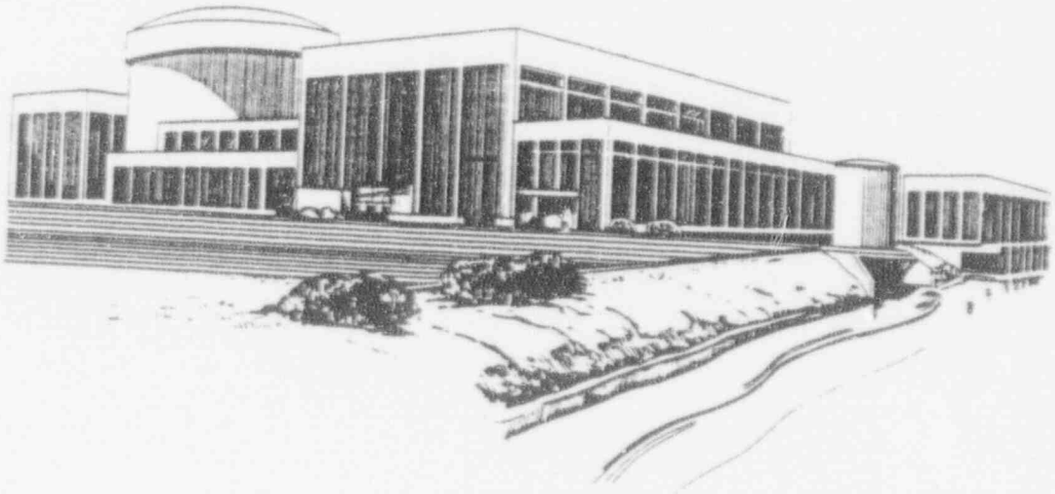
OPPD

FORT CALHOUN STATION
PERFORMANCE INDICATORS

JANUARY 1993



Prepared by:

Production Engineering Division
System Engineering
Test and Performance Group

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

OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION
PERFORMANCE INDICATORS REPORT

Prepared By:
Production Engineering Division
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JANUARY 1993

ABSTRACT

PURPOSE

The "Performance Indicators Program" is intended to provide selected Fort Calhoun plant performance information to OPPD's personnel responsible for optimizing unit performance. The information is presented in a way that provides ready identification of trends and a means to track progress toward reaching corporate goals. The information can be used for assessing and monitoring Fort Calhoun's plant performance, with emphasis on safety and reliability. Some performance indicators show company goals or industry information. This information can be used for comparison or as a means of promoting pride and motivation.

SCOPE

The conditions, goals, and projections reflected within this report are current as of the end of the month being reported, unless otherwise stated.

In order for the Performance Indicator Program to be effective, the following guidelines were followed while implementing the program:

1) Data was selected which most effectively monitors Fort Calhoun's performance in key areas.

2) Established corporate goals and industry information were included for comparison.

3) Formal definitions were developed for each performance parameter to ensure consistency in future reports and allow comparison with industry averages where appropriate.

Comments and input are encouraged to ensure that this program is tailored to address the areas which are most meaningful to the people using the report. Please refer comments to the System Engineering Department's Test and Performance Group. To increase personnel awareness of Fort Calhoun Station's plant performance, it is suggested that this report be distributed throughout your respective departments.

REFERENCES

INPO Good Practices OA-102, "Performance Monitoring - Management Information"

INPO Report Dated November 1984, "Nuclear Power Plant Operational Data"

NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Black-out at Light Water Reactors", Revision 1, Appendix D, "EDG Reliability Program", dated April 6, 1990.

FORT CALHOUN STATION PERFORMANCE INDICATORS REPORT
JANUARY 1993 - SUMMARY

POSITIVE TREND REPORT

The Positive Trend Report highlights several Performance Indicators with data representing continued performance above the stated goal and indicators with data representing significant improvement in recent months.

The following indicators have been selected as exhibiting positive trends for the reporting month:

Gaseous Radioactive Waste Being Discharged to the Environment
(Page 56)
The 1992 year-end total for this indicator (157.5 curies) is well below the goal of a maximum of 340 curies/year.

Liquid Radioactive Waste Being Discharged to the Environment
(Page 57)
The 1992 year-end total for this indicator (106.3 curies) is well below the goal of a maximum of 225 curies/year.

End of Positive Trend Report

ADVERSE TREND REPORT

A Performance Indicator which has data representing three (3) consecutive months of declining performance constitutes an adverse trend. The Adverse Trend Report explains the conditions under which certain indicators are showing adverse trends.

There were no indicators exhibiting adverse trends for the reporting month:

End of Adverse Trend Report.

INDICATORS NEEDING INCREASED MANAGEMENT ATTENTION REPORT

This section lists the indicators which show inadequacies when compared to the OPPD goal.

Forced Outage Rate
(Page 2)
The forced outage rate value for the twelve months from 2/1/92 through 1/31/93 (10.09%) is above the 1992 and 1993 Fort Calhoun goals of 2.4%.

Thermal Performance
(Page 10)
The thermal performance value for the reporting month (99.1%) is below the 1993 goal of 99.4%.

Number of Control Room Equipment Deficiencies
(Page 33)
The number of control room equipment deficiencies for the reporting month (62) exceeds the 1993 goal of ≤45.

Percent of Completed Scheduled Maintenance Activities
(Pages 36 thru 39)
The percentage of completed scheduled maintenance activities for electrical maintenance, pressure equipment, general maintenance and mechanical maintenance for the reporting month is less than the 1993 goal of ≥85%.

In-Line Chemistry Instruments Out-of-Service
(Page 49)
The number of in-line chemistry instruments out-of-service for the reporting month (16) exceeds the 1993 Fort Calhoun goal of a maximum of 5.

Number of Hot Spots
(Page 55)
The number of hot spots removed for the reporting month (0) is less than the 1993 Fort Calhoun goal of removing one hot spot per month.

Inventory Accuracy
(Page 63)
The inventory accuracy for the reporting month (94%) is less than the 1993 goal of ≥98%.

Violations/1,000 Inspection Hours
(Page 78)
The violations per 1,000 inspection hours value for the last twelve months (3.03) exceeds the 1993 and 1992 Fort Calhoun goals of a maximum of 1.5.

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.

Disabling Injury/Illness Frequency Rate
(Page 18)
SEP No. 27 reference was added to this indicator.

Recordable Injury/Illness Cases Frequency Rate
(Page 19)
SEP No. 27 reference was added to this indicator.

Emergency Diesel Generator Unreliability
(Page 26)
This indicator, tracked by INPO as an "Other Indicator", has been added to the report.

Significant Events
(Page 81)
This NRC indicator has been added to the report.

End of Performance Indicator Report Improvements/ Changes Report

Table of Contents/Summary

MAINTENANCE (cont'd))

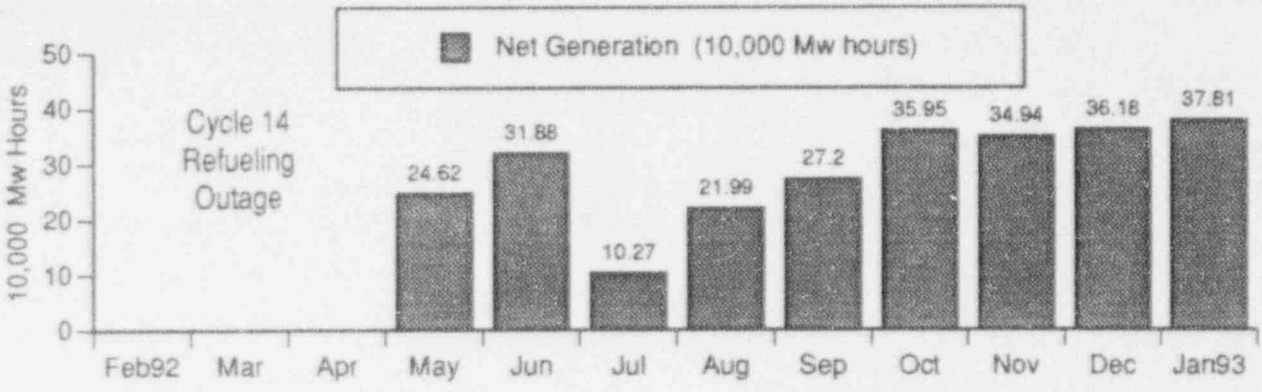
	INDUSTRY UPPER 10%	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	PAGE
RATIO OF PREVENTIVE TO TOTAL MAINTENANCE	NA	NA	64.5%	77.7%	NA	31
PREVENTIVE MAINTENANCE ITEMS OVERDUE	NA	≤0.5%	0%	0%	NA	32
NUMBER OF CONTROL ROOM EQUIPMENT DEFICIENCIES	NA	≤45	52	44	NMA	33
MAINTENANCE OVERTIME	NA	≤10%	2.6%	12.6%	I	34
PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)	NA	0	0	0	NA	35
PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (ELECTRICAL MAINTENANCE)	NA	≥85%	70.3%	70.2%	NMA	36
PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (PRESSURE EQUIPMENT)	NA	≥85%	78.3%	78.3%	NMA	37
PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (GENERAL MAINTENANCE)	NA	≥85%	53.9%	49.2%	NMA	38
PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (MECHANICAL MAINTENANCE)	NA	≥85%	65.6%	80.7%	NMA	39
PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (INSTRUMENTATION & CONTROL)	NA	≥85%	87.5%	75.9%	I	40
NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS	NA	0	0	1	NA	41
COMPONENT FAILURE ANALYSIS REPORT (CFAR) SUMMARY	NA	NA	NA	NA	NA	42
NUMBER OF NPRDS MULTIPLE FAILURES	NA	NA	NA	NA	NA	43
MAINTENANCE EFFECTIVENESS	NA	NA	NA	NA	NA	44
CHECK VALVE FAILURE RATE	NA	≤2.00E-6	1.21E-6	1.21E-6	NA	45

CHEMISTRY AND RADIOLOGICAL PROTECTION

	INDUSTRY UPPER 10%	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	PAGE
COLLECTIVE RADIATION EXPOSURE (person-rem)	115.6/YR	≤200/YR	1.85/'93	255.6/'92	NA	16
VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE	2,078/YR	≤1,000/YR	0/'93	2,278.2/'92	NA	17
SECONDARY SYSTEM CHEMISTRY	0.20	≤0.60	0.582	0.488	D	46

TABLE OF CONTENTS/SUMMARY TREND SYMBOLS

A = ADVERSE TREND
I = IMPROVED PERFORMANCE
D = DECLINING PERFORMANCE
NMA = NEEDS MANAGEMENT ATTENTION
NA = NOT APPLICABLE/AVAILABLE



STATION NET GENERATION

During the month of January 1993 a net total of 378,130 MWH was generated by the Fort Calhoun Station. There were no power reductions or unplanned energy losses during the month.

Unplanned energy losses for the month of September 1992 were attributable to the forced outage which began on 8/22/92 when an AC/DC converter failed in the Turbine Electro Hydraulic Control system. Pressurizer safety valve RC-142 then opened prior to reaching design pressure and the plant tripped on TM/LP. The generator was brought on-line at 2101 hours on 9/5/92.

Unplanned energy losses during August 1992 were the result of the forced outage on 8/22/92 (described above) and the forced outage that began on 8/5/92 when a feeder breaker to the 125V DC panel AI-41A failed resulting in a controlled shutdown to Mode 2. The turbine generator was synchronized to the grid on 8/6/92.

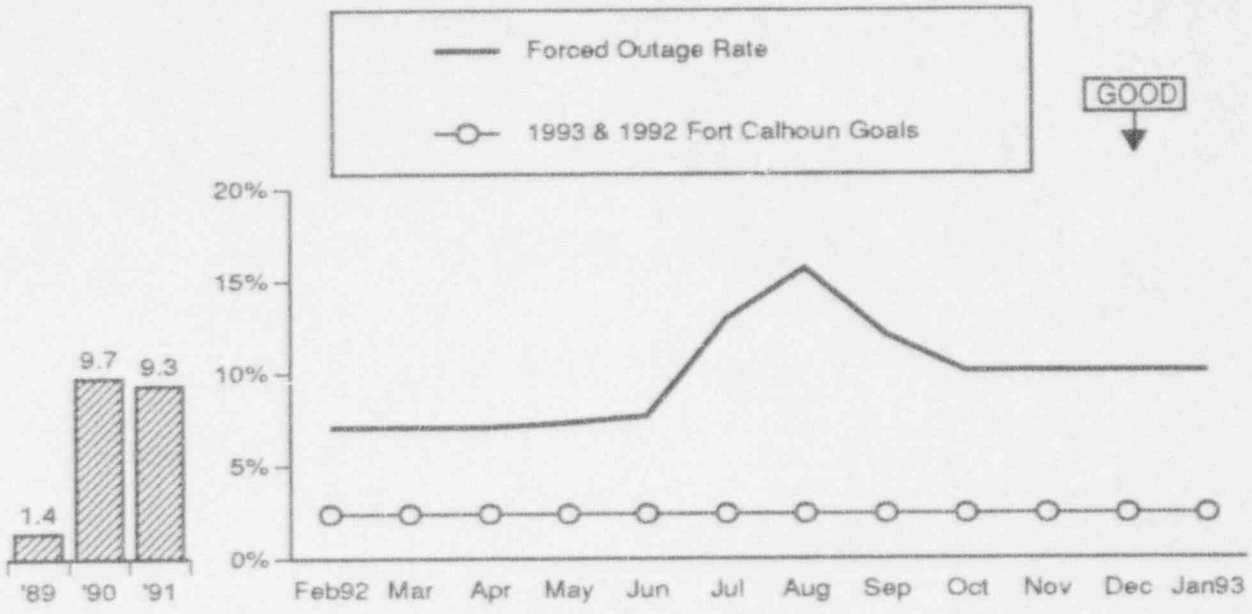
Unplanned energy losses for the month of July 1992 were a result of the forced outage that occurred on 7/3/92 due to the loss of an inverter and the subsequent reactor trip. The generator was brought on-line at 0610 hours on 7/23.

During the month of June 1992 unplanned energy losses were a result of a forced outage that occurred on 6/1/92 due to a dropped control rod. The plant was returned to 100% power on 6/4/92.

