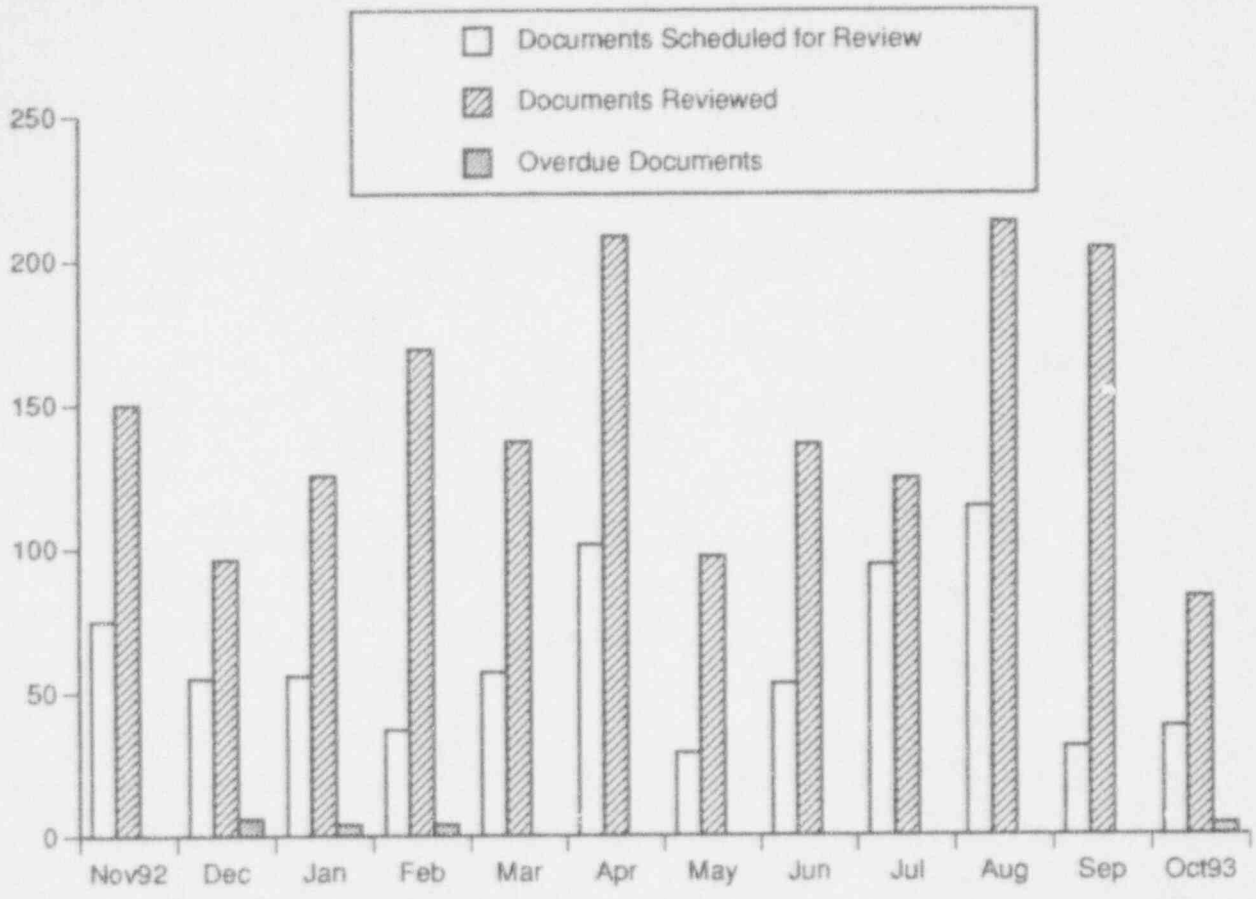
13 hot spots were removed during the month. All of the hotspots removed were in the auxiliary building, and 12 of the 13 were planned removals.

Removal is planned for 14 hot spots.

There has been a total of 26 hot spots removed in 1993.

The 1993 Fort Calhoun goal is to remove three hot spots per quarter and achieve a net reduction of one hot spot per quarter.

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



DOCUMENT REVIEW

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

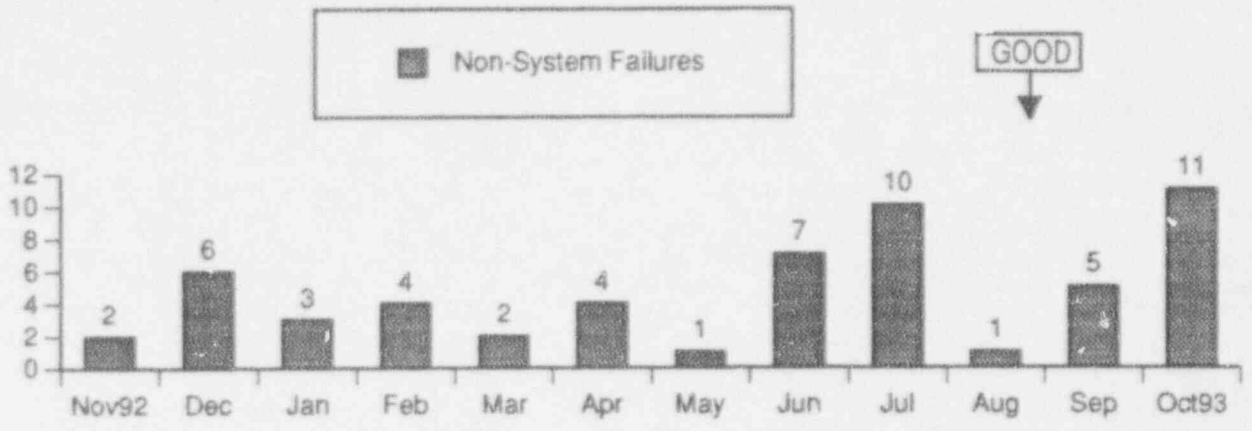
During October 1993 there were 83 document reviews completed while 38 document reviews were scheduled. At the end of October, there were 4 document reviews more than 6 months overdue.

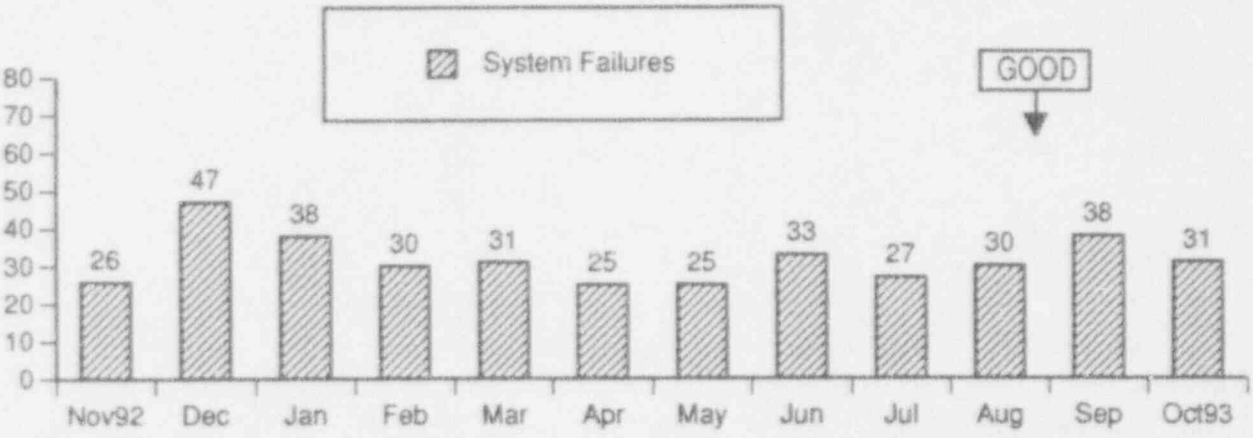
There were 34 new documents initiated in October.

The 1993 monthly goal for this indicator is no (0) documents more than 6 months overdue.

Data Source: Chase/Keister (Manager/Source)
Accountability: Chase/Jaworski
Adverse Trend: None

SEP 46





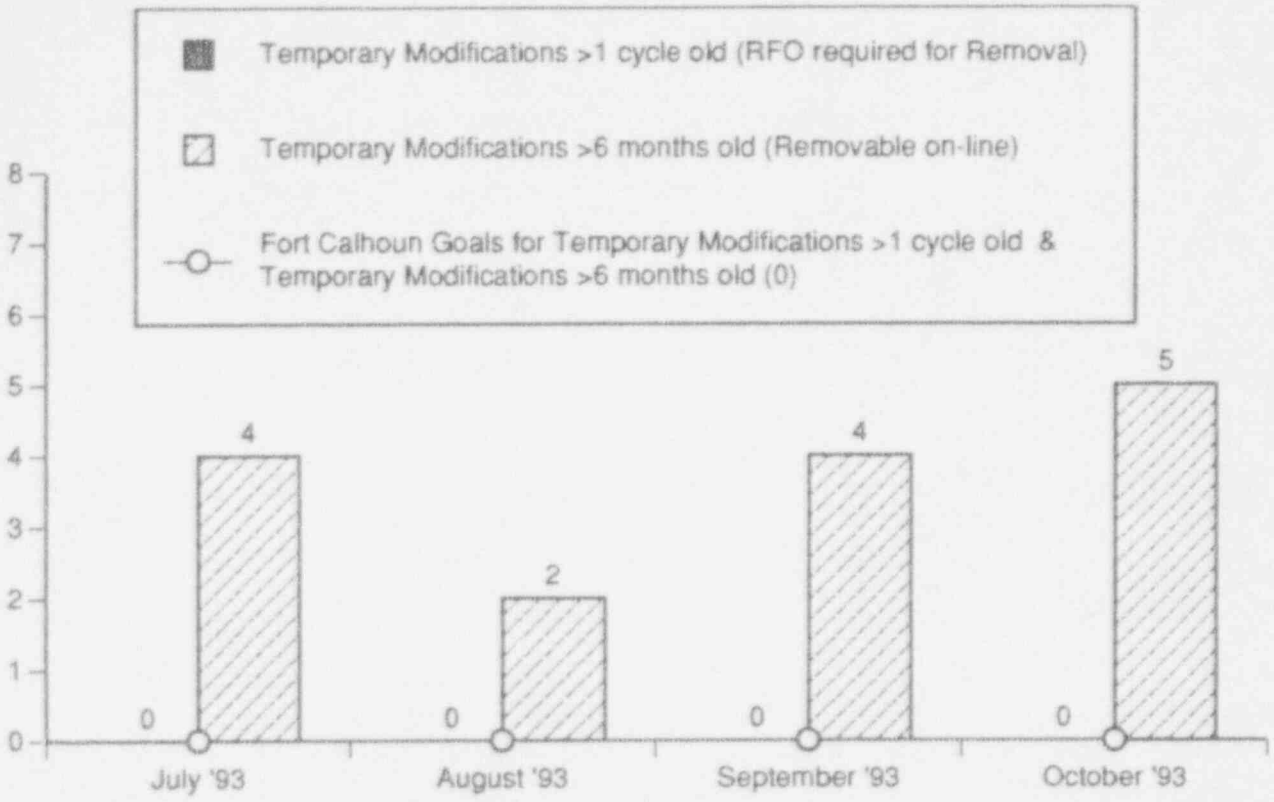
LOGGABLE/REPORTABLE INCIDENTS (SECURITY)

The Loggable/Reportable Incidents (Security) Indicator is depicted in two separate graphs. The top graph depicts the total number of loggable/reportable non-system failures concerning Security Badges, Access Control and Authorization, Security Force Error, and Unsecured Doors. The bottom graph shows the total number of loggable/reportable incidents concerning system failures which occurred during the reporting month.

During the month of October 1993, there were 42 loggable/reportable incidents identified. System failures accounted for 31 (73%) of the loggable/reportable incidents. There were 13 loggable security door events during the reporting month. 3 vital area security doors accounted for 11 of the 13 loggable incidents. General Maintenance is now conducting periodic preventive maintenance on these doors. There were 6 lost/unattended security badge incidents and 3 access control incidents during the month of October.

Data Source: Sefick/Woerner (Manager/Source)
Accountability: Sefick
Adverse Trend: None

SEP 58



TEMPORARY MODIFICATIONS

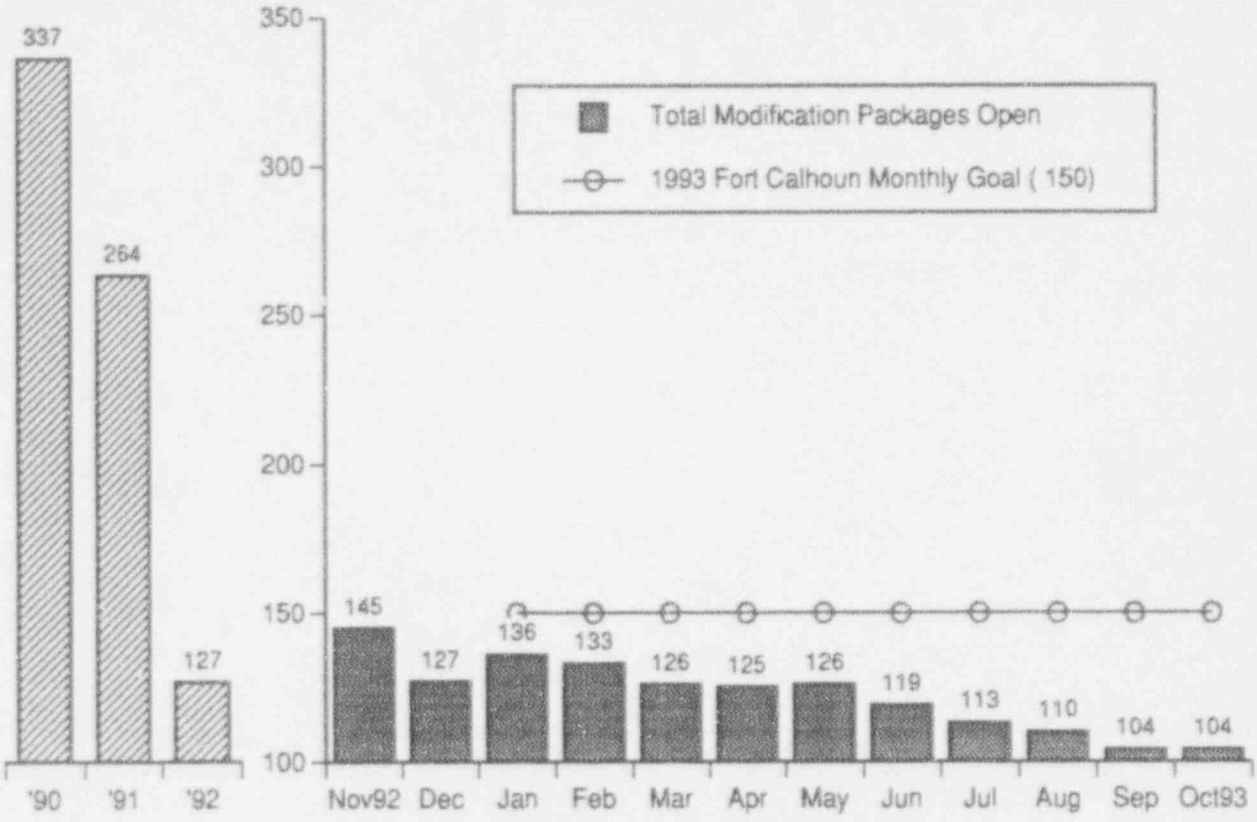
This indicator provides information on the number of temporary modifications greater than one fuel cycle old requiring a refueling outage (RFO) for removal and the number of temporary modifications removable on-line that are greater than six months old. Also provided are the Fort Calhoun goals for temporary modifications.

There are currently no temporary modifications that are greater than one fuel cycle old requiring a refueling outage to remove. In addition, at the end of October 1993 there were 5 temporary modifications installed that were greater than six months old that can be removed on-line. These were: 1) Camera and mounting bracket removal, which is awaiting completion of MWO 924757, scheduled start date 11/30/93; 2) Local indication for BAST CH-11A and CH-11B, in which Licensing is to issue an FLC, and the NRC is to approve the FLC; 3) Time delay relay for PC-1902B, which is awaiting NPRC review for installation date of ECN 92-468; 4) LP-30 transformer, which is awaiting completion of MWO 930765, scheduled start date 11/22/93; and 5) Fire hose connection -- Blair water system, which is awaiting completion of MWO 932649, scheduled start date 1/25/94.

At the end of October 1993, there was a total of 29 TMs installed in the Fort Calhoun Station. 10 of the 29 installed TMs require an outage for removal and 19 are removable on-line. In 1993 a total of 52 temporary modifications have been installed.

Data Source: Jaworski/Turner (Manager/Source)
Accountability: Jaworski/Gorence
Adverse Trend: None