The station was returned to service after the Cycle 14 Refueling Outage when the reactor was taken critical on 5/1/92 at 1035 hours and the generator was put on-line on 5/3/92. A forced outage occurred on 5/14/92 when the turbine generator tripped on a false high level moisture separator trip signal which caused a simultaneous reactor trip. The reactor was returned to critical and the generator was put on-line on 5/15/92.

Unplanned energy losses for May were 1992: 1) the Cycle 14 Refueling Outage extension; 2) the reduction to 58% power for repair of an inoperable condenser valve: 3) the reactor trip; 4) the hold at 48% power for repair on a feedwater pump suction valve; and 5) the 5/31 dropped control rod caused by a faulty clutch coil.

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



FORCED OUTAGE RATE

The forced outage rate (FOR) was reported as 10.09% for the twelve months from 2/1/92 to 1/31/93. There were no forced outage hours during the month of January 1993. Because this is a twelve month rate, assuming no additional forced outages, the FOR indicator will not improve until May 1993, when the May 1992 forced outage drops from the twelve month interval.

Forced outage hours for September 1992 were due to the forced outage that began on 8/22/92 when an AC/DC converter failed in the Turbine Electro Hydraulic Control system. Pressurizer safety valve RC-142 then opened prior to reaching design pressure and the plant tripped on TM/LP. The generator was brought on-line at 2101 hours on 9/5/92.

During the month of August 1992 forced outage hours were due to the forced outage on 8/22/92 (described above) and the forced outage on 8/5/92 when the turbine was taken off-line to replace a feeder breaker to the 125V DC panel AI-41A. The turbine generator was synchronized to the grid on 8/6/92.

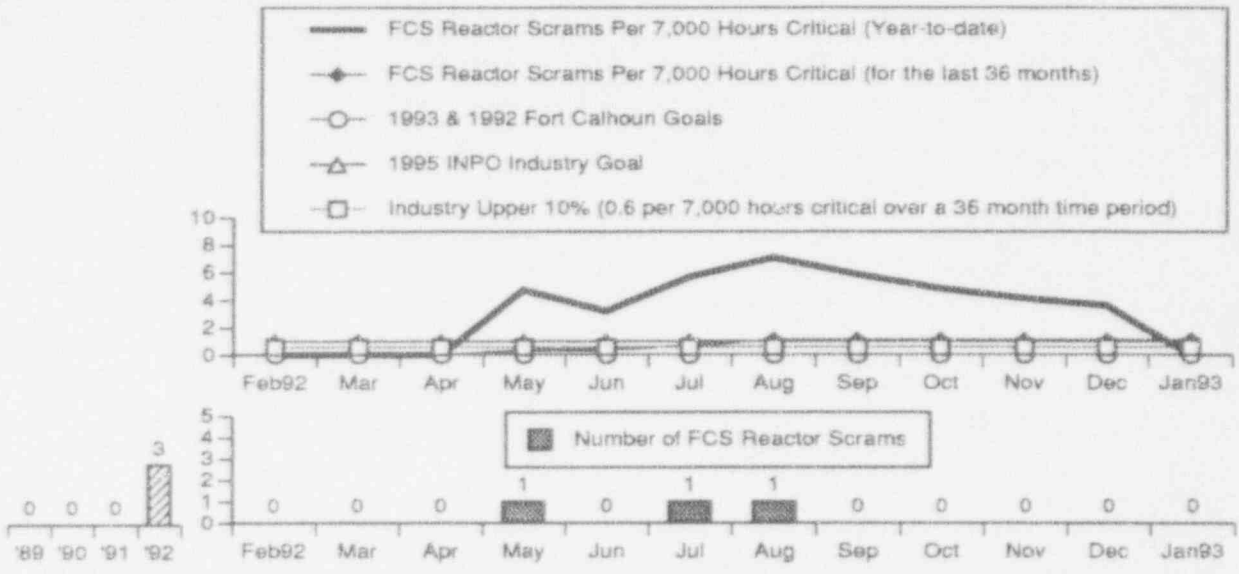
A forced outage caused by the loss of an inverter and the subsequent reactor trip occurred on 7/3/92. Additionally, RC-142 opened and failed to reclose. The generator was brought on-line at 0610 hours on 7/23/92.

A forced outage occurred on 6/1/92 when the unit was shutdown due to a dropped control rod. The generator was brought on-line at 0852 on 6/2/92.

A forced outage occurred on 5/14/92 at 1557 hours when the turbine generator tripped on a false high level moisture separator trip signal which caused a simultaneous reactor trip. The generator was brought on-line at 1150 hours at 5/15/92 following repairs.

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

Data Source: Monthly Operations Report & NERC GAD Forms
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 11/91 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 year-to-date station value is 0 for the month of January 1993 and the value for the last 36 months is 1.08.

The lower graph shows the number of unplanned automatic reactor scrams that occurred during each month for the last twelve months.

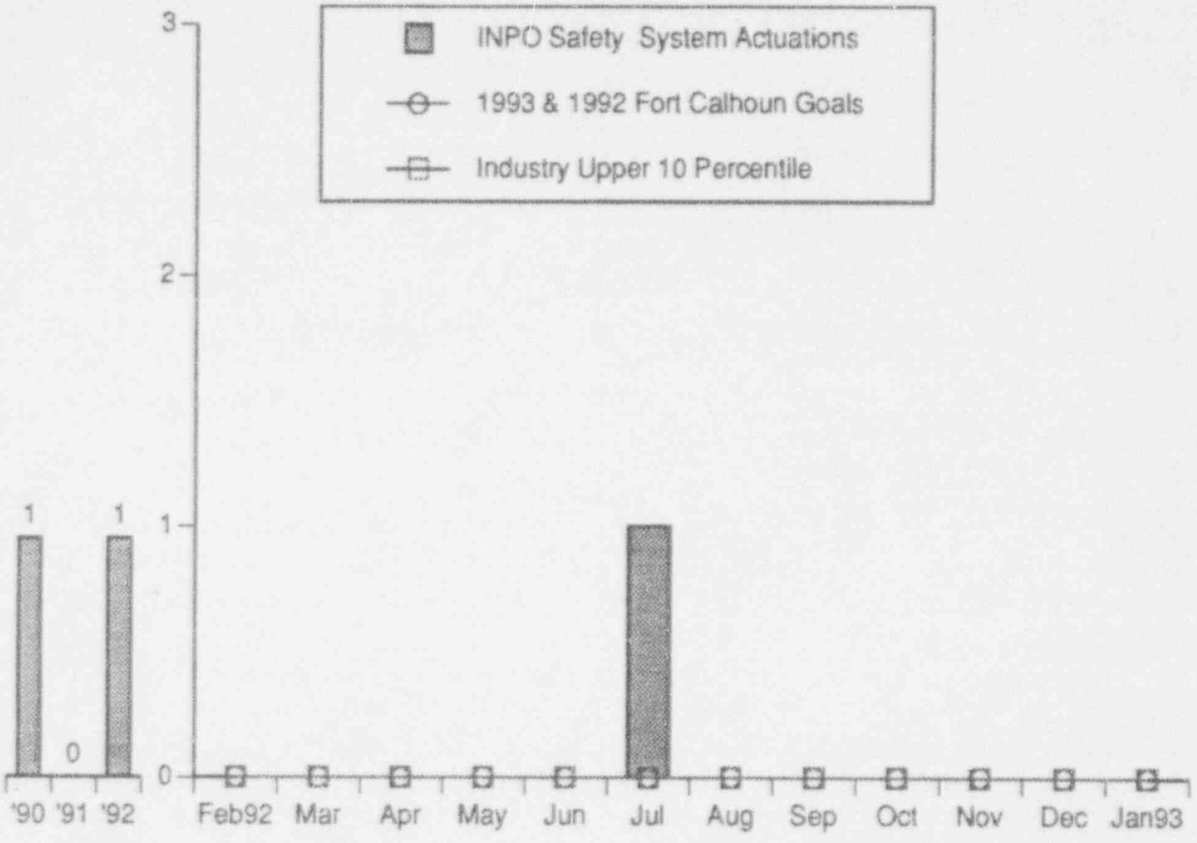
The last unplanned automatic reactor scram occurred on August 22, 1992 as a result of the failure of an AC/DC converter in the Turbine Electro Hydraulic Control system. Pressurizer safety valve RC-142 then opened prior to reaching design pressure and the plant tripped on TM/LP.

There was one unplanned automatic reactor scram in July 1992. This scram occurred on July 3 at 2336 as a result of the loss of inverter No. 2.

There was one unplanned automatic reactor scram in May 1992. This scram occurred on May 14 at 1557 when the turbine generator tripped on a false high level moisture separator trip signal which caused a simultaneous reactor trip. The last unplanned automatic reactor scram prior to this occurred on July 2, 1986.

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 one unplanned automatic reactor scram per 7,000 hours critical. The industry upper ten percentile value is approximately 0.6 scrams per 7,000 hours critical for the 36 month time period from 7/89 through 6/92.

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



UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

There were 0 unplanned safety system actuations during the month of January 1993.

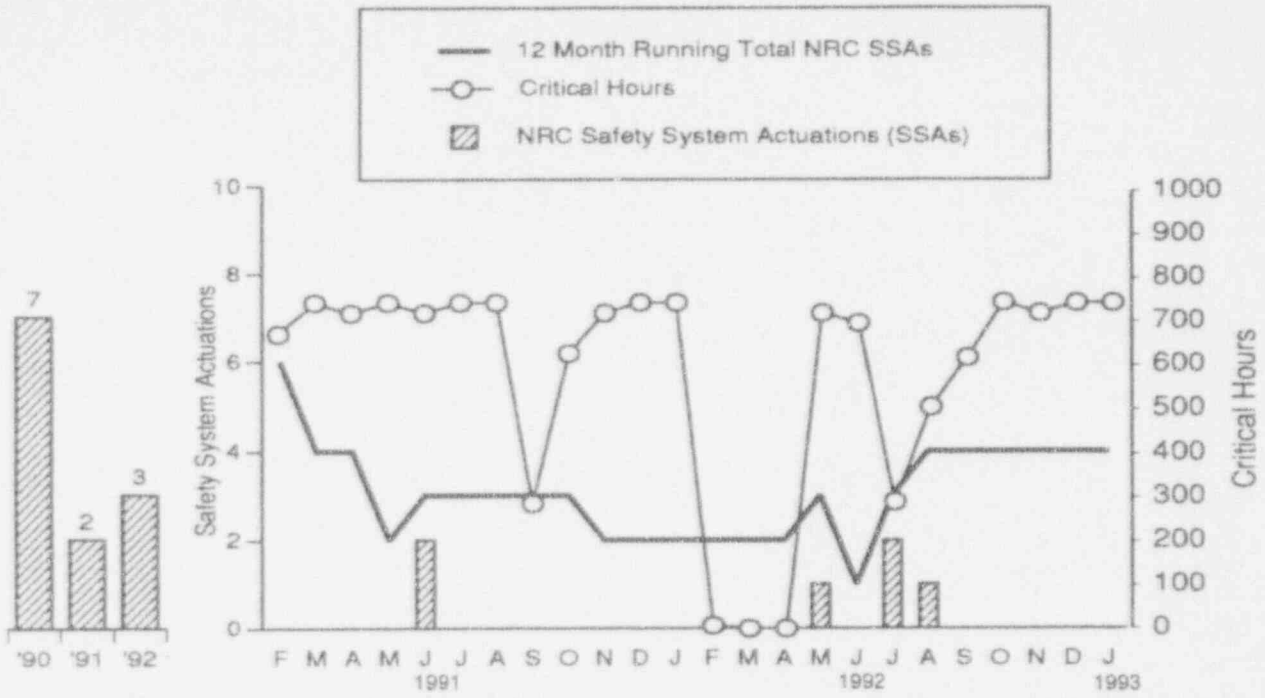
There was one unplanned safety system actuation during the month of July 1992 due to the loss of an inverter and the subsequent reactor trip on 7/3/92.

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.

There were 0 unplanned safety system actuations during the month of January 1993.

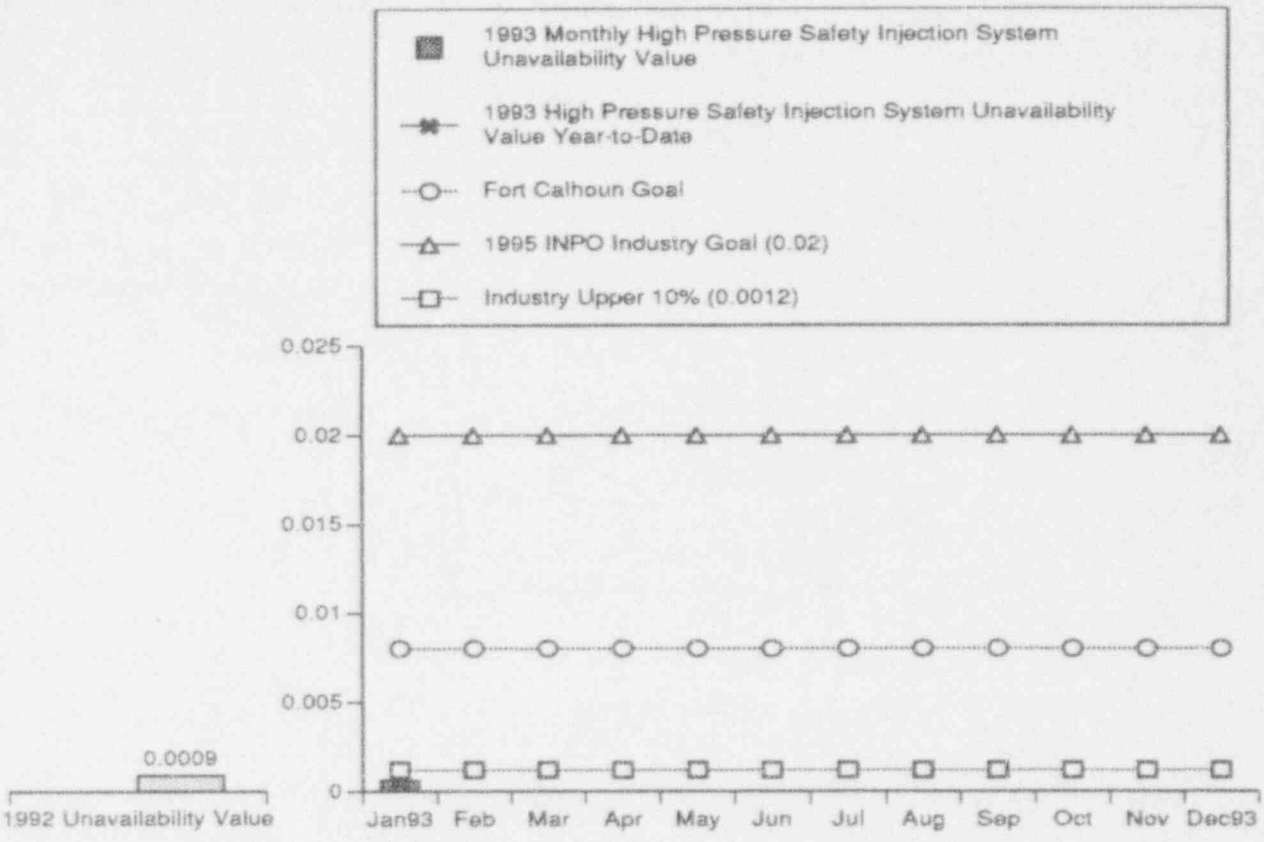
The last unplanned safety system actuation occurred on August 22, 1992 due to the failure of an AC/DC converter in the Turbine Electro Hydraulic Control system. Pressurizer safety valve RC-142 then opened prior to reaching design pressure during a plant transient and trip.