SEP 62 & 71



OUTSTANDING MODIFICATIONS

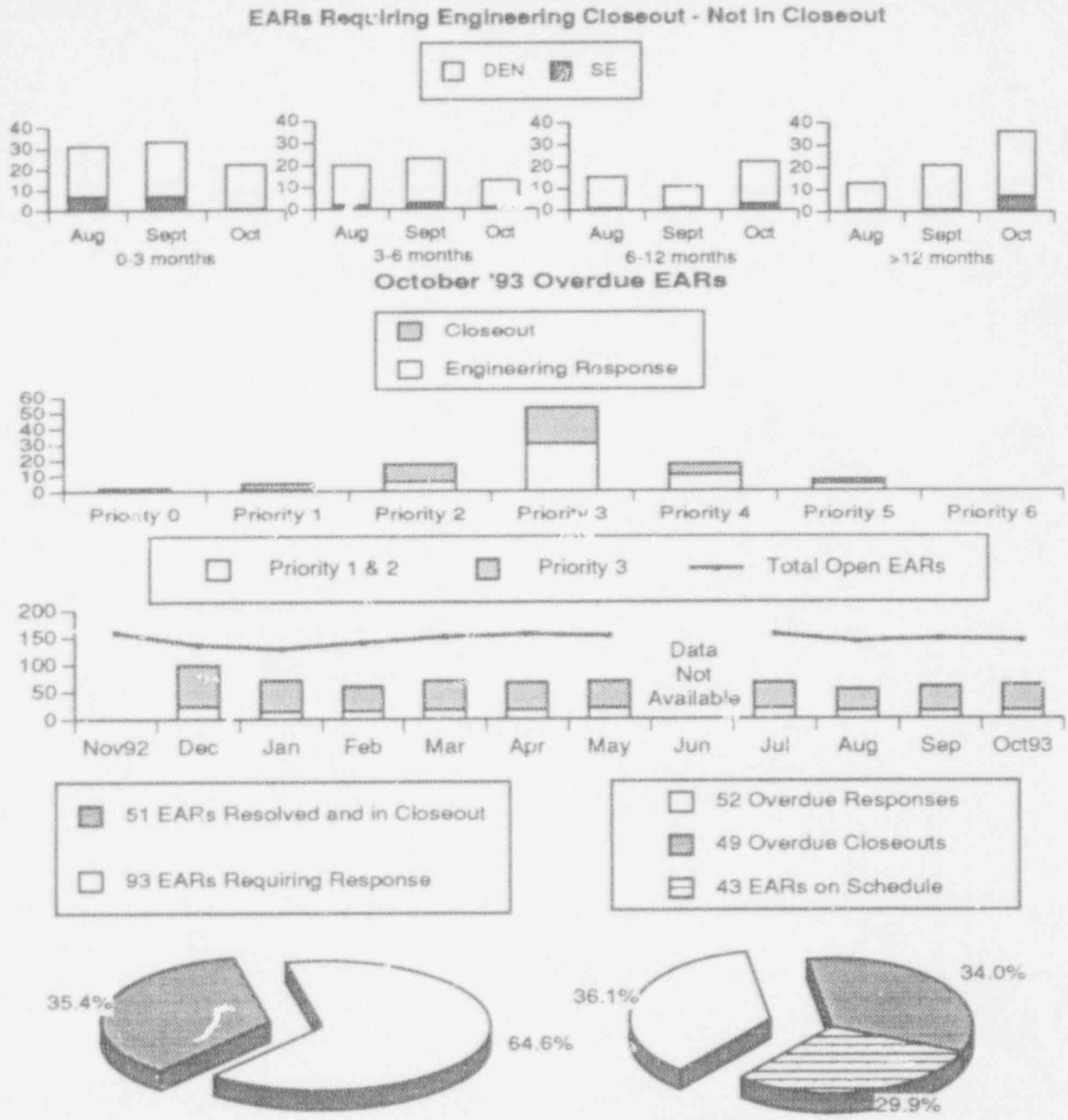
This indicator shows the total number of outstanding modifications (excluding outstanding modifications which are proposed to be cancelled).

Category	Reporting Month
Form FC-1133 Backlog/In Progress	1
Mod. Requests Being Reviewed	8
Design Engr. Backlog/In Progress	47
Construction Backlog/In Progress	36
Design Engr. Update Backlog/In Progress	12
Total	104

At the end of October 1993, 15 additional modification requests had been issued this year and 89 modification requests had been cancelled. The Nuclear Projects Review Committee (NPRC) had completed 209 backlog modification request reviews this year. The Nuclear Projects Committee (NPC) had completed 57 backlog modification request reviews this year.

The 1993 Fort Calhoun monthly goal is a maximum of 150 total outstanding modifications.

Data Source: Jaworski/Turner (Manager/Source)
Scofield/Lounsbery (Manager/Source)
Accountability: Scofield/Phelps
Positive Trend



ENGINEERING ASSISTANCE REQUEST BREAKDOWN

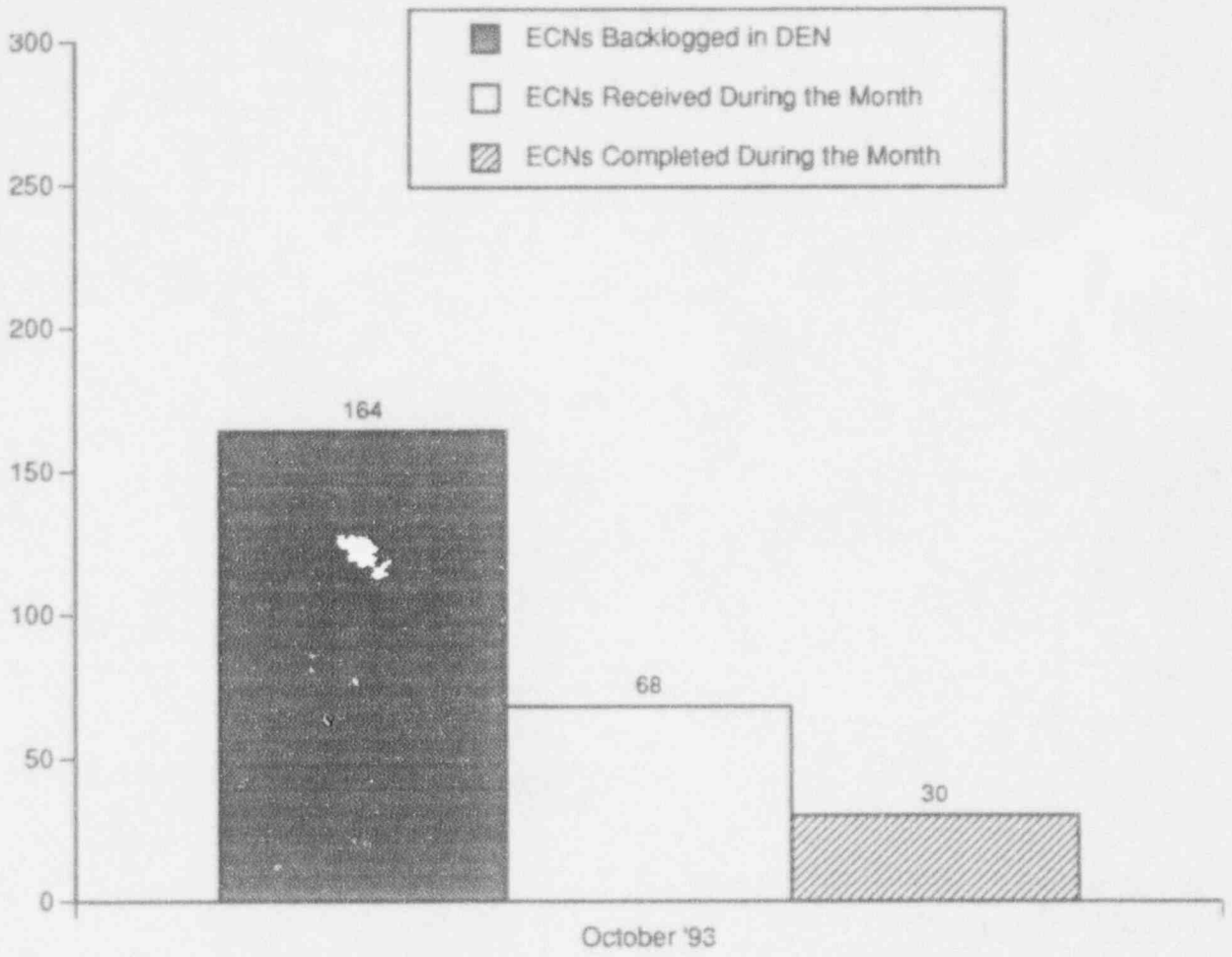
This indicator shows a breakdown of the number of EARs assigned to Design Engineering and System Engineering. The 1993 goal for this indicator is a maximum of 150 outstanding EARs.

Total EAR breakdown is as follows:

EARs opened during the month	9
EARs closed during the month	15
Total EARs open as of the end of the month	144

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

SEP 62



ENGINEERING CHANGE NOTICE STATUS

This indicator shows the number of Engineering Change Notices (ECNs) awaiting completion by DEN, the number of ECNs opened during the reporting month, and the number of ECNs completed by DEN during the reporting month.

At the end of October 1993, there was a total of 164 DEN backlogged open ECNs. There were 68 ECNs received by DEN, and 30 ECNs completed during the month.

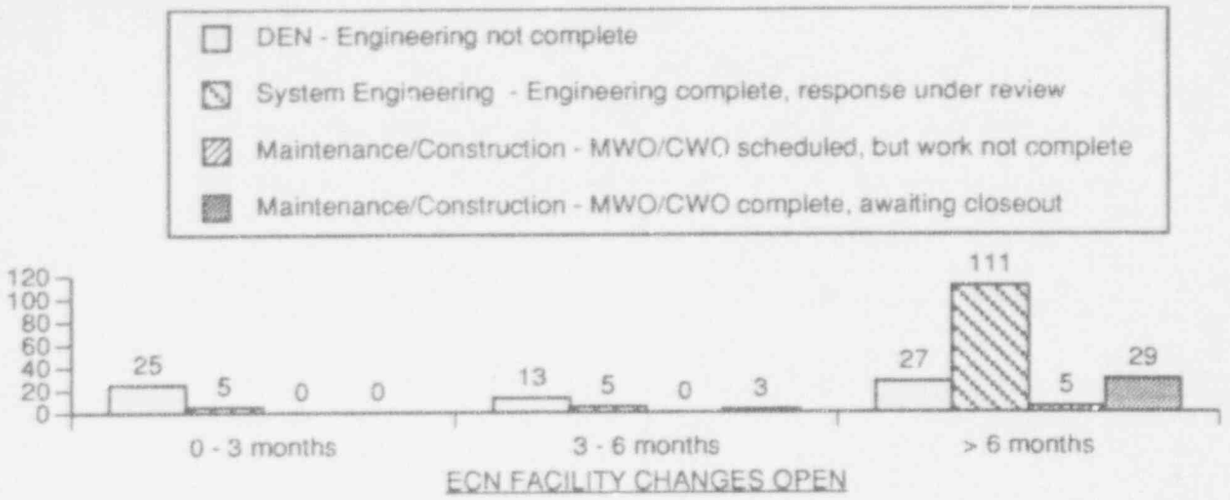
Although the number of open ECNs is currently high, activities are in progress to reduce the backlog of open ECNs.

Data Source: Phelps/Pulverenti (Manager/Source)

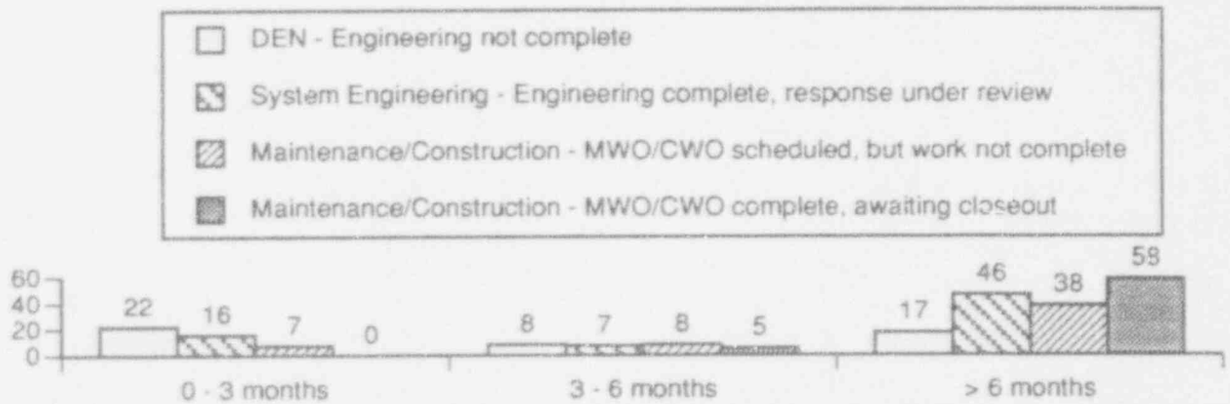
Accountability: Phelps/Jaworski

Adverse Trend: None

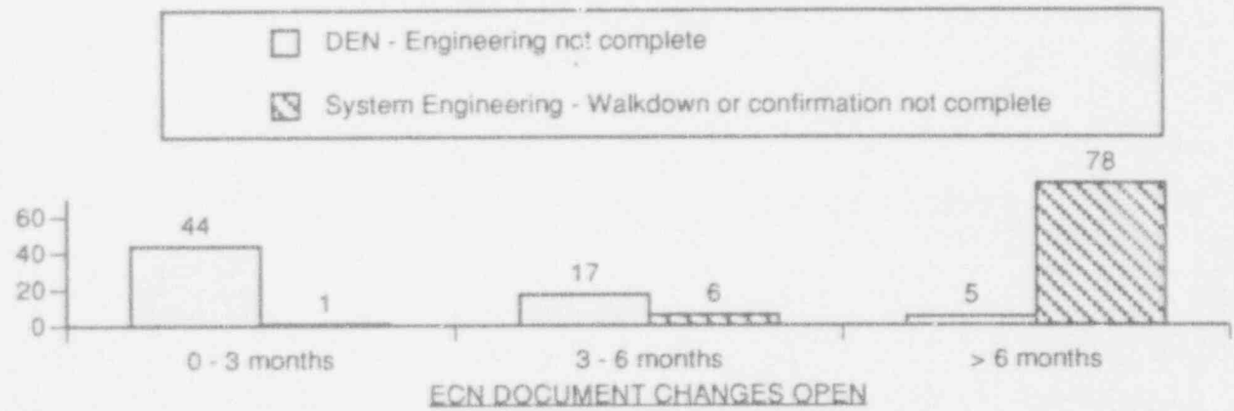
SEP 62



ECN FACILITY CHANGES OPEN



ECN SUBSTITUTE REPLACEMENT ITEMS OPEN



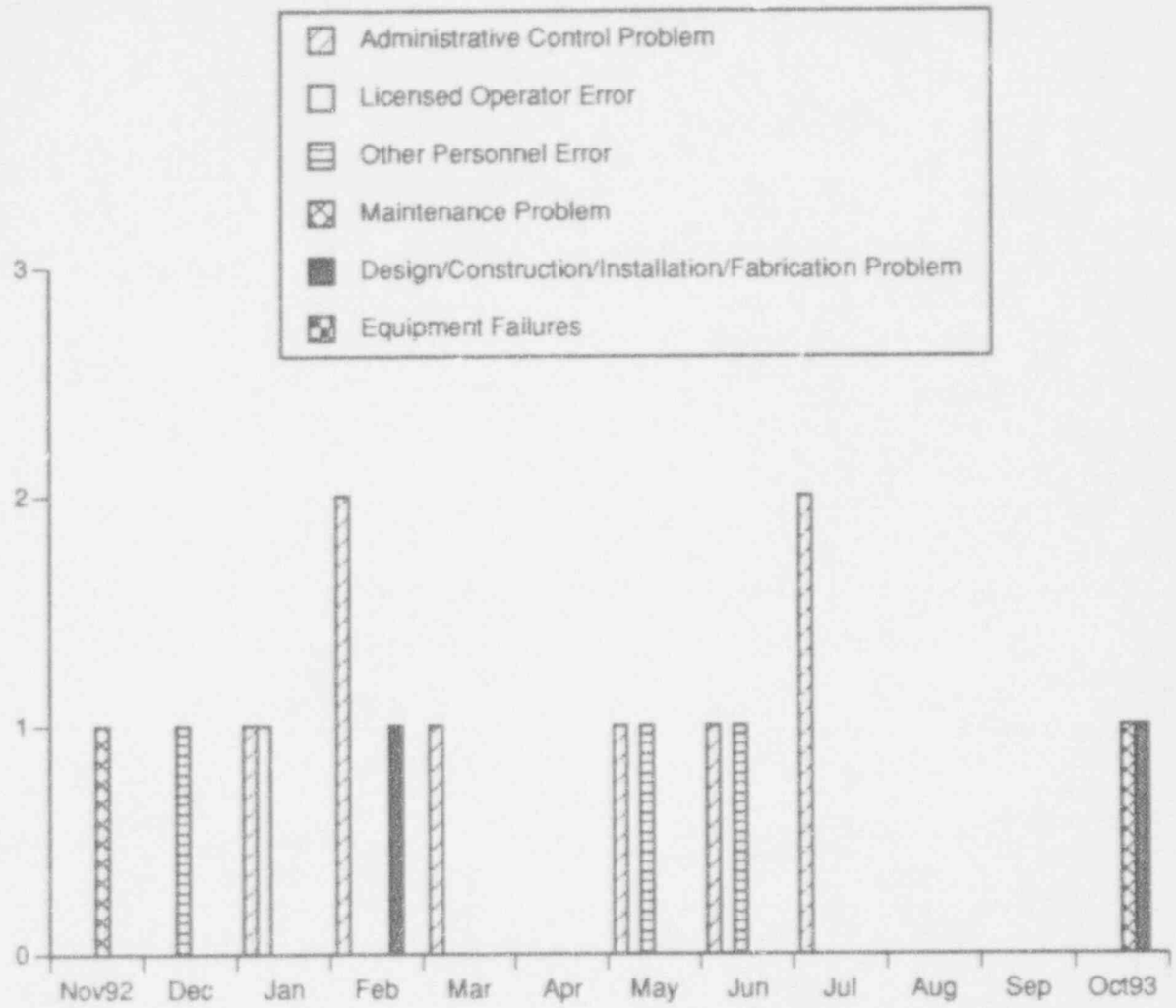
ECN DOCUMENT CHANGES OPEN

ENGINEERING CHANGE NOTICE BREAKDOWN

This indicator shows a breakdown of the number of Engineering Change Notices (ECNs) that are assigned to Design Engineering Nuclear (DEN), System Engineering, and Maintenance or Construction for October 1993. The graphs provide data on ECN Facility Changes Open, ECN Substitute Replacement Items Open, and ECN Document Changes Open.

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

SEP 62



LICENSEE EVENT REPORT (LER) ROOT CAUSE BREAKDOWN

This indicator shows the LERs by report date broken down by Root Cause Code for each of the past twelve months from November 1,1992 through October 31, 1993.