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.

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



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.

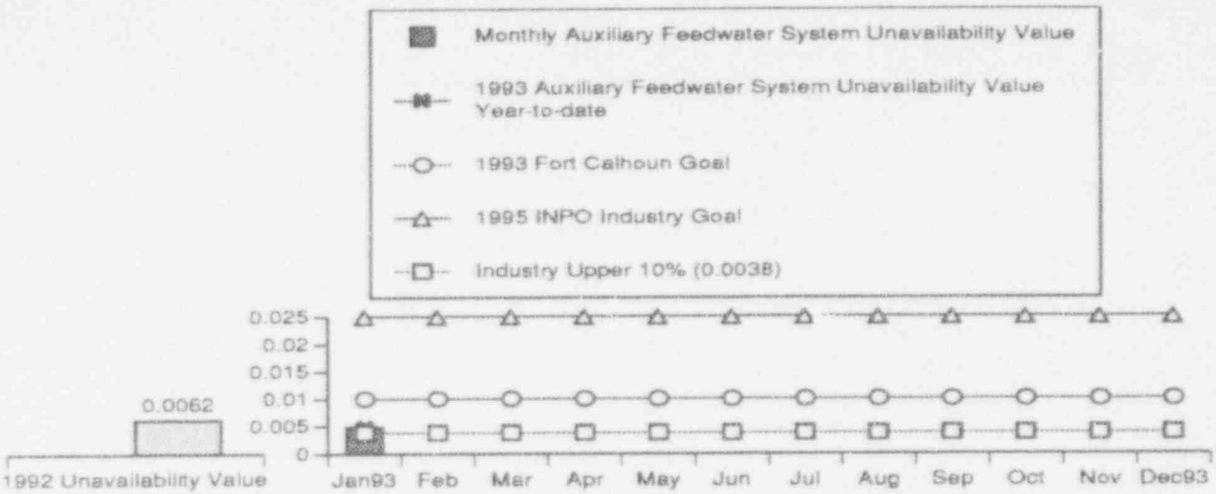
The High Pressure Safety Injection System unavailability value for January 1993 was 0.0006. There was 1.48 hours of planned or unplanned unavailability for surveillance tests and no hours of unplanned unavailability during the month . The 1993 year-to-date HPSI unavailability value was 0.0006 at the end of January.

In November 1992 there were no (0) hours of planned or unplanned unavailability. There were 1.05 hours of planned unavailability in October. There were no (0) hours of planned or unplanned unavailability in September. There were 1.1 hours of planned unavailability for surveillance tests in August.

In July there were no (0) hours of planned or unplanned unavailability. In June there were 1.5 hours of planned unavailability for surveillance tests and in May there were 1.5 hours of planned unavailability for surveillance tests.

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 7/89 through 6/92) is approximately 0.0012.

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 January 1993 was 0.0049. There were 7.23 hours of planned unavailability for surveillance tests during the month. The 1993 year-to-date AFW unavailability value was 0.0049 at the end of January.

There were 4.33 hours of planned unavailability for surveillance tests and FW-6 maintenance during the month of December 1992.

In November, there were 0.35 hours of planned unavailability for surveillance tests.

There were 4.45 hours of planned unavailability for surveillance tests and 16.43 hours of unplanned unavailability for FW-6 during October due to problems incurred during surveillance testing.

There were 0.67 hours of planned unavailability for surveillance tests in September and 16.43 hours of unplanned unavailability for repair of YCV-1045.

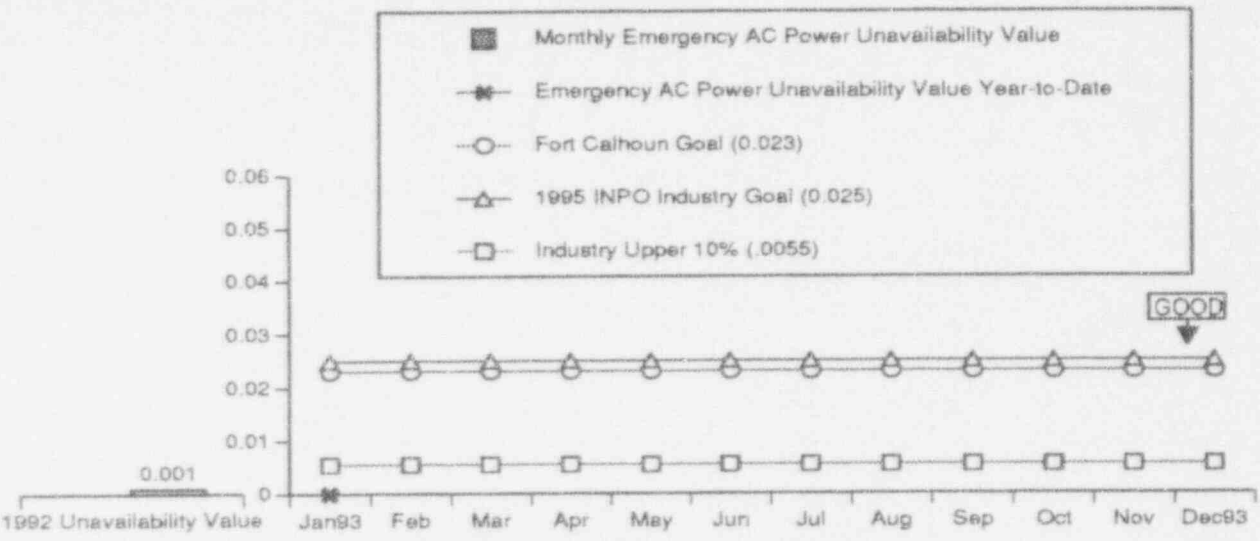
There were 1.2 hours of planned unavailability for surveillance tests in August and 1.6 hours of planned unavailability for surveillance tests in July.

In June 1992 there were 2.82 hours of planned unavailability for a PM and 7.33 hours of unplanned unavailability for corrective maintenance on a flow instrument.

In May 1992 preventive maintenance activities resulted in 2.67 hours of planned unavailability and there were 10.9 hours of unplanned unavailability due to corrective maintenance following the initial attempt to perform a PM.

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 7/89 through 6/92) is approximately 0.0038.

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 January 1993 is 0.0. There were no hours of planned or unplanned unavailability for DG-1 and DG-2 in January. The Emergency AC Power System unavailability value year-to-date is 0.0.

There were no (0) hours of planned or unplanned unavailability for DG-1 in December 1992. There were 6.67 hours of planned unavailability for maintenance and no (0) hours of unplanned unavailability for DG-2 in December.

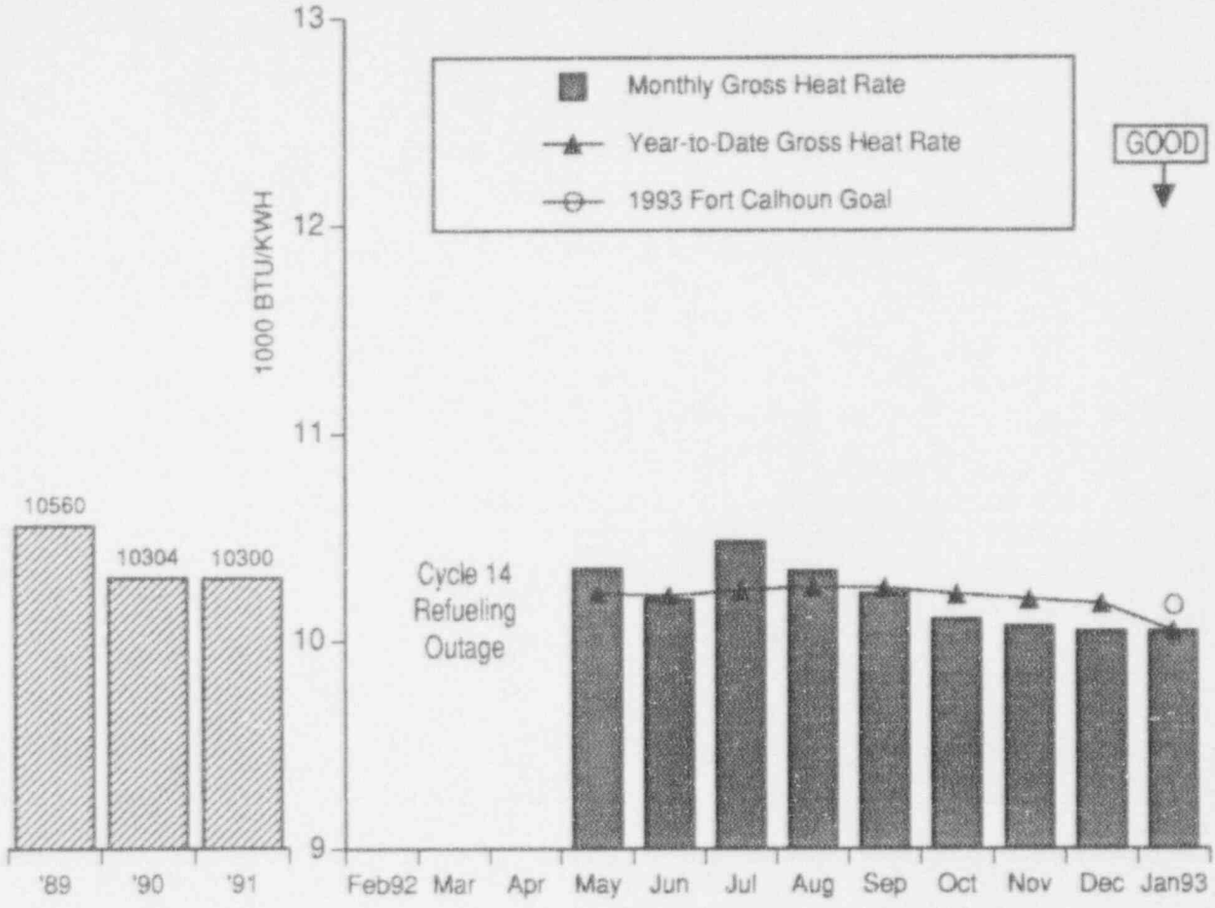
There were no (0) hours of planned or unplanned unavailability for DG-1 or DG-2 from September through October. There were 2.9 hours of planned unavailability for DG-1 in August to inspect relays for contact degradation.

In July there were no (zero) hours of planned or unplanned unavailability. In June 1992 there were 9 hours of planned unavailability for DG-2 for retorqueing radiator fan retaining bolts.

In May 1992 there were 7.9 hours of planned unavailability for DG-1 to tighten the fan blades and repair a starting air solenoid valve.

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 7/89 through 6/92) is approximately 0.0055.

Data Source: Jaworski/Ronning
Accountability: Jaworski/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 the Fort Calhoun Station was reported as 10043 BTU/KWH for the month of January 1993. When the plant operates at a nominal 100% power, the monthly gross heat rate improves during winter months as a result of the decrease in river water temperature. This is because the gross heat rate is not normalized to the design river water temperature of 60 degrees Fahrenheit.

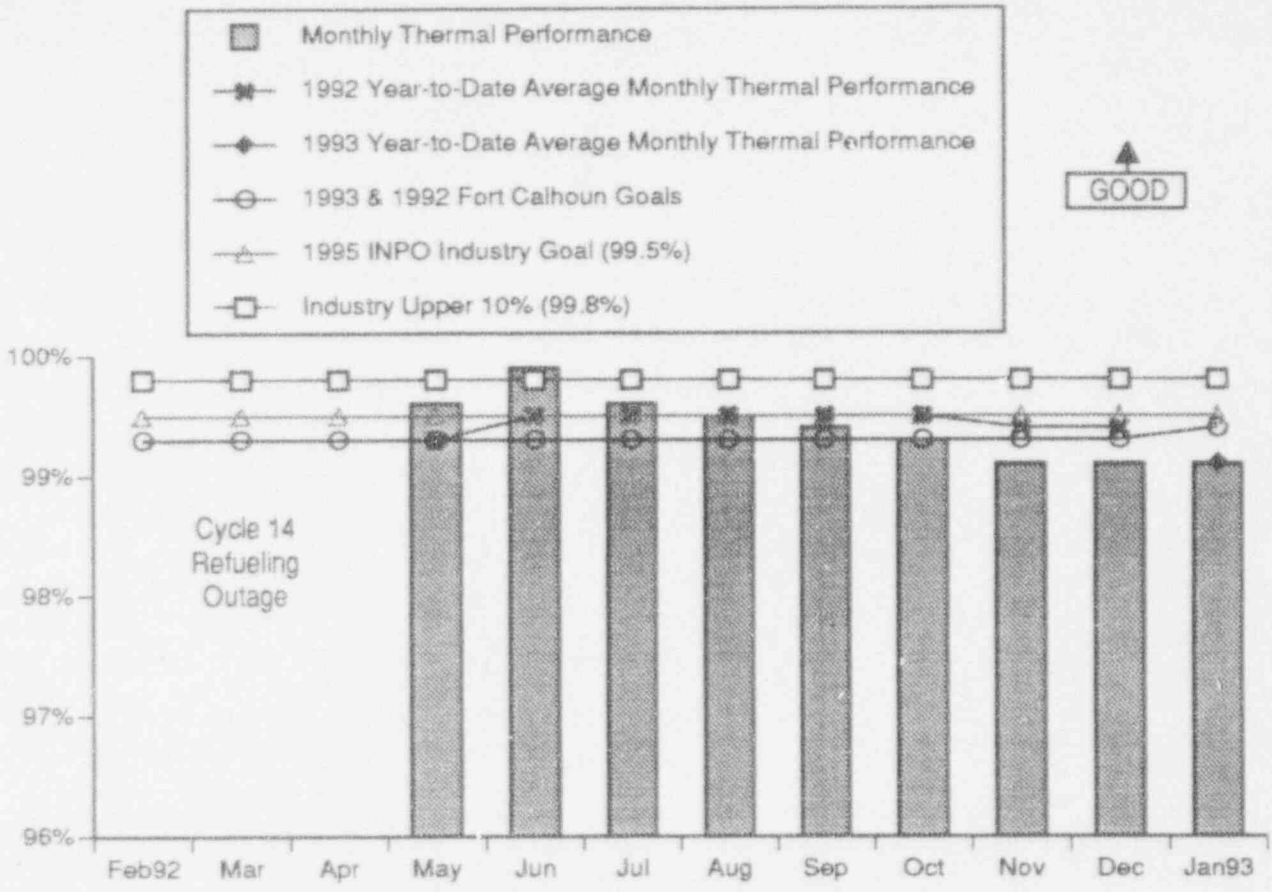
The year-to-date gross heat rate was reported as 10,043 BTU/KWH at the end of January.