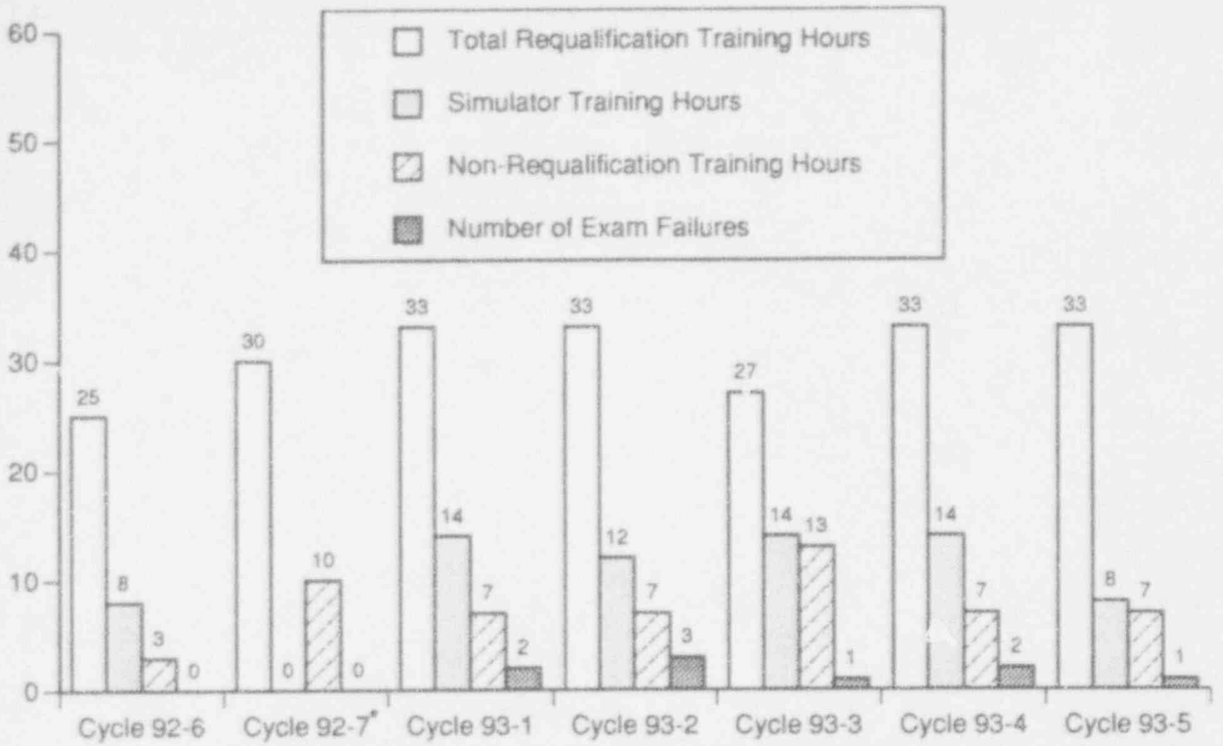
The cause codes are intended to identify possible programmatic deficiencies. For detailed descriptions of these codes, see the "Performance Indicator Definitions" section of this report.

There were 2 LERs submitted in October 1993.

Data Source: Short/Cavanaugh (Manager/Source)

Accountability: Chase

Adverse Trend: None



*Note: The Simulator was out-of-service for maintenance and modifications during Rotation 92-7.

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.

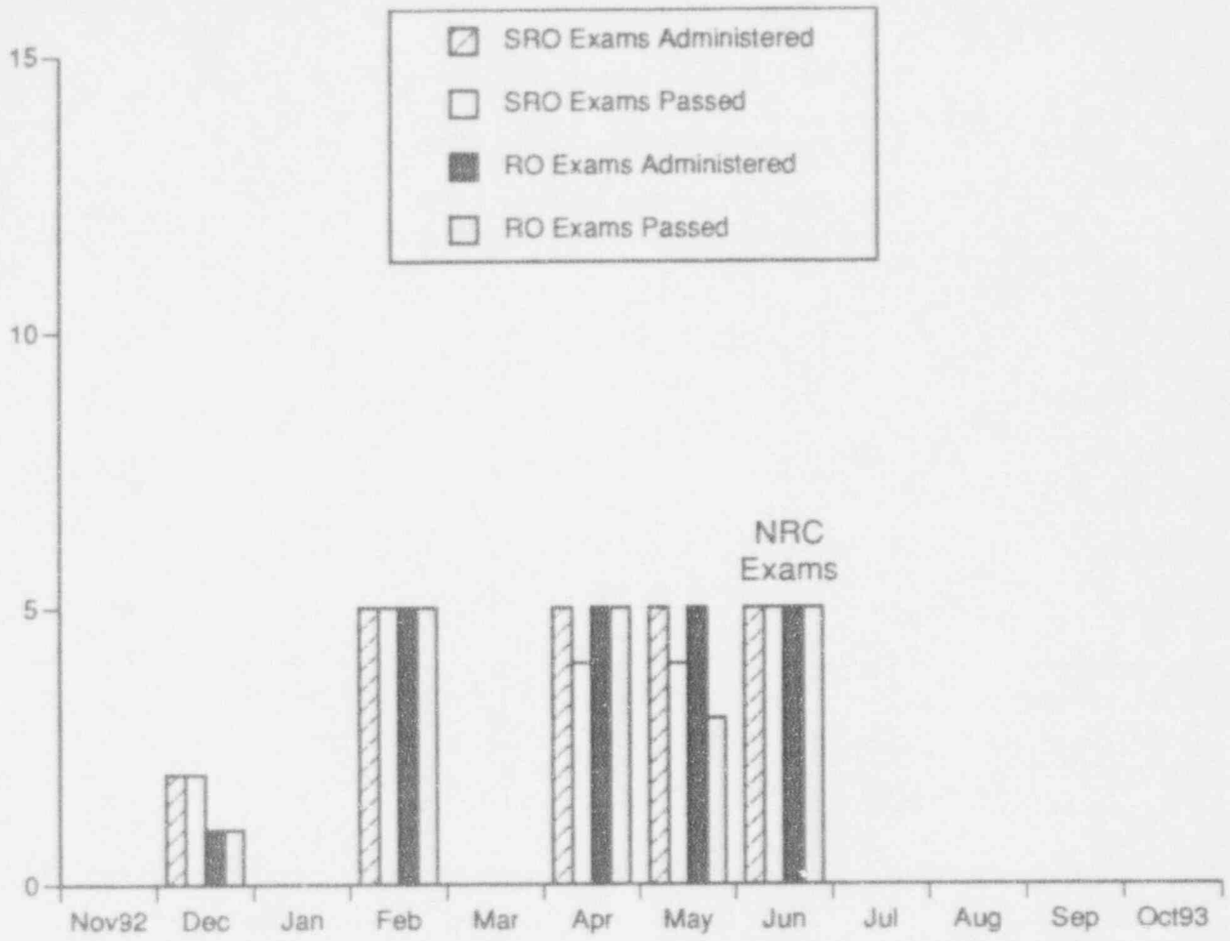
Exam failures are defined as failures in the written, simulator, and Job Performance Measures (JPMs) segments of the Licensed Operator Requalification Training.

There were 12 NRC administered requalification exams given during Rotation 93-5. Five individuals took the written, walk-through, and dynamic simulator portions of the exam, and 7 additional individuals took only the dynamic simulator portion of the exam. There were no crew or individual failures on the NRC exam and the licensed operator requalification program has been judged satisfactory.

"In-House" annual requalification exams were also given during Rotation 93-5. These exams consisted of a walk-through and a dynamic simulator section. There was one individual failure on the dynamic simulator. The individual was remediated and returned to shift. In addition, 5 remedials were given to individuals who passed their exams but were judged to be weak in the Emergency Operating Procedures. Shift operations was not impacted.

Data Source: Gasper/Lazar (Manager/Source)
Accountability: Gasper/Lazar
Adverse Trend: None

SEP 68



LICENSE CANDIDATE EXAMS

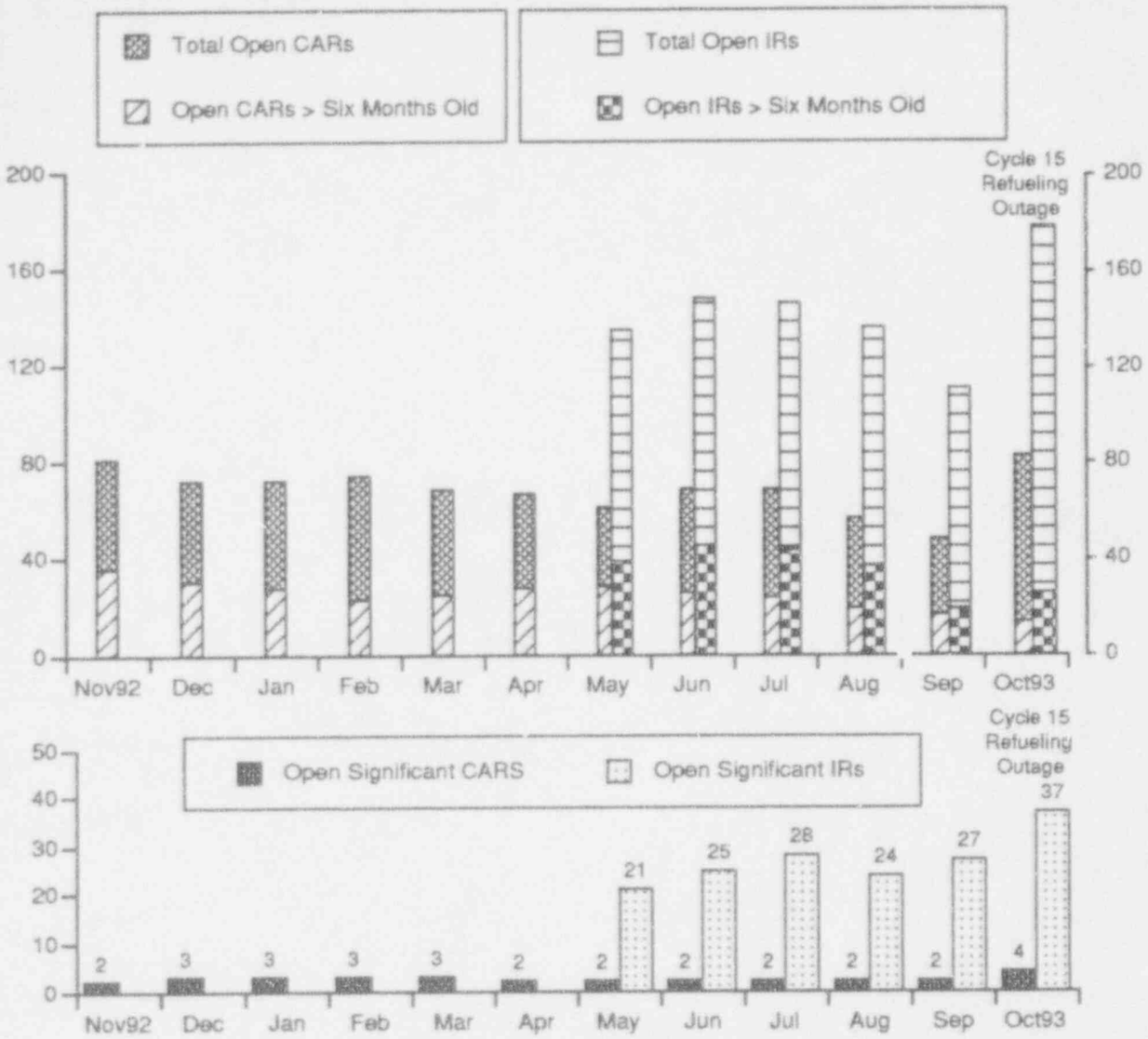
This indicator shows the number of Senior Reactor Operator (SRC) and Reactor Operator (RO) quizzes and exams taken and passed each month. These internally administered quizzes and exams are used to plot the SRO and RO candidates' monthly progress.