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 Trends: 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.

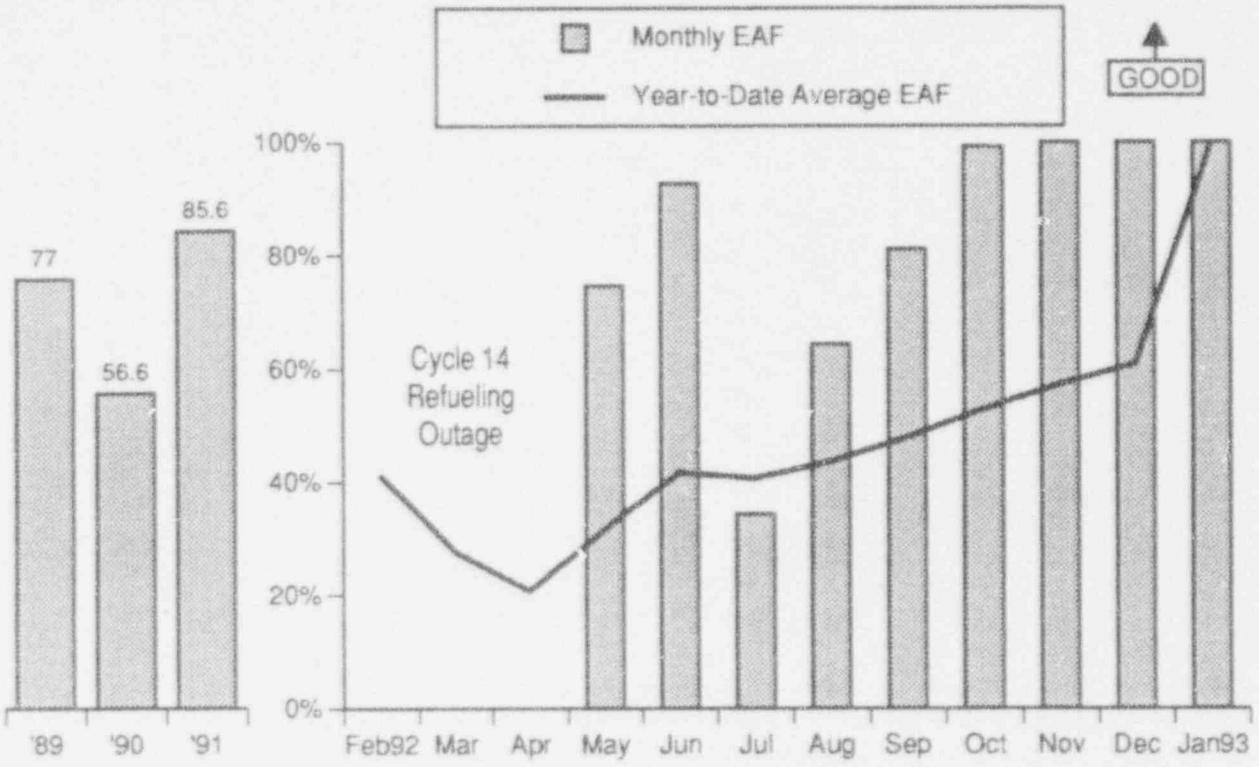
The thermal performance value for January 1993 was 99.1%. The year-to-date average monthly thermal performance value was 99.1%.

The declining thermal performance values in July through October 1992 may be due to circulating water flow reductions possibly caused by condenser fouling and/or circ. water pump degradation. The decline in November is attributed to initiation of warm water recirculation and the drop in river water level.

System Engineering Department plans to evaluate condenser and circ. water pump conditions during the next available power reduction.

The 1993 Fort Calhoun Goal for this indicator is 99.4%. The 1992 goal was 99.3%. The 1995 INPO industry goal is 99.5% and the industry upper ten percentile value (for the one year period from 7/91 through 6/92) is approximately 99.8%.

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



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.

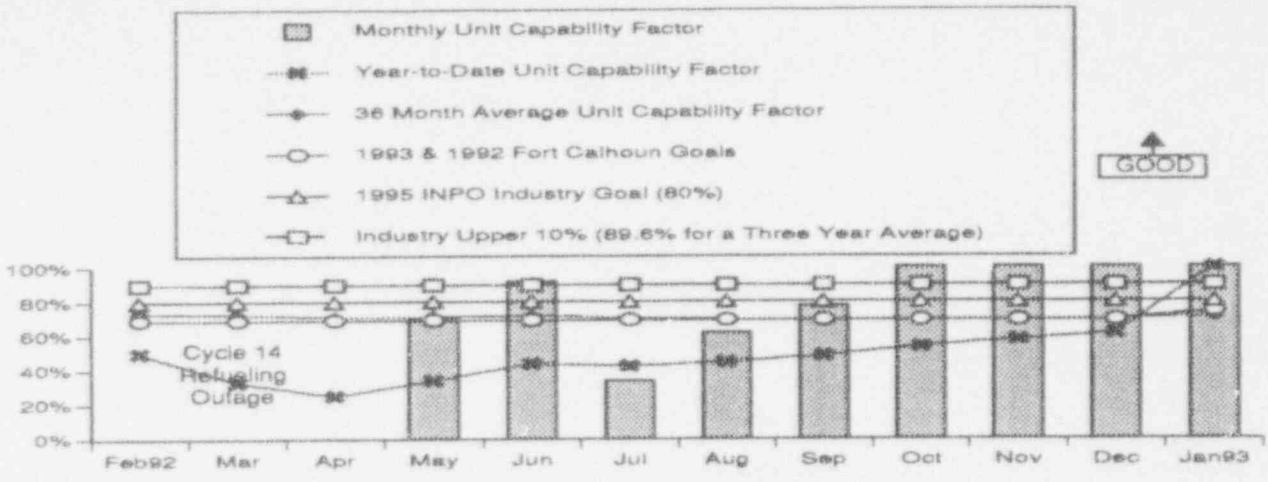
The EAF for the month of January 1993 was reported as 100%. The year-to-date average monthly EAF was reported as 100% at the end of January.

The EAF for September 1992 was reported as 81%. This figure is the result of a forced outage that began on 8/22/92 when an AC/DC converter failed 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. The generator was brought on-line on 9/5/92.

The EAF for August 1992 was reported as 64.29%. This figure is a result of the 8/22/92 forced outage (described above) and a forced outage on 8/5/92 when a feeder breaker to the 125V DC panel AI-41A failed. The turbine generator was synchronized to the grid on 8/6/92.

The EAF for July 1992 was reported as 34.39%. This figure is a result of the forced outage caused by the loss of an inverter and the subsequent reactor trip on 7/3/92. The plant was brought to 90% power on 7/26/92.

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 was reported as 100% for the month of January 1993. The year-to-date unit capability factor was reported as 100%.

The UCF was reported as 77.5% for the month of September 1992. Unplanned energy losses for the month were a result of the forced outage that began on 8/22/92 when an AC/DC converter failed 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. The generator was brought on-line at 2101 hours on 9/5/92.

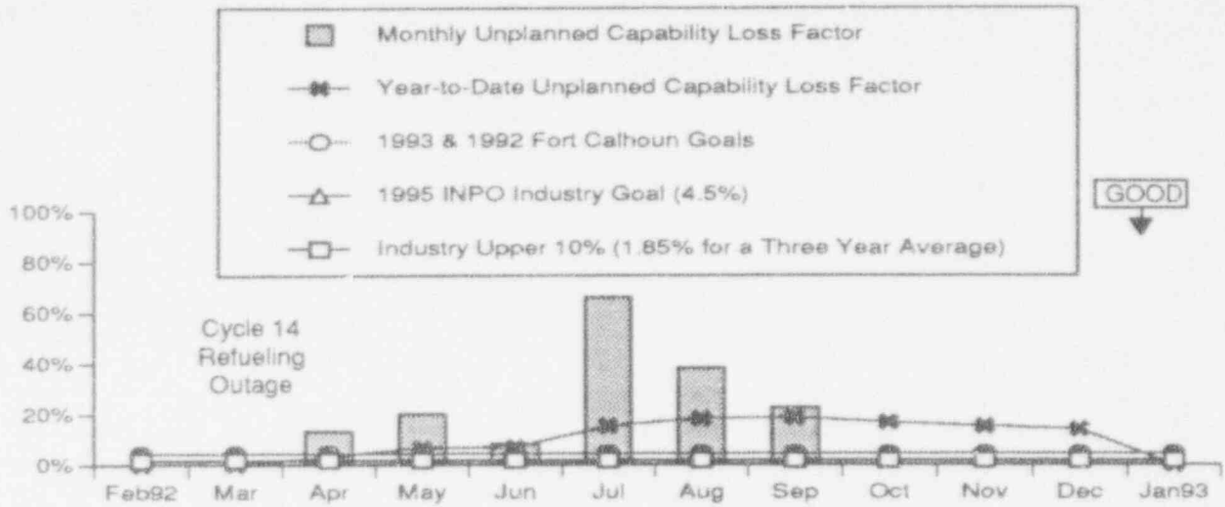
The UCF was reported as 62% for the month of August 1992. Unplanned energy losses for the month were a result of the 8/22/92 forced outage (described above) and the forced outage on 8/5/92 when a feeder breaker to the 125V DC panel AI-41A failed. The turbine generator was synchronized to the grid on 8/6/92.

The UCF was reported as 34% for the month of July 1992. Energy losses for the month were due to the forced outage caused by the loss of an inverter and the subsequent reactor trip on 7/3/92. The plant was brought to 90% power on 7/26/92.

The 1995 INPO industry goal is 80% and the industry upper ten percentile value (for the three year period from 7/89 through 6/92) is approximately 89.6%.

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 rampup (5 full power equivalent days), mini outage of 7 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 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% for the month of January 1993. The year-to-date UCLF for 1993 is 0%.

The UCLF was reported as 22.5% for the month of September 1992. Unplanned energy losses for the month were a result of the forced outage that began on 8/22/92 when an AC/DC converter failed 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. The generator was brought on-line at 2101 hours on 9/5/92.

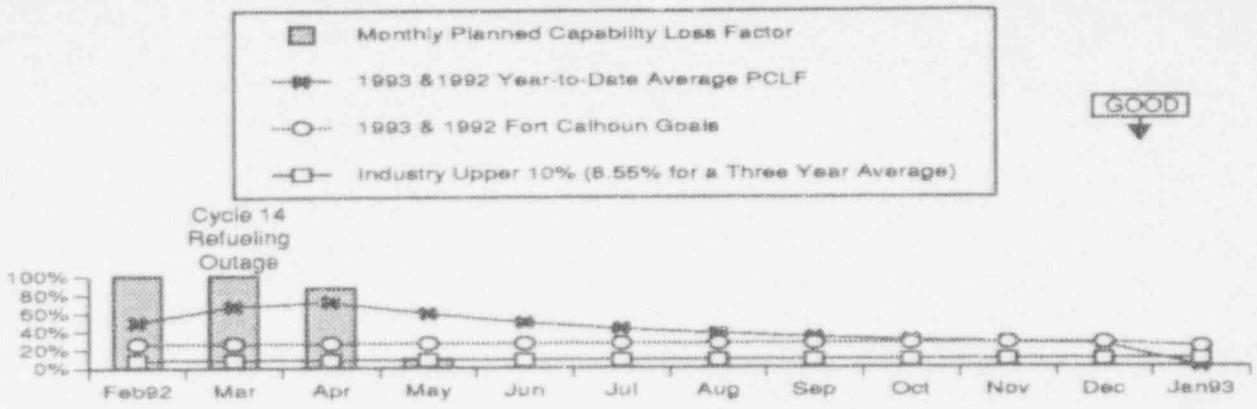
The UCLF was reported as 62% for the month of August 1992. Unplanned energy losses for the month were a result of the 8/22/92 forced outage (described above) and the forced outage on 8/5/92 when a feeder breaker to the 125V DC panel A1-41A failed. The turbine generator was synchronized to the grid on 8/6/92.

The UCLF was reported as 66% for the month of July 1992. Unplanned energy losses for the month were due to the forced outage caused by the loss of an inverter and the subsequent reactor trip on 7/3/92 and operating at less than full power from 7/23 through 7/31 after bringing the unit back on-line.

The 1995 INPO industry goal is 4.5% and the industry upper ten percentile value (for the three year period from 7/89 through 6/92) is approximately 1.85%.

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



PLANNED CAPABILITY LOSS FACTOR

This indicator shows the plant monthly Planned Capability Loss Factor (PCLF), the PCLF year-to-date value, and the Fort Calhoun year-end goals for 1993 and 1992. PCLF is defined as the ratio of the planned 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 PCLF was reported as 0% for the month of January 1993. The year-to-date PCLF was reported as 0%.

The PCLF was reported as 0% for the month of September 1992. Energy losses for the month were due to the forced outage that began on 8/22/92 when an AC/DC converter failed 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. The generator was brought on-line on 9/5/92. These energy losses were classified as unplanned.

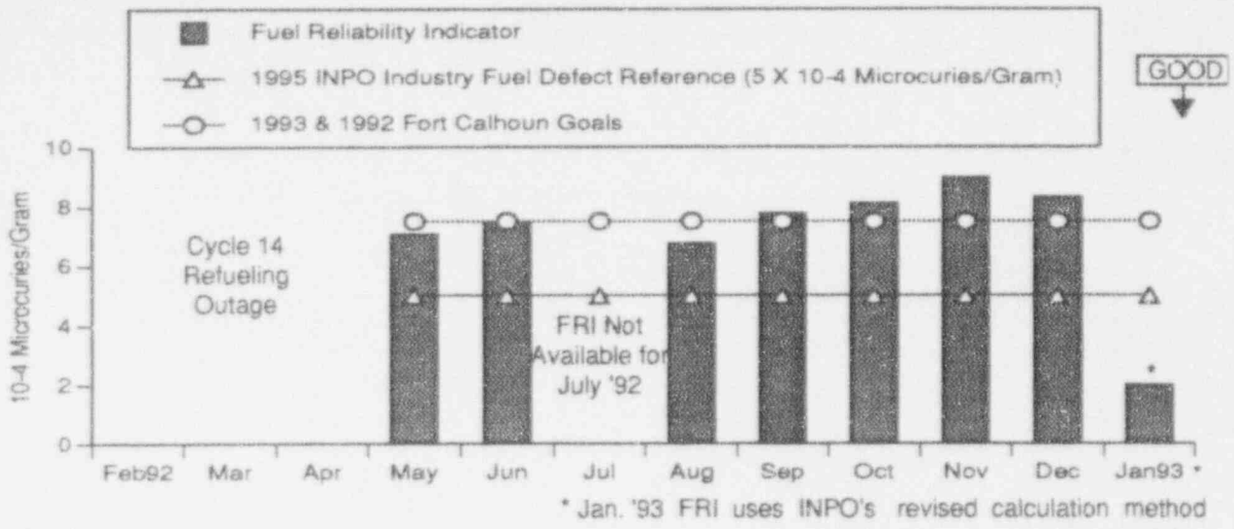
The PCLF was reported as 0% for the month of August 1992. Energy losses for the month were classified as unplanned and were due to the forced outage on 8/22/92 (described above) and the forced outage on 8/5/92 when a feeder breaker to the 125V dc panel AI-41A failed. The turbine generator was synchronized to the grid on 8/6/92.

The PCLF was reported as 0% for the month of July 1992. Energy losses for July were due to the forced outage caused by the loss of an inverter and the subsequent reactor trip on 7/3/92. These energy losses were classified as unplanned.

The 1993 Fort Calhoun year-end Planned Capability Loss Factor goal is 21.4%. The basis for this goal is 56 days for the Cycle 15 Refueling Outage, and 20 days rampup (10 full power equivalent days), and a mini outage of 7 full power equivalent days, and 10 day rampup (5 full power equivalent days).

The PCLF industry upper ten percentile value (for the three year period from 7/89 through 6/92) is approximately 8.55%.

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



FUEL RELIABILITY INDICATOR

The Fuel Reliability Indicator (FRI) for January 1993 was 1.98 X 10-4 microcuries/gram. The monthly FRI is a calculated value based on fission product activities present in the reactor coolant. Its purpose is to monitor industry progress in achieving and maintaining high fuel integrity.

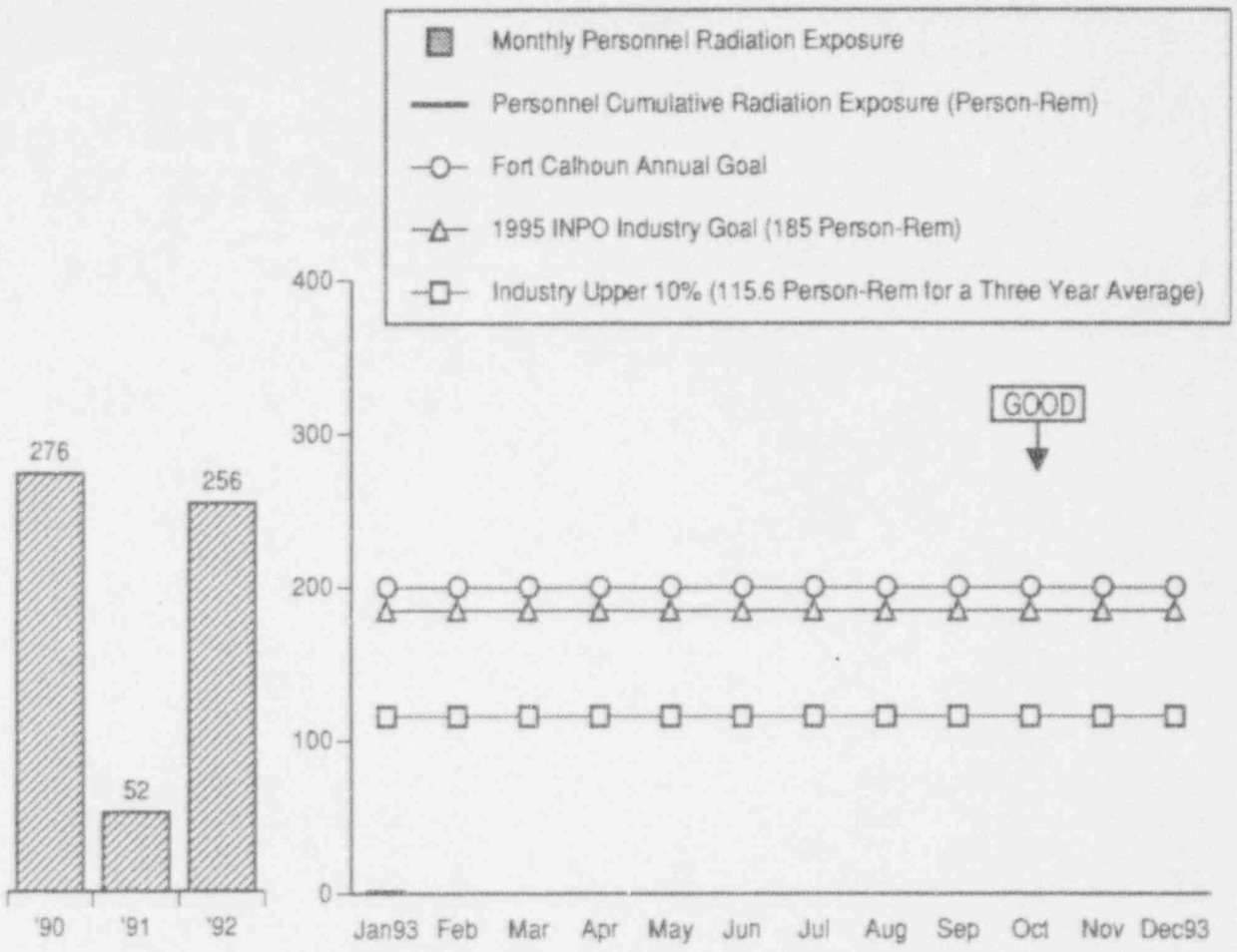
On December 22, 1992 INPO issued changes to the FRI calculation. These changes are implemented in this FRI report. The changes include an improved correction for tramp materials from past fuel defects and normalization of the indicator results to 100 percent power and a standard linear heat generation rate. The changes will allow the FRI to more consistently differentiate between defect-free cores and cores with one defect. Since the FCS reactor coolant contains high tramp activity, the new INPO calculation results in a smaller FCS FRI value.

The FRI value, using the latest INPO calculation method, is expected to be below the 1993 goal of 7.5 X 10-4 microcuries/gram for the remainder of Cycle 14, without fuel failures. A value of 1.98 X 10-4 microcuries/gram is a favorable FRI for the Fort Calhoun Station at this time in core life and indicates a defect-free core when no Xe-133 activity increases and no iodine spiking are present. This has been confirmed with the Westinghouse Coolant Activity Data Evaluation Code, CADE, and with discussions with Olga Correal-Pulver (W Nuclear Fuel Division). The last detected fuel failure was during Cycle 13.

The January 1993 FRI was calculated using the data from January 1 through 31.

The INPO September 1992 Report "I[illegible]nce Indicators for U.S. Nuclear Utility Industry" (INPO No. 92-011) states that "...the 1993 industry goal for fuel reliability is that units should strive to operate with zero fuel defects. A value of 5.0 X 10-4 microcuries/gram indicates a high probability of unit operation with 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



COLLECTIVE RADIATION EXPOSURE

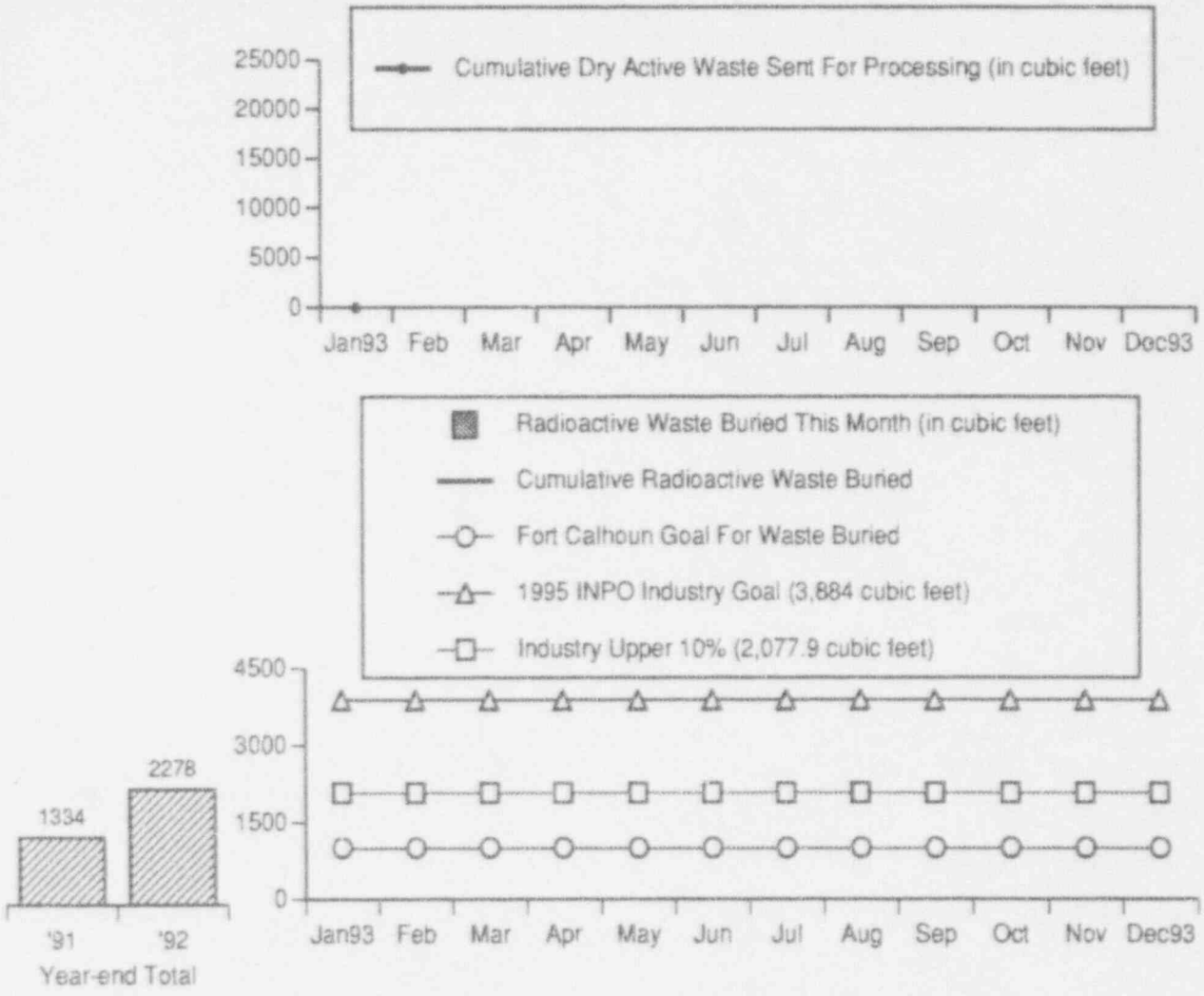
During January 1993, 1.851 person-rem was recorded by TLDs worn by personnel while working at the Fort Calhoun Station. The year-to-date exposure is 1.851 person-rem.

The Fort Calhoun goal for collective radiation exposure during 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 7/89 through 6/92) is approximately 115.6 person-rem per year. The three year average for Fort Calhoun Station from 7/89 through 6/92 is 194.3 person-rem per year.