There were no OPPD Reactor Operator or Senior Reactor Operator exams administered during October 1993.

Currently, there is no Hot License class being conducted. The next class will begin in December 1993.

Data Source: Gasper/Lazar (Manager/Source)
Accountability: Gasper/Lazar
Adverse Trend: None

SEP 68



OPEN CORRECTIVE ACTION REPORTS AND INCIDENT REPORTS

This indicator shows the total number of open Corrective Action Reports (CARs), CARs >6 months the total number of Open IRs, IRs >6 months old, the number of open significant CARs and the number of open significant IRs.

At the end of October 1993 there were 82 open CARs. 14 of these CARs were greater than 6 months o There were 4 Open Significant CARs at the end of the month.

Also, at the end of October there were 179 open IRs. 26 of these IRs were greater than 6 months old. There were 37 Open Significant IRs at the end of the month.

The 1993 monthly goal for the number of CARs greater than 6 months old is a maximum of 30.

Data Source: Orr/Gurtis (Manager/Source) & CHAMPS
Accountability: Andrews/Gambhir/Gates
Adverse Trend: None

ACTION PLANS FOR ADVERSE TRENDS

ACTION PLANS FOR ADVERSE TRENDS

The following action plans have been developed for the performance indicators cited as exhibiting adverse trends during the three months preceding this report:

Number of Personnel Errors Reported in LERs

Problems: As of the end of October, 35.7% of the total number of LERs submitted in 1993 have been attributed to personnel error.

Goal: The 1993 goal for this indicator is that a maximum of 12% of the total LERs submitted will be attributed to personnel error.

Action: LERs require a root cause analysis be performed to determine the cause of each reportable event. The root cause analysis process is being strengthened to provide more comprehensive corrective actions.

Before the analysis begins, a meeting is held between plant management and the department assigned to do the root cause analysis to provide management expectations and input. Major emphasis is placed on concentrating on generic implications to ensure across-the-board corrective actions are taken to prevent similar occurrences in other areas.

A follow-up meeting is held to finalize the root cause analysis report. Any affected department managers/supervisors are invited to attend this meeting. The thoroughness of the evaluation, the generic implication analysis and the proposed corrective actions are reviewed. Corrective actions are finalized and assigned at this meeting.

Personnel performance accountability is continuing to be stressed with department supervisors by plant management. Appropriate disciplinary actions are taken when warranted.

PERFORMANCE INDICATOR DEFINITIONS

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.

AUXILIARY SYSTEMS CHEMISTRY PERCENT OF HOURS OUTSIDE STATION LIMITS
The cumulative hours that the Component Cooling Water system is outside the station chemistry limit. The hours are accumulated from the first sample exceeding the limit until additional sampling shows the parameter to be back within limits.

CHECK VALVE FAILURE RATE
Compares the Fort Calhoun check valve failure rate to the industry check valve failure rate (failures per 1 million component hours). The data for the industry failure rate is three months behind the PI Report reporting month. This indicator tracks performance for SEP #43.

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.

COMPONENT FAILURE ANALYSIS REPORT (CFAR) SUMMARY
The number of INPO categories for Fort Calhoun Station with significantly higher (1.645 standard deviations) failure rates than the rest of the industry for an eighteen month time period. Failures are reported as component (i.e. pumps, motors, valves, etc.) and application (i.e. charging pumps, main steam stop valves, control element drive motors, etc.) categories.
Failure Cause Categories are:

Wear Out/Aging - a failure thought to be the consequence of expected wear or aging.

Manufacturing Defect - a failure attributable to inadequate assembly or initial quality of the responsible component or system.

Engineering/Design - a failure attributable to the inadequate design of the responsible component or system.

Other Devices - a failure attributable to a failure or misoperation of another component or system, including associated devices.

Maintenance/Testing - a failure that is a result of improper maintenance or testing, lack of maintenance, or personnel errors that occur during maintenance or testing activities performed on the responsible component or system, including failure to follow procedures.

Errors - failures attributable to incorrect procedures that were followed as written, improper installation of equipment, and personnel errors (including failure to follow procedures properly). Also included in this category are failures for which the cause is unknown or cannot be assigned to any of the preceding categories.

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 12 month rolling average for the current year. The basis for the budget curve is the approved 1993 budget. The basis for the actual curve is the Financial and Operating Report.

CONTAMINATIONS ≥2,000 COUNTS/MINUTE PER PROBE AREA
Reportable skin and clothing contaminations. This indicator tracks personnel performance for SEP #15 & 54.

DAILY THERMAL OUTPUT
This indicator shows the daily core thermal output as measured from computer point XC105 (in thermal megawatts). The 1500 MW Tech Spec limit, and the unmet portion of the 1495 MW FCS daily goal for the reporting month are also shown.

DIESEL GENERATOR RELIABILITY (25 DEMANDS)
This indicator shows the number of failures occurring for each emergency diesel generator during the last 25 start demands and the last 25 load-run demands.

DECONTAMINATED 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 decontaminated based on the total square footage. This indicator tracks performance for SEP # 54.

DISABLING INJURY/ILLNESS FREQUENCY RATE (LOST 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.

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 6 months of the assigned due date. This indicator tracks performance for SEP #46.

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.

EMERGENCY DIESEL GENERATOR UNIT RELIABILITY

This indicator shows the number of failures that were reported during the last 20, 50, and 100 emergency diesel generator demands at the Fort Calhoun Station. Also shown are trigger values which correlate to a high level of confidence that a unit's diesel generators have obtained a reliability of greater than or equal to 95% when the demand failures are less than the trigger values.

1) Number of Start Demands: All valid and inadvertent start demands, including all start-only demands and all start demands that are followed by load-run demands, whether by automatic or manual initiation. A start-only demand is a demand in which the emergency generator is started, but no attempt is made to load the generator.

2) Number of Start Failures: Any failure within the emergency generator system that prevents the generator from achieving specified frequency and voltage is classified as a valid start failure. This includes any condition identified in the course of maintenance inspections (with the emergency generator in standby mode) that definitely would have resulted in a start failure if a demand had occurred.

3) Number of Load-Run Demands: For a valid load-run demand to be counted the load-run attempt must meet one or more of the following criteria:

A) A load-run of any duration that results from a real automatic or manual initiation.

B) A load-run test to satisfy the plant's load and duration as stated in each test's specifications.

C) Other special tests in which the emergency generator is expected to be operated for at least one hour while loaded with at least 50% of its design load.

4) Number of Load-Run Failures: A load-run failure should be counted for any reason in which the emergency generator does not pick up load and run as predicted. Failures are counted during any valid load-run demands.

5) Exceptions: Unsuccessful attempts to start or load-run should not be counted as valid demands or failures when they can be attributed to any of the following:

A) Spurious trips that would be bypassed in the event of an emergency.

B) Malfunction of equipment that is not required during an emergency.

C) Intentional termination of a test because of abnormal conditions that would not have resulted in major diesel generator damage or repair.

D) Malfunctions or operating errors which would have not prevented the emergency generator from being restarted and brought to load within a few minutes.

E) A failure to start because a portion of the starting system was disabled for test purpose, if followed by a successful start with the starting system in its normal alignment.

Each emergency generator failure that results in the generator being declared inoperable should be counted as one demand and one failure. Exploratory tests during corrective maintenance and the successful test that follows repair to verify operability should not be counted as demands or failures when the EDG has not been declared operable again.

EMERGENCY DIESEL GENERATOR UNRELIABILITY

This indicator measures the total unreliability of emergency diesel generators. In general, unreliability is the ratio of unsuccessful operations (starts or load-runs) to the number of valid demands. Total unreliability is a combination of start unreliability and load-run unreliability.

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.

ENGINEERING CHANGE NOTICE (ECN) BREAKDOWN

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 Parts open, and ECN Document Changes open. This indicator tracks performance for SEP #62.

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.