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

SEP 54



VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

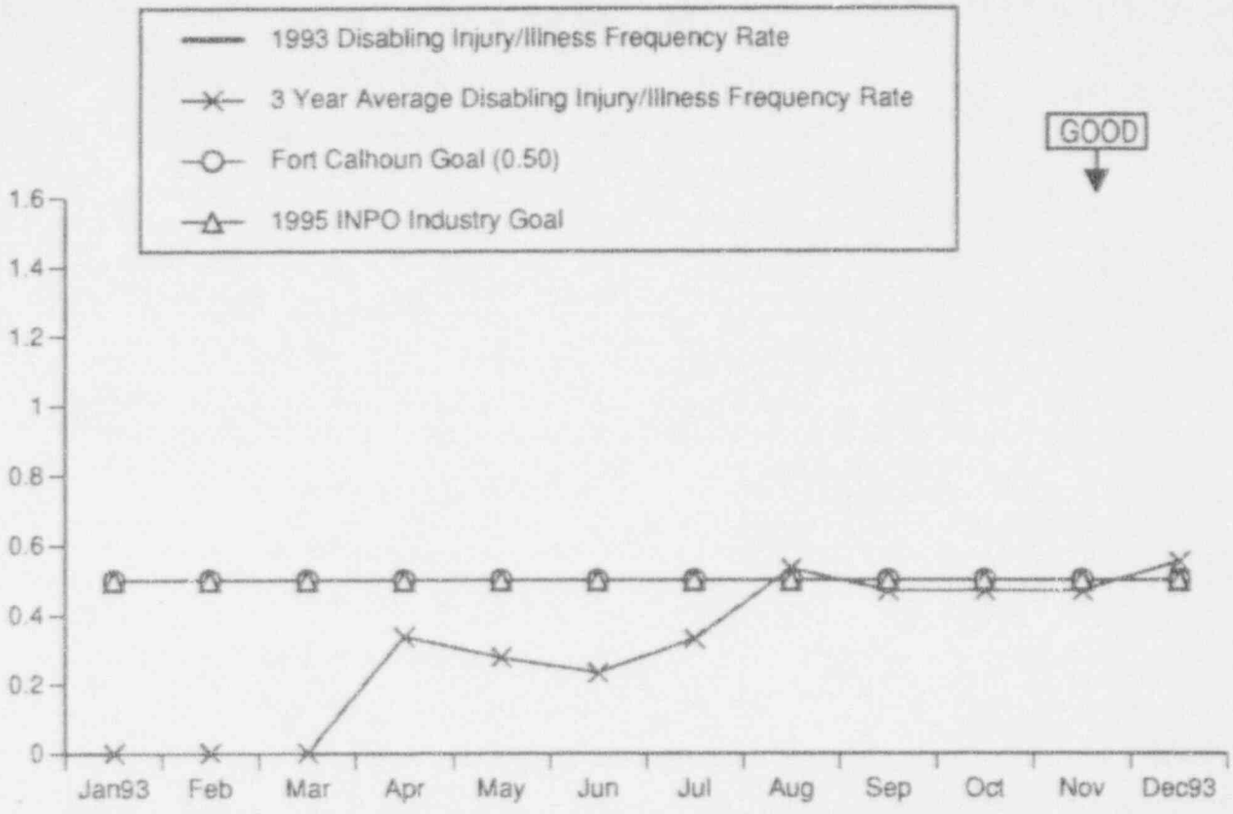
The upper graph shows the volume of dry radioactive waste sent for processing. The lower graph shows the volume of the monthly radioactive waste buried, the cumulative annual total for radioactive waste buried, and the year-end totals for radioactive waste buried the previous 2 years.

Cumulative amount of solid radwaste shipped off-site for processing (cubic feet)	0.0
Amount of solid radwaste shipped off-site for processing during January (cubic feet)	0.0
Volume of solid radioactive waste which was buried during January (cubic feet)	0.0
Cumulative volume of solid radioactive waste buried in 1993 (cubic feet)	0.0
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 is approximately 58.85 cubic meters (2,077.9 cubic feet) per year.

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

SEP 54



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

This indicator shows the 1993 disabling injury/illness frequency rate. The 3 year average (from 1990 through 1992) disabling injury/illness frequency rate is also shown.

The disabling injury/illness frequency rate for January 1993 was 0.0. There were no lost time accidents reported for the month of January. The total number of lost time accidents that have been reported during 1993 is 0. The 1993 disabling injury/illness frequency rate goal is a maximum value of 0.50. The 1995 INPO Industry goal is 0.50.

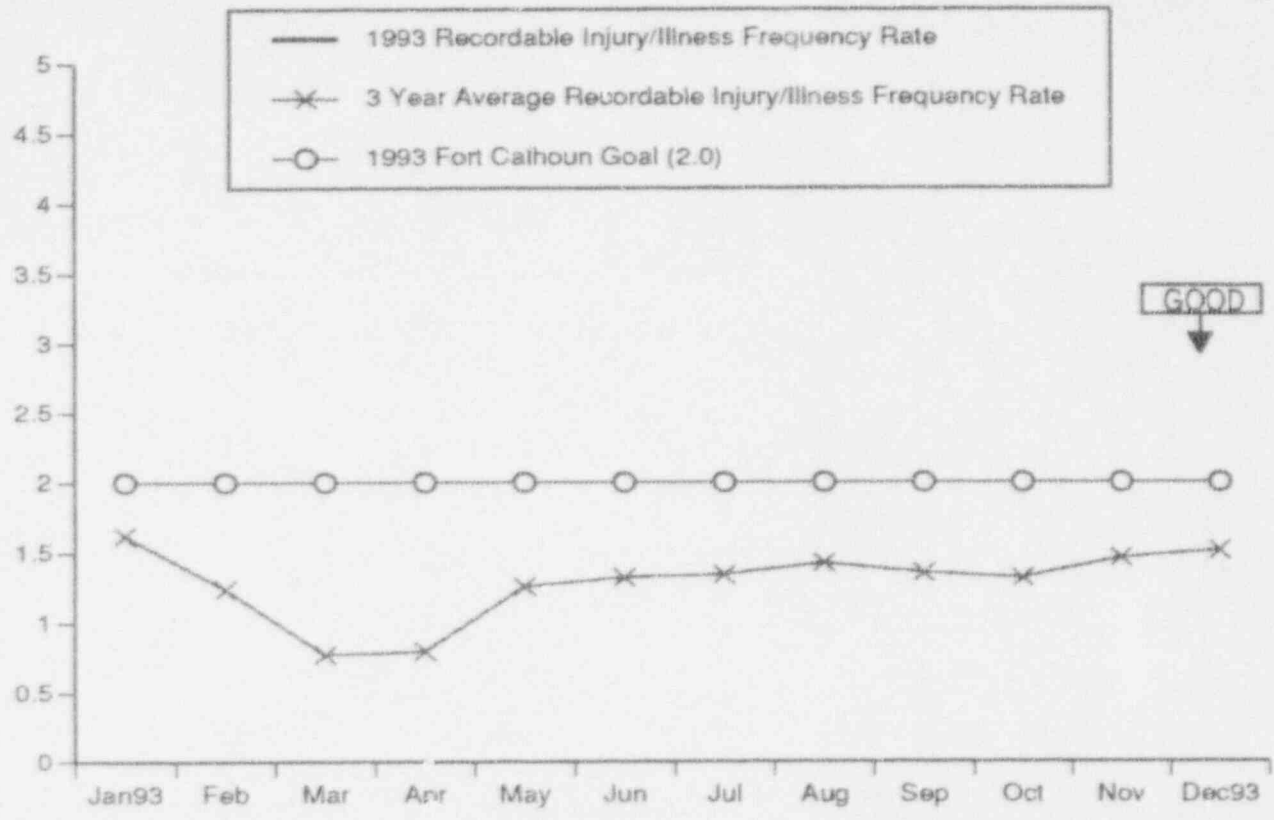
The disabling injury/illness frequency rate for the past twelve months is 0.71.

The industry upper ten percentile disabling injury/illness frequency rate for the twelve months from 7/91 through 6/92 is approximately 0.12.

Year	Year-End Rate
1989	0.4
1990	0.5
1991	0.4
1992	1.05

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 3 year average (from 1990 through 1992) recordable injury/illness cases frequency rate is also shown.

A recordable injury/illness case is reported if Nuclear Operations Division personnel 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 1993 was reported as 0.0. There were no recordable injury/illness cases reported for the month of January. There have been no recordable injury/illness cases in 1993.

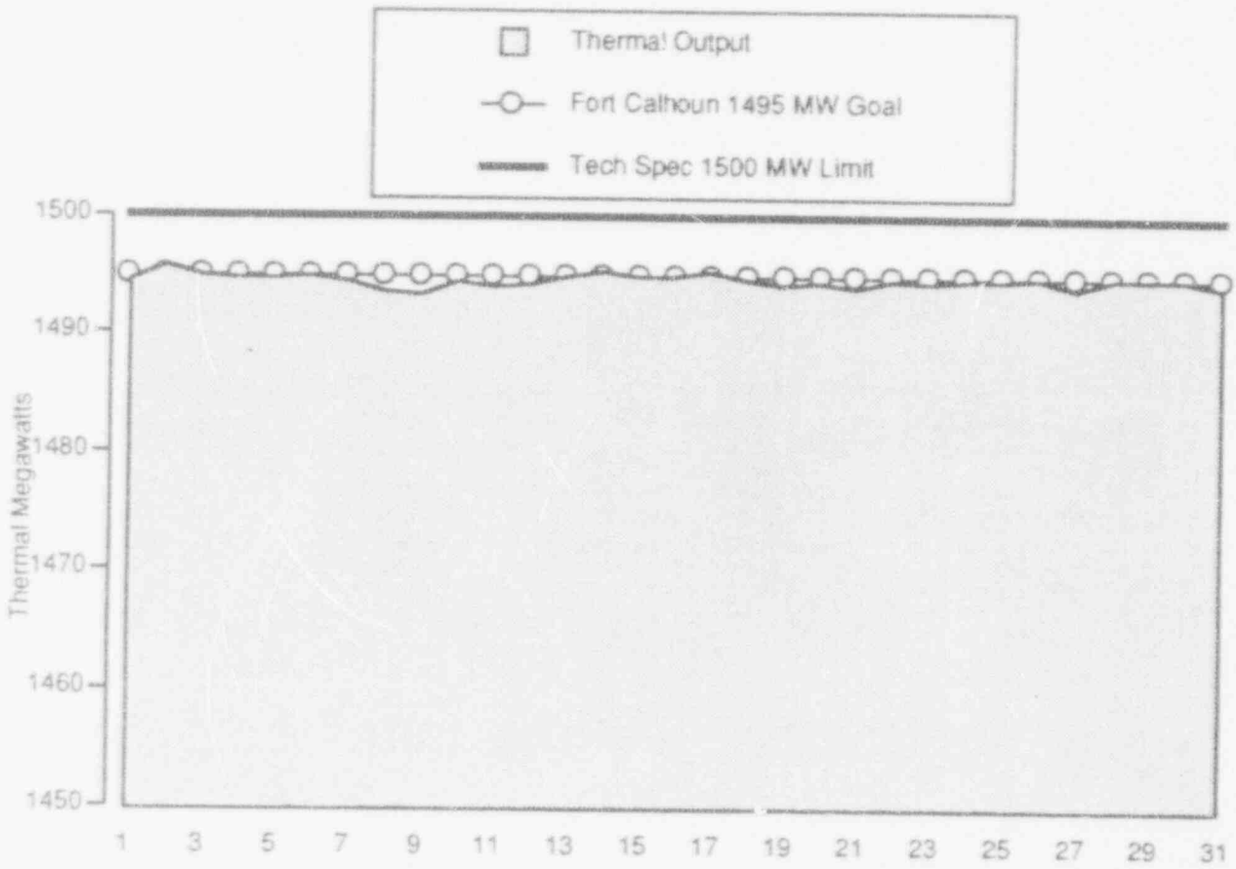
The recordable injury/illness rate for the past twelve months is 1.55.

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

Year	Recordable Cases	Year-End Rate
1989	11	2.2
1990	11	2.1
1991	18	3.3
1992	18	3.15

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

SEP 15, 25, 26 & 27



DAILY THERMAL OUTPUT

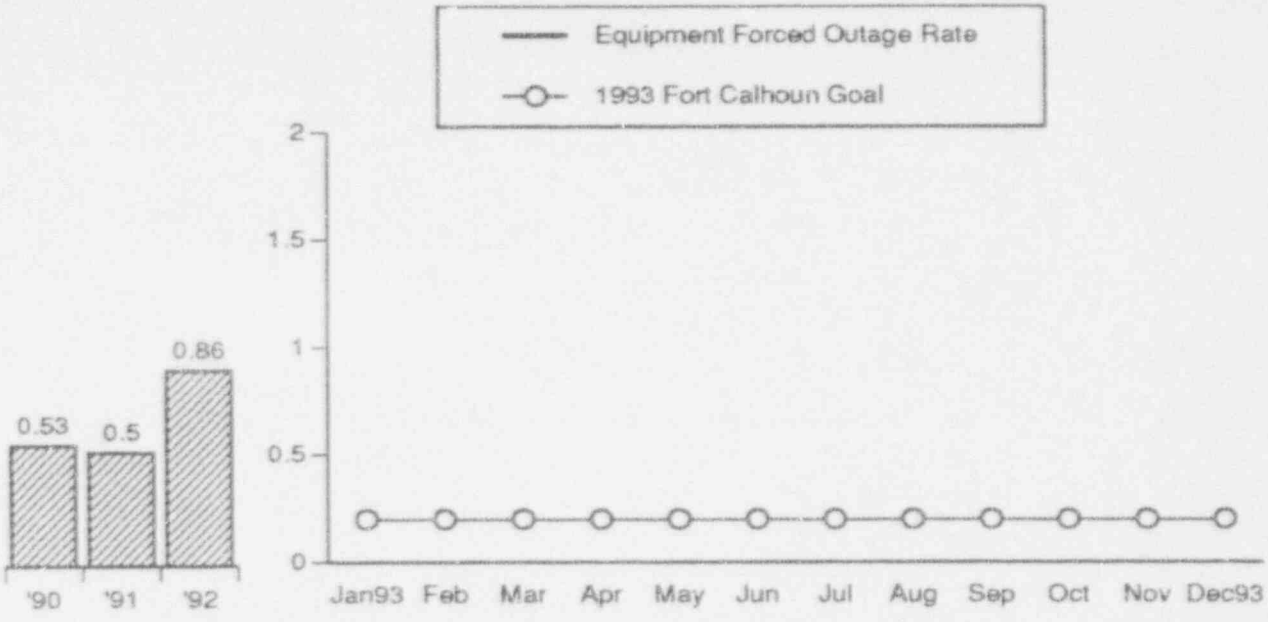
The above thermal output graph displays the daily operating power level during January 1993, the 1500 thermal megawatt average technical specification limit, and the 1495 thermal megawatt Fort Calhoun goal.

Main Turbine Control Valve (CV-1) was fluctuating during January 1993. As a conservative approach to this condition, reactor power was allowed to drift below the goal of 1495 Mwth.

Data Source: Holthaus/Gray (Manager/Source)

Accountability: Chase/Tills

Adverse Trend: None



EQUIPMENT FORCED OUTAGES PER 1,000 CRITICAL HOURS

The equipment forced outage rate per 1,000 critical hours was 0 for the month of January 1993. There were no equipment forced outages during the month.

The equipment forced outage that began on August 22, 1992 (described below) continued into September. The generator was brought on-line on 9/5/92.

The following two equipment forced outages occurred in August 1992: 1) on 8/5/92 a feeder breaker to the 125V DC panel AI-41A failed. The turbine generator was synchronized to the grid on 8/6/92; 2) on 8/22/92 an AC/DC converter failed 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. The plant was shutdown for the remainder of the month.

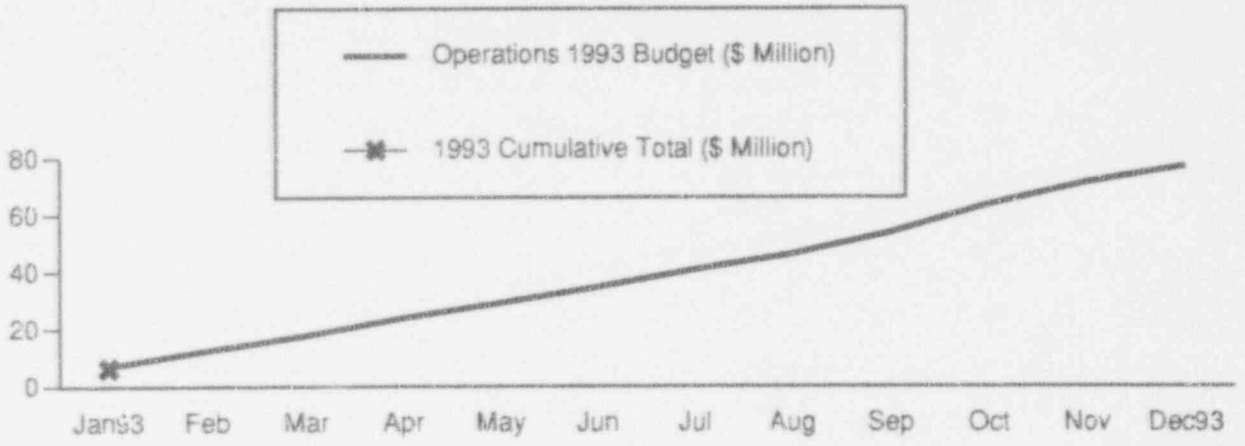
There was one equipment forced outage during July due to the loss of an inverter and the subsequent reactor trip on 7/3/92.

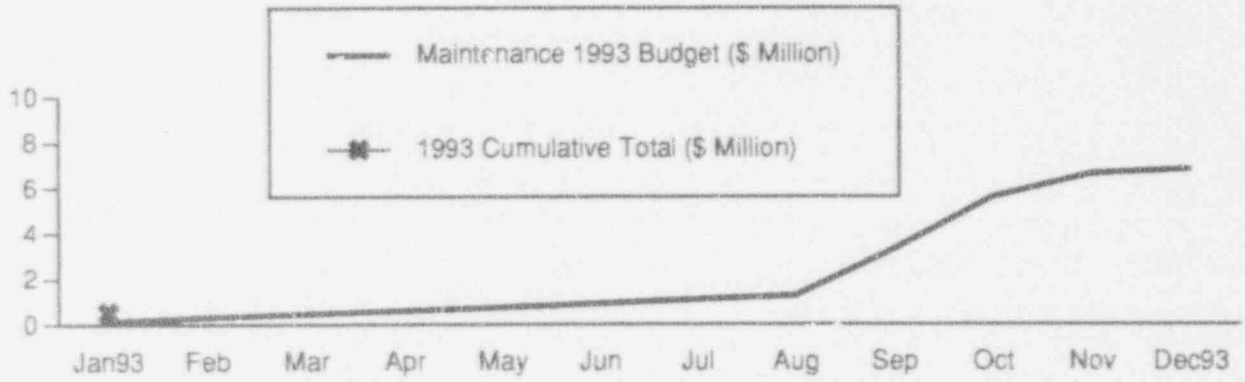
There was one equipment forced outage during June due to a dropped control rod. The rod was dropped at 2305 on 5/31/92 and reactor shutdown commenced at that time. The generator was taken off-line at 0234 on 6/1/92 and was brought back on-line at 0852 on 6/2/92.

There was one equipment forced outage during May. This equipment forced outage occurred on May 14 when the turbine generator tripped on a false high level moisture separator trip signal which caused a simultaneous reactor trip.

The 1993 Fort Calhoun goal for this indicator is 0.20.

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





OPERATIONS AND MAINTENANCE BUDGET

The Operations and Maintenance Budget Indicator shows the budget year-to-date as well as the actual expenditures for operations and maintenance for the Fort Calhoun Station.

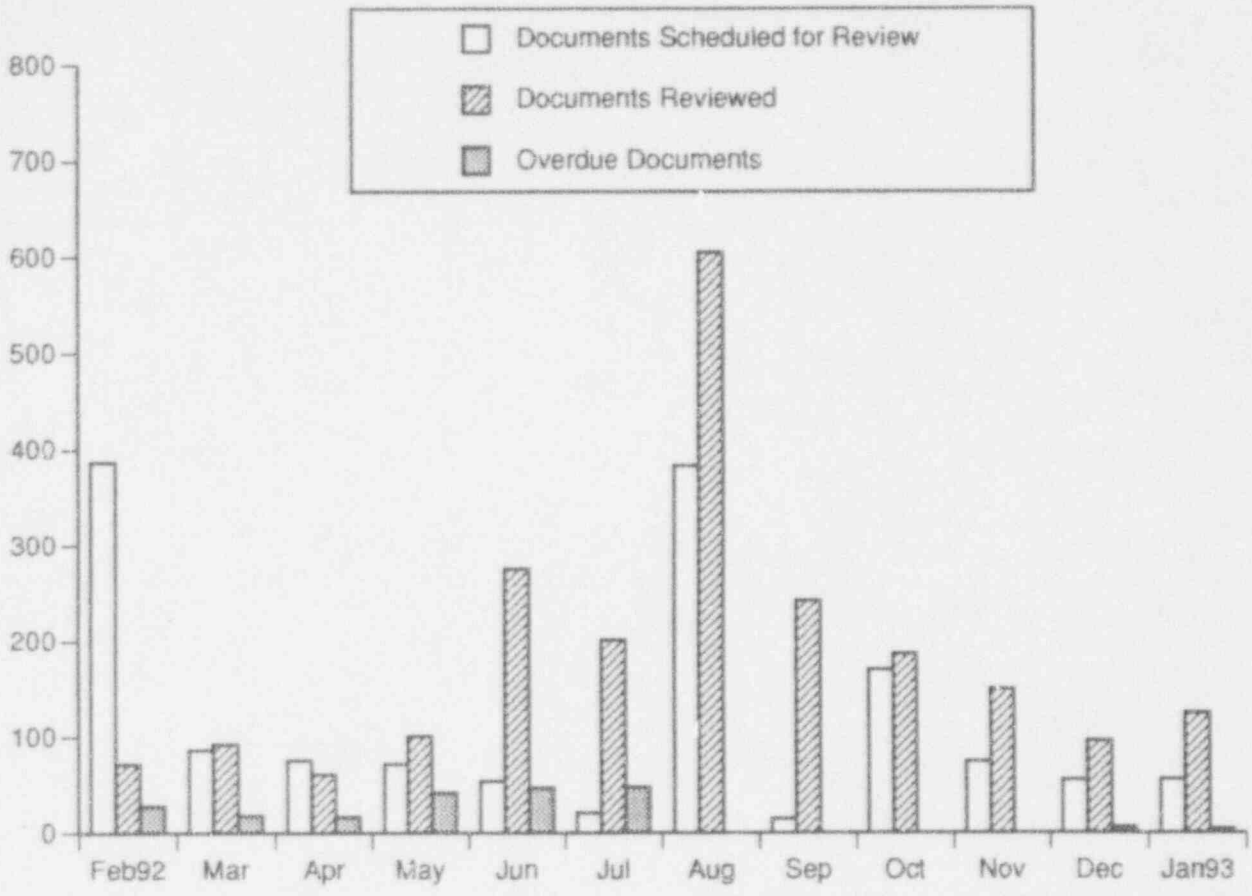
The budget year-to-date for Operations was 7,053,100 dollars for January 1993 while the actual cumulative expenditures through January totaled 6,265,900 dollars. The 1993 year-end budget for operations has been revised to 76,535,200 dollars, which is a decrease of 83,000 dollars.

The budget year-to-date for Maintenance was 149,600 dollars for January 1993 while the actual cumulative expenditures through January totaled 527,100 dollars. The 1993 year-end budget for maintenance remains at 6,807,900 dollars.

Data Source: Scofield/Parent (Manager/Source)

Accountability: Scofield

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 January 1993 there were 125 document reviews completed while 56 document reviews were scheduled. At the end of January, there were 4 document reviews more than 6 months overdue.

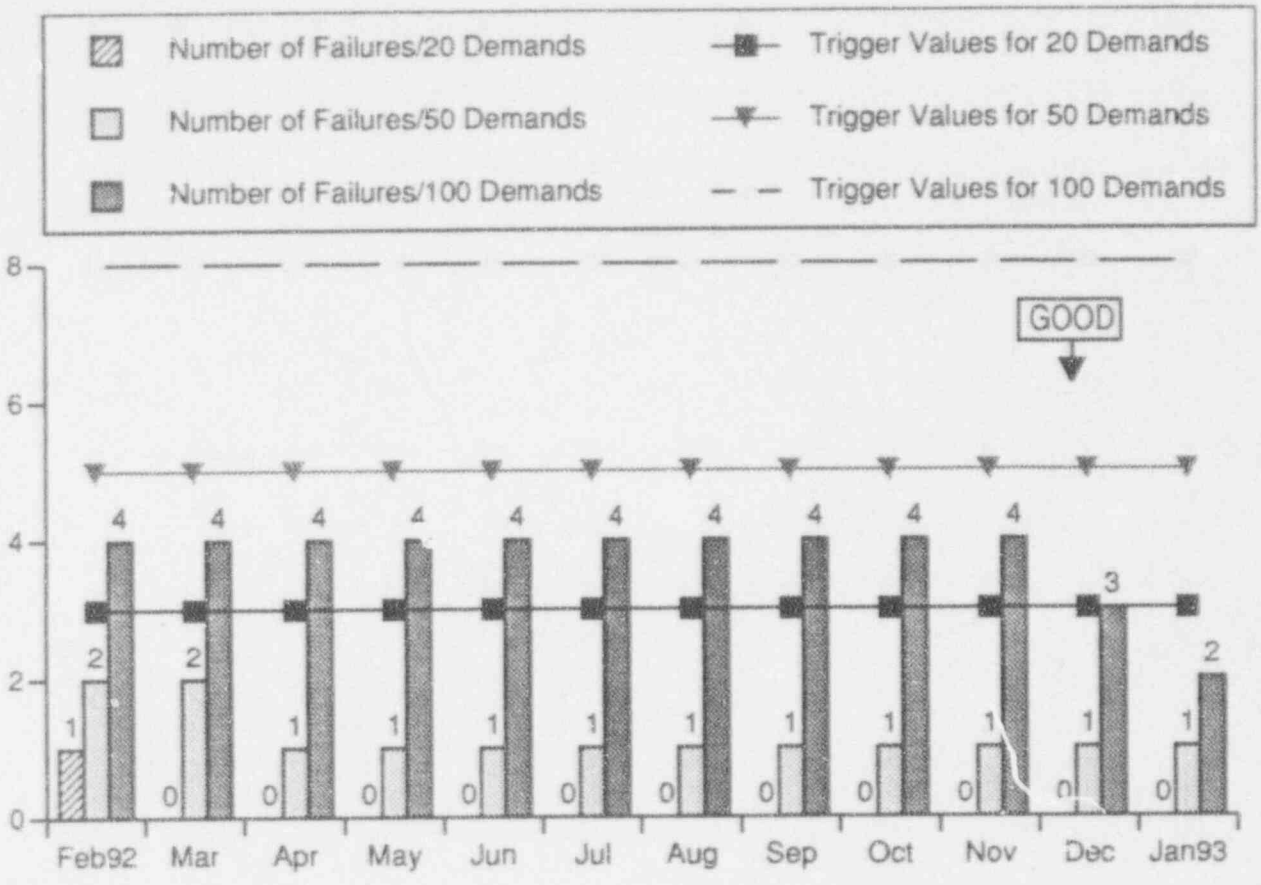
In addition, during the month of January there were 22 new or renamed documents reviewed. These new or renamed documents will need to be reviewed again in 1995.