EQUIPMENT FORCED OUTAGES PER 1,000 CRITICAL HOURS

Equipment forced outages per 1000 critical hours is the inverse of the mean time between forced outages caused by equipment failures. The mean time is equal to the number of hours the reactor is critical in a period (1000 hours) divided by the number of forced outages caused by equipment failures in that period.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

EQUIVALENT AVAILABILITY FACTOR
This indicator is defined as the ratio of gross available generation to gross maximum generation, expressed as a percentage. Available generation is the energy that can be produced if the unit is operated at the maximum power level permitted by equipment and regulatory limitations. Maximum generation is the energy that can be produced by a unit in a given period if operated continuously at maximum capacity.

FORCED OUTAGE RATE
This indicator is defined as the percentage of time that the unit was unavailable due to forced events compared to the time planned for electrical generation. Forced events are failures or other unplanned conditions that require removing the unit from service before the end of the next weekend. Forced events include start-up failures and events initiated while the unit is in reserve shutdown (i.e., the unit is available but not in service).

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., Vf = 0.02146) divided by the specific volume of coolant at normal letdown temperature (120 degrees F at outlet of the letdown cooling heat exchanger, Vf = 0.016204), which results in a density correction factor for FCS equal to 1.32.

GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT
This indicator displays the total number of Curies of all gaseous radioactive nuclides released from FCS. This indicator is included in the report when new data is available, i.e., every 6 months.

GROSS HEAT RATE
Gross heat rate is defined as the ratio of total thermal energy in British Thermal Units (BTU) produced by the reactor to the total gross electrical energy produced by the generator in kilowatt-hours (KWH).

HAZARDOUS WASTE PRODUCED
The total amount (in Kilograms) of non-halogenated hazardous waste, halogenated hazardous waste, and other hazardous waste produced by FCS each month.

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.

IN-LINE CHEMISTRY INSTRUMENTS OUT OF SERVICE
Total number of in-line chemistry instruments that are out-of-service in the Secondary System and the Post Accident Sampling System (PASS).

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.

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.

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.

LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT
This indicator displays the total number of curies from all liquid releases from FCS to the Missouri River. This indicator is included in the report when new data is available, i.e., every 6 months.

LOGGABLE/REPORTABLE INCIDENTS (SECURITY)
The total number of security incidents for the reporting month depicted in two graphs. This indicator tracks security performance for SEP #58.

MAINTENANCE OVERTIME
The % of overtime hours compared to normal hours for maintenance. This includes OPPD personnel as well as contract personnel.

MAINTENANCE WORKLOAD BACKLOGS
This indicator is a breakdown of the manhours associated corrective non-outage maintenance work orders by several categories. Safety related MWOs are those MWOs in which the Equipment Data Base in CHAMPS has identified the equipment as Critical Quality Equipment (CQE). Therefore, this indicator is identifying those MWOs that have been identified as CQE and reports the number of estimated manhours associated with the backlog. This indicator tracks maintenance performance for SEP #36.

MAXIMUM INDIVIDUAL RADIATION EXPOSURE
The total maximum amount of radiation received by an individual person working at FCS on a monthly, quarterly, and annual basis.

MWO PLANNING STATUS (CYCLE 15 REFUELING OUTAGE)
The total number of Maintenance Work Orders that have been approved for inclusion in the Cycle 15 Refueling Outage and the number that are ready to work (parts staged, planning complete, and all other paperwork ready for field use). Also included is the number of MWOs that have engineering holds (ECNs, procedures and other miscellaneous engineering holds), parts hold, (parts staged, not yet inspected, parts not yet arrived) and planning hold (job scope not yet completed). Maintenance Work Requests (MWRs) are also shown that have been identified for the Cycle 15 Refueling Outage and have not yet been converted to MWOs.

NUMBER OF CONTROL ROOM EQUIPMENT DEFICIENCIES
A control room equipment deficiency (CRD) is defined as any component which is operated or controlled from the Control Room, provides indication or alarm to the Control Room, provides testing capabilities from the Control Room, provides automatic actions from or to the Control Room, or provides a passive function for the Control Room and has been identified as deficient, i.e., does not perform under all conditions as designed. This definition also applies to the Alternate Shutdown Panels AI-179, AI-185, and AI-212.
A plant component which is deficient or inoperable is considered an "Operator Work Around (OWA) Item" if some other action is required by an operator to compensate for the condition of the component. Some examples of OWAs are: 1) The control room level indicator does not work but a local sightglass can be read by an Operator out in the plant; 2) A deficient pump cannot be repaired because replacement parts require a long lead time for purchase/delivery, thus requiring the redundant pump to be operated continuously; 3) Special actions are required by an Operator because of equipment design problems. These actions may be described in Operations Memorandums, Operator Notes, or may require changes to Operating Procedures. 4) Deficient plant equipment that is required to be used during Emergency Operating Procedures or Abnormal Operating Procedures. 5) System indication that provides critical information during normal or abnormal operations.

NUMBER OF HOT SPOTS
The number of radiological hot spots which have been identified and documented to exist at FCS at the end of the reporting month. A hot spot is a small localized source of radiation. A hot spot occurs when the contact dose rate of an item is at least 5 times the General Area dose rate and the item's dose rate is equal to or greater than 100 mRem/hour.

NUMBER OF PERSONNEL ERRORS REPORTED IN LERS
The number of Licensee Event Reports (LERs) attributed to personnel error on the original LER submittal. A Personnel Error is an event for which the root cause is inappropriate action on the part of one or more specified 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. This indicator trends personnel performance for SEP #15.

NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS
The number of Surveillance Tests (STs) that result in Licensee Event Reports (LERs) during the reporting month. This indicator tracks missed STs for SEP #60 & 61.

OPEN CORRECTIVE ACTION REPORTS & INCIDENT REPORTS
This indicator displays the total number of open Corrective Action Reports (CARs), the number of CARs that are older than six months and the number of open significant CARs. Also displayed are the number of open Incident Reports (IRs), the number of IRs that are greater than six months old and the number of open significant IRs.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

OUTSTANDING MODIFICATIONS
The number of Modification Requests (MRs) in any state between the issuance of a Modification Number and the completion of the drawing update.
1) Form FC-1133 Backlog/In Progress. This number represents modification requests that have not been plant approved during the reporting month.
2) Modification Requests Being Reviewed. This category includes:
A.) Modification Requests that are not yet reviewed.
B.) Modification Requests being reviewed by the Nuclear Projects Review Committee (NPRC).
C.) Modification Requests being reviewed by the Nuclear Projects Committee (NPC)
These Modification Requests may be reviewed several times before they are approved for accomplishment or cancelled. Some of these Modification Requests are returned to Engineering for more information, some approved for evaluation, some approved for study, and some approved for planning. Once planning is completed and the scope of the work is clearly defined, these Modification Requests may be approved for accomplishment with a year assigned for construction or they may be cancelled. All of these different phases require review.
3) Design Engineering Backlog/In Progress. Nuclear Planning has assigned a year in which construction will be completed and design work may be in progress.
4) Construction Backlog/In Progress. The Construction Package has been issued or construction has begun but the modification has not been accepted by the System Acceptance Committee (SAC).
5) Design Engineering Update Backlog/In Progress. PED has received the Modification Completion Report but the drawings have not been updated.
The above mentioned outstanding modifications do not include modifications which are proposed for cancellation.

OVERALL PROJECT STATUS (REFUELING OUTAGE)
This indicator shows the status of the projects which are in the scope of the Refueling Outage.

PERCENTAGE OF TOTAL MWOs COMPLETED PER MONTH IDENTIFIED AS REWORK
The percentage of total MWOs completed per month identified as rework. Rework activities are identified by maintenance planning and craft. Rework is: Any maintenance work repeated to correct a deficiency which has re-occurred within 60 days following similar work activities. Any additional work required to correct deficiencies discovered during a failed Post Maintenance Test to ensure the component/system passes subsequent Post Maintenance Tests. This definition can be found in S. O. M-101.

PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES
The % of the number of completed maintenance activities as compared to the number of scheduled maintenance activities each month. This % is shown for all maintenance crafts. Also shown are the number of emergent MWOs. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and other miscellaneous activities. This indicator tracks Maintenance performance for SEP #33.

PRIMARY SYSTEM CHEMISTRY % OF HOURS OUT OF LIMIT
The % of hours out of limit are for six primary chemistry parameters divided by the total number of hours possible for the month. The key parameters used are: Lithium, Chloride, Hydrogen, Dissolved Oxygen, Fluoride, and Suspended Solids. EPRI limits are used.

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 & 44.

PROGRESS OF REFUELING OUTAGE MODIFICATION PLANNING (FROZEN SCOPE OF 24 MODIFICATIONS)
This indicator shows the status of modifications approved for completion during the Refueling Outage.

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.

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 % of preventive maintenance items in the month that were not completed by the scheduled date plus a grace period equal to 25 % of the scheduled interval. This indicator tracks preventive maintenance activities for SEP #41.

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 & 26.

REPEAT FAILURES
The number of Nuclear Plant Reliability Data System (NPRDS) components with more than 1 failure and the number of NPRDS components with more than 2 failures for the last eighteen months.

SAFETY SYSTEM FAILURES
Safety system failures are any events or conditions that could prevent the fulfillment of the safety functions of structures or systems. If a system consists of multiple redundant subsystems or trains, failure of all trains constitutes a safety system failure. Failure of one of two or more trains is not counted as a safety system failure. The definition for the indicator parallels NRC reporting requirements in 10 CFR 50.72 and 10 CFR 50.73. The following is a list of the major safety systems, subsystems, and components monitored for this indicator: Accident Monitoring Instrumentation, Auxiliary (and Emergency) Feedwater System, Combustible Gas Control, Component Cooling Water System, Containment and Containment Isolation, Containment Coolant Systems, Control Room Emergency Ventilation System, Emergency Core Cooling Systems, Engineered Safety Features Instrumentation, Essential Compressed Air Systems, Essential or Emergency Service Water, Fire Detection or Suppression Systems, Isolation Condenser, Low Temperature Overpressure Protection, Main Steam Line Isolation Valves, Onsite Emergency AC & DC Power w/Distribution, Radiation Monitoring Instrumentation, Reactor Coolant System, Reactor Core Isolation Cooling System, Reactor Trip System and Instrumentation, Recirculation Pump Trip Actuation Instrumentation, Residual Heat Removal Systems, Safety Valves, Spent Fuel Systems, Standby Liquid Control System and Ultimate Heat Sink.

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. The chemistry parameters are reported only for the period of time when the plant is operated at greater than 30 percent power.
The CPI is calculated using the following equation: $CPI = (Ka/0.8) + (Na/20) + (O_2/10) / 3$ where the following are monthly averages of: Ka = average blowdown cation conductivity, Na = average blowdown sodium concentration, O_2 = average condensate pump discharge dissolved oxygen concentration.

SIGNIFICANT EVENTS
Significant events are those events identified by NRCstaff through detailed screening and evaluation of operating experience. The screening process includes the daily review and discussion of all reported operating reactor events, as well as other operational data such as special tests or construction activities. An event identified from the screening process as a significant event candidate is further evaluated to determine if any actual or potential threat to the health and safety of the public was involved. Specific examples of the type of criteria are summarized as follows: 1) Degradation of important safety equipment; 2) Unexpected plant response to a transient; 3) Degradation of fuel integrity, primary coolant pressure boundary, important associated features; 4) Scram with complication; 5) Unplanned release of radioactivity; 6) Operation outside the limits of the Technical Specifications; 7) Other.
INPO significant events reported in this indicator are SERs (Significant Event Reports) which inform utilities of significant events and lessons learned identified through the SEE-IN screening process.

SPARE PARTS INVENTORY VALUE
The dollar value of the spare parts inventory value for FCS during the reporting period.

STAFFING LEVEL
The actual staffing level and the authorized staffing level for the Nuclear Operations Division, the Production Engineering Division, and the Nuclear Services Division. This indicator tracks performance for SEP #24.

STATION NET GENERATION
The net generation (sum) produced by the FCS during the reporting month.

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, 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) Scaffolding 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 for SEP #62 & 71.

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

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.

UNPLANNED AUTOMATIC REACTOR SCRAMS PER 7,000 CRITICAL HOURS

This indicator is defined as the number of unplanned automatic scrams (reactor protection system 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 scram signal may have resulted from exceeding a setpoint or may have been spurious.

3) Automatic means that the initial signal that caused actuation of the reactor protection system logic was provided from one of the sensors monitoring plant parameters and conditions, rather than the manual scram switches or, in 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 factor (k_{eff}) was essentially equal to one.

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.

UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

This indicator is defined as the sum of the following safety system actuations:

1) The number of unplanned Emergency Core Cooling System (ECCS) actuations that result from reaching an ECCS actuation setpoint or from a spurious/inadvertent ECCS signal.

2) The number of unplanned emergency AC power system actuations that result from a loss of power to a safeguards bus. An unplanned safety system actuation occurs when an actuation setpoint for a safety system is reached or when a spurious or inadvertent signal is generated (ECCS only), and major equipment in the system is actuated. Unplanned means that the system actuation was not part of a planned test or evolution. The ECCS actuations to be counted are actuations of the high pressure injection system, the low pressure injection system, or the safety injection tanks.

UNPLANNED SAFETY SYSTEM ACTUATIONS (NRC DEFINITION)

The number of safety system actuations which include (only) the High Pressure Safety Injection System, the Low Pressure Safety Injection System, the Safety Injection Tanks, and the Emergency Diesel Generators. The NRC classification of safety system actuations includes actuations when major equipment is operated and when the logic systems for the above safety systems are challenged.

VIOLATIONS PER 1,000 INSPECTION HOURS

This indicator is defined as the number of violations sited in NRC inspection reports for FCS per 1,000 NRC inspection hours. The violations are reported in the year that the inspection was actually performed and not based on when the inspection report is received. The hours reported for each inspection report are used as the inspection hours.

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 sol.' 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.

SAFETY ENHANCEMENT PROGRAM INDEX

The purpose of the Safety Enhancement Program (SEP) Performance Indicators Index is to list performance indicators related to SEP items with parameters that can be trended.

SAFETY ENHANCEMENT PROGRAM INDEX (continued)

REPORT DISTRIBUTION LIST

R. L. Andrews
G. L. Anglehart
K. L. Belek
B. H. Blome
J. P. Bobba
C. E. Boughter
C. J. Brunnert
G. R. Cavanaugh
J. W. Chase
A. G. Christensen
O. J. Clayton
R. P. Clemens
G. M. Cook
D. C. Dietz
H. J. Faulhaber
M. A. Ferdig
M. T. Frans
S. K. Gambhir
J. K. Gasper
W. G. Gates
M. O. Gautier
S. W. Gebers
L. V. Goldberg
R. H. Guy
J. B. Herman
K. C. Holthaus
C. K. Huang
C. J. Husk
T. W. Jamieson
R. L. Jaworski
R. A. Johansen
W. C. Jones
J. D. Keppler
D. D. Kloock
L. T. Kusek
M. P. Lazar
D. L. Lovett
J. H. MacKinnon
J. W. Marcil
N. L. Marlice
R. D. Martin
T. J. McIvor
K. A. Miller
Nuclear Licensing
& Industry Affairs
J. T. O'Connor
W. W. Orr
T. L. Patterson
R. T. Pearce
R. L. Phelps
R. L. Plott
W. J. Ponec
C. R. Rice
A. W. Richard
D. G. Ried
G. K. Samide
M. J. Sandhoefner
F. C. Scofield
H. J. Sefick
J. W. Shannon
R. W. Short
C. F. Simmons
E. L. Skaggs
J. L. Skiles
F. K. Smith
R. L. Sorenson
K. E. Steele
M. A. Tesar
J. J. Tesarek
J. W. Tills
J. M. Waszak
S. J. Willrett

FORT CALHOUN STATION
OPERATING CYCLES AND REFUELING OUTAGE DATES

Event	Date Range	Production (MWH)	Cumulative (MWH)
Cycle 1	09/26/73 -02/01/75	3,299,639	3,299,639
1st Refueling	02/01/75 -05/09/75	*	*
Cycle 2	05/09/75 -10/01/76	3,853,322	7,152,961
2nd Refueling	10/01/76 -12/13/76	*	*
Cycle 3	12/13/76 - 9/30/77	2,805,927	9,958,888
3rd Refueling	09/30/77 -12/09/77	*	*
Cycle 4	12/09/77 - 10/14/78	3,026,832	12,985,720
4th Refueling	10/14/78 - 12/24/78	*	*
Cycle 5	12/24/78 - 01/18/80	3,882,734	16,868,454
5th Refueling	01/18/80 - 06/11/80	*	*
Cycle 6	06/11/80 - 09/18/81	3,899,714	20,768,168
6th Refueling	09/18/81 - 12/21/81	*	*
Cycle 7	12/21/81 - 12/06/82	3,561,866	24,330,034
7th Refueling	12/06/82 - 04/07/83	*	*
Cycle 8	04/07/83 - 03/03/84	3,406,371	27,736,405
8th Refueling	03/03/84 - 07/12/84	*	*
Cycle 9	07/12/84 - 09/28/85	4,741,488	32,477,893
9th Refueling	09/28/85 - 01/16/86	*	*
Cycle 10	01/16/86 - 03/07/87	4,356,753	36,834,646
10th Refueling	03/07/87 - 06/08/87	*	*
Cycle 11	06/08/87 - 09/27/88	4,936,859	41,771,505
11th Refueling	09/27/88 - 01/31/89	*	*
Cycle 12	01/31/89 - 02/17/90	3,817,954	45,589,459
12th Refueling	02/17/90 - 05/29/90	*	*
Cycle 13	05/29/90 - 02/01/92	5,451,069	51,040,528
13th Refueling	02/01/92 - 05/03/92	*	*
Cycle 14#	05/03/92 -09/25/93	4,981,485	56,022,013
14th Refueling	09/25/93 - 11/20/93	(Planned Dates)	*
Cycle 15	11/20/93 - 03/11/95	*	*
15th Refueling	03/11/95 - 05/06/95	*	*

FORT CALHOUN STATION
CURRENT PRODUCTION AND OPERATIONS "RECORDS"

First Sustained Reaction	August 5, 1973 (5:47 p.m.)
First Electricity Supplied to the System	August 25, 1973
Commercial Operation (180,000 KWH)	September 26, 1973
Achieved Full Power (100%)	May 4, 1974
Longest Run (477 days)	June 8, 1987-Sept. 27,1988
Highest Monthly Net Generation (364,468,800 KWH)	October 1987
Most Productive Fuel Cycle (5,451,069 MWH)(Cycle 13)	May 29, 1990-Feb. 1,1992