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

Data Source: Chase/McKay (Manager/Source)

Accountability: Chase/Jaworski

Adverse Trend: None SEP 46

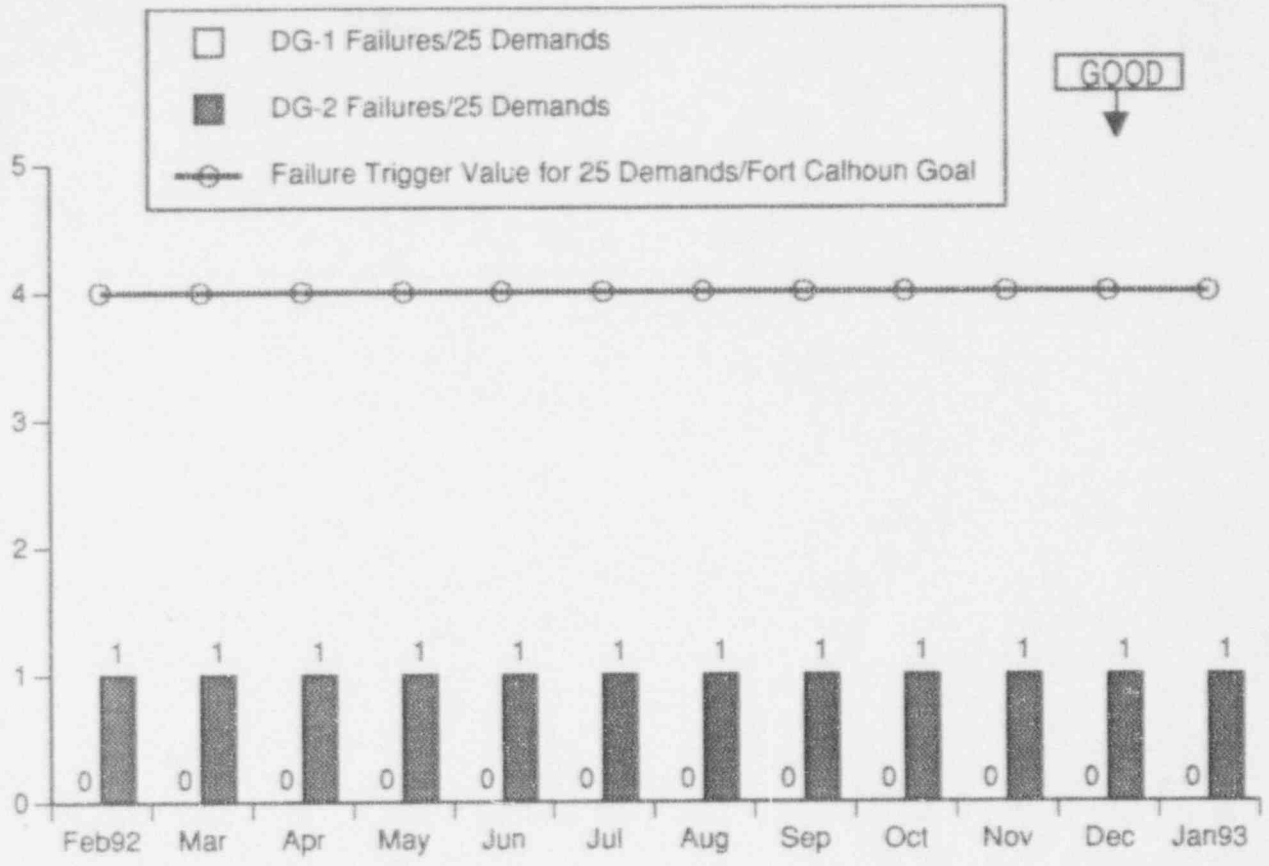


EMERGENCY DIESEL GENERATOR UNIT RELIABILITY

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 1992 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
Adverse Trend: None



DIESEL GENERATOR RELIABILITY (25 DEMANDS)

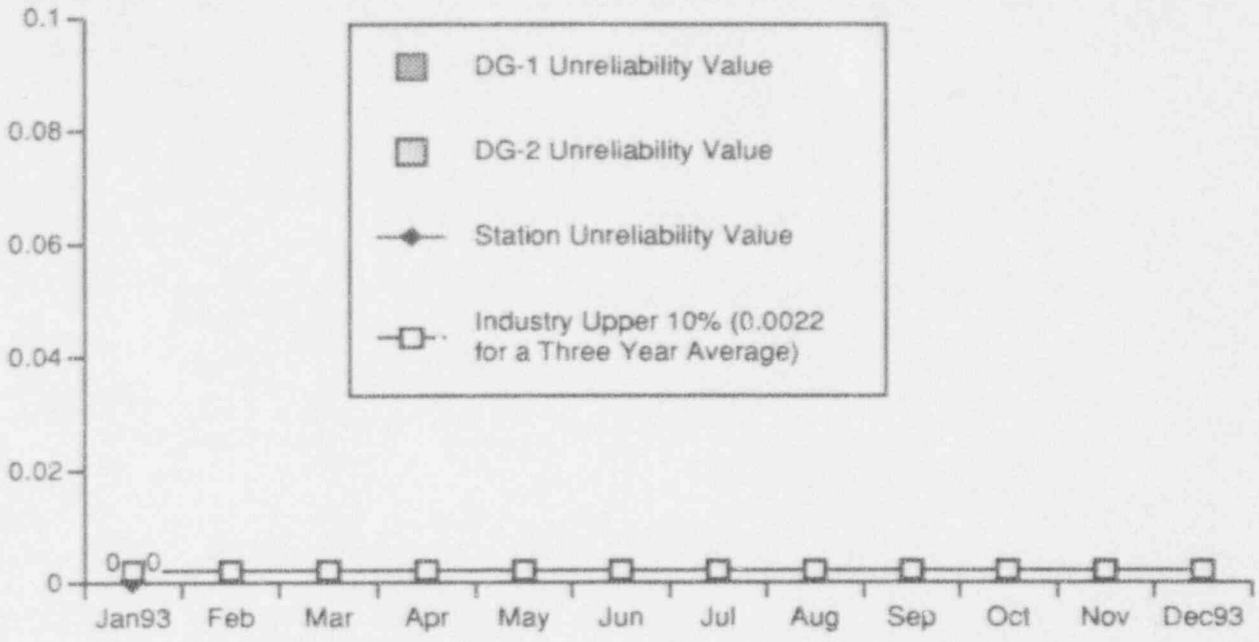
This indicator shows the number of failures experienced by each emergency diesel generator during the last 25 start demands and the last 25 load-run demands. A trigger value of 4 failures within the last 25 demands is also shown. This trigger value of 4 failures within 25 demands is the Fort Calhoun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

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 drafted 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 experienced one failure during the last 25 demands on the unit. An air damper roll pin failure occurred in July 1991.

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



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 station EDG unreliability value for January 1992 was 0.0.

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

For DG-2: There was 1 start demand for the reporting month with no failure. In addition, there was 1 load-run demand with no failure.

Emergency diesel generator unreliability is calculated as follows:

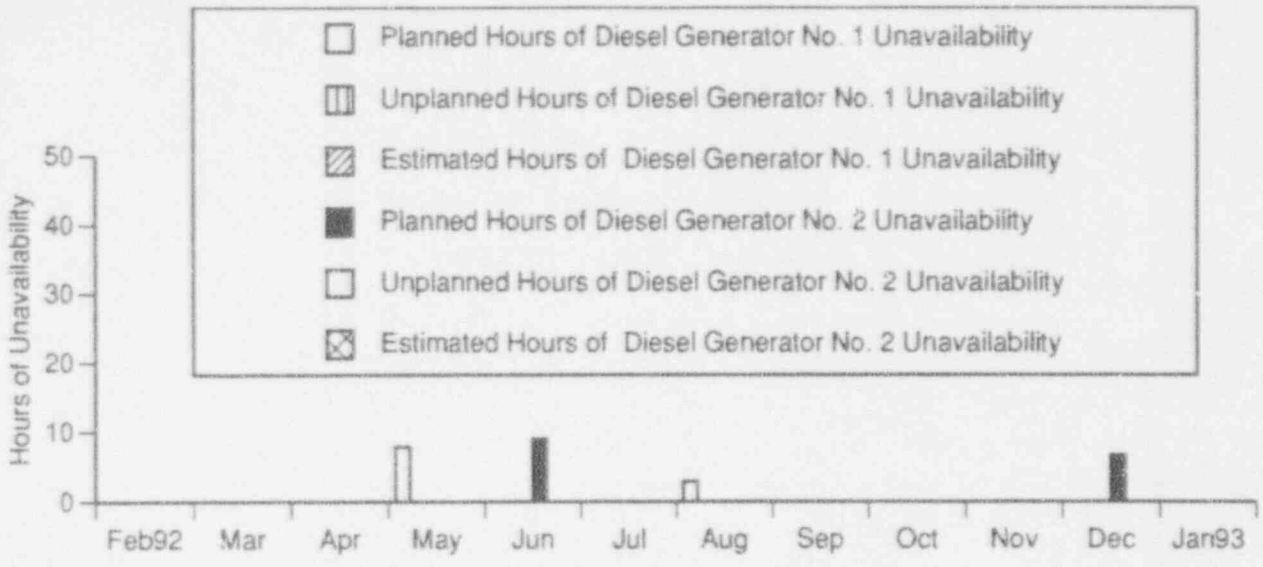
value per DG = SU + LU - (SU x LU)

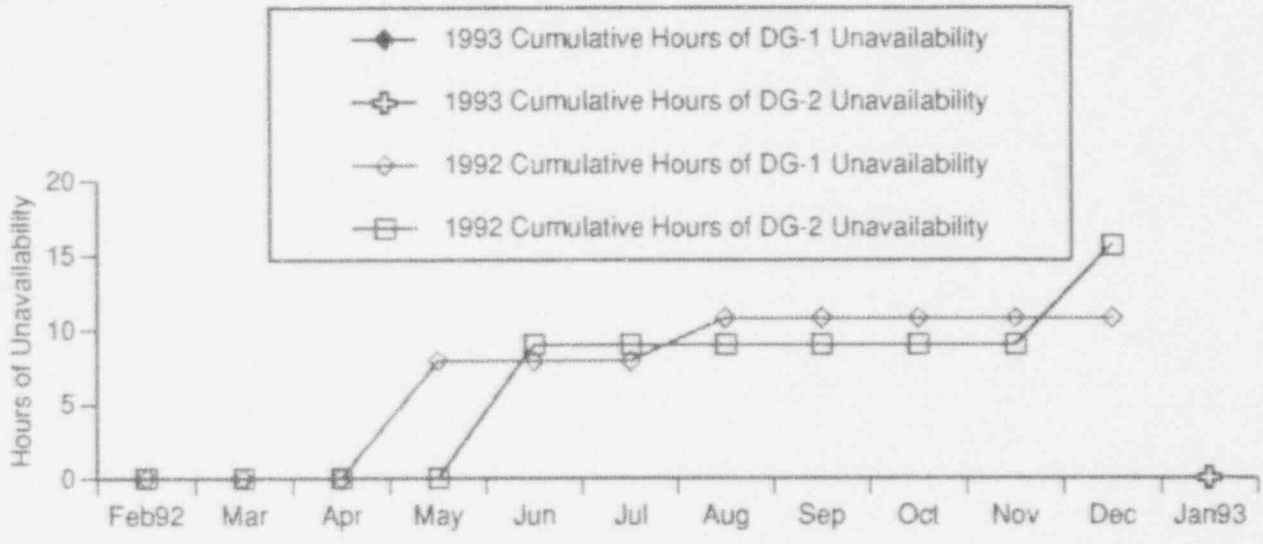
where SU = Start Unreliability = $\frac{\text{number of unsuccessful starts}}{\text{number of valid start demands}}$

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
Adverse Trend: None





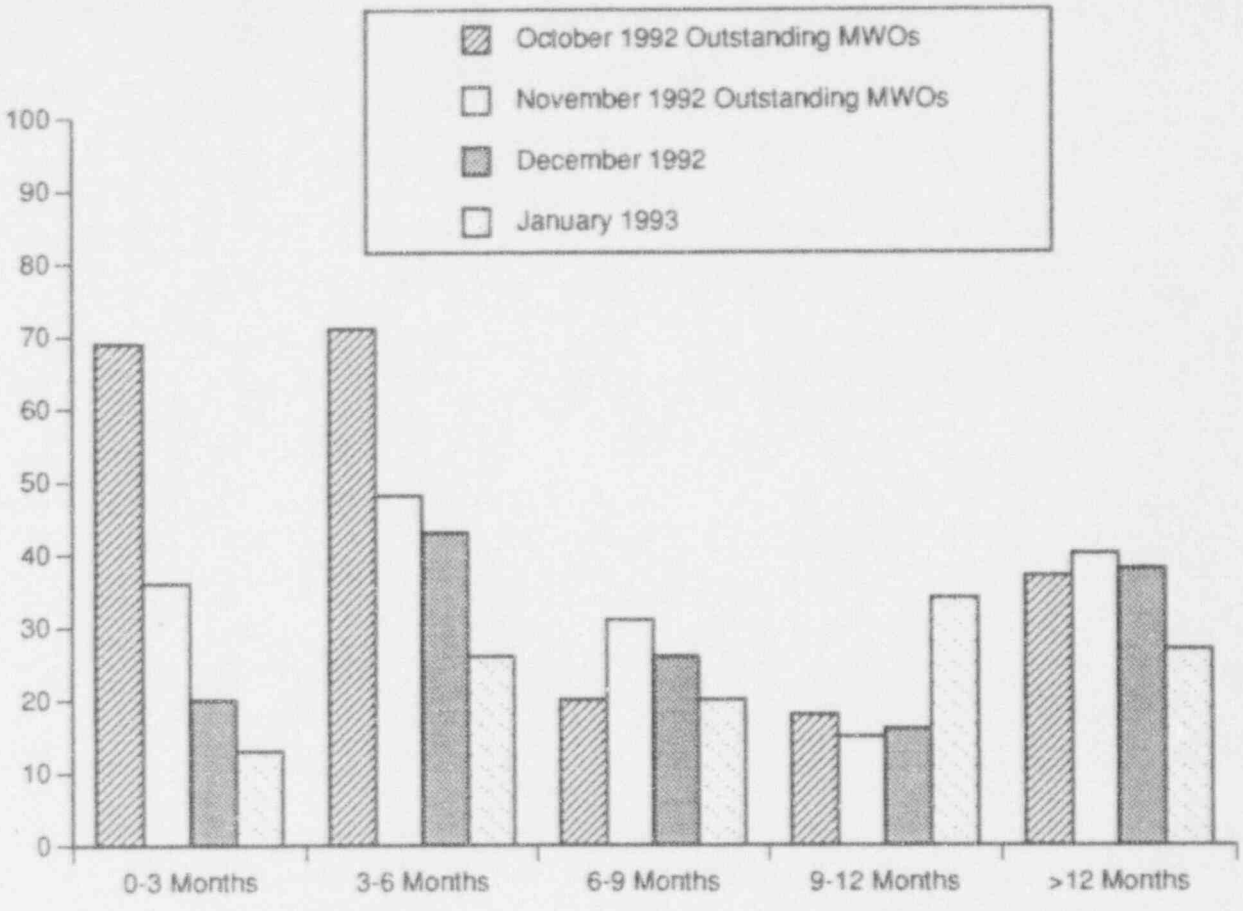
DIESEL GENERATOR UNAVAILABILITY

This indicator provides a monthly illustration of diesel generator unavailability. The top graph shows the diesel generator planned, unplanned, and estimated unavailable hours for DG-1 and DG-2 for each month. The lower graph shows the year-to-date cumulative hours of unavailability for each diesel generator.

During January 1993 there were no (0) hours of planned or unplanned unavailability for DG-1 and DG-2.

The 1993 Fort Calhoun goal is a maximum of 201.48 hours of unavailability for each diesel generator.

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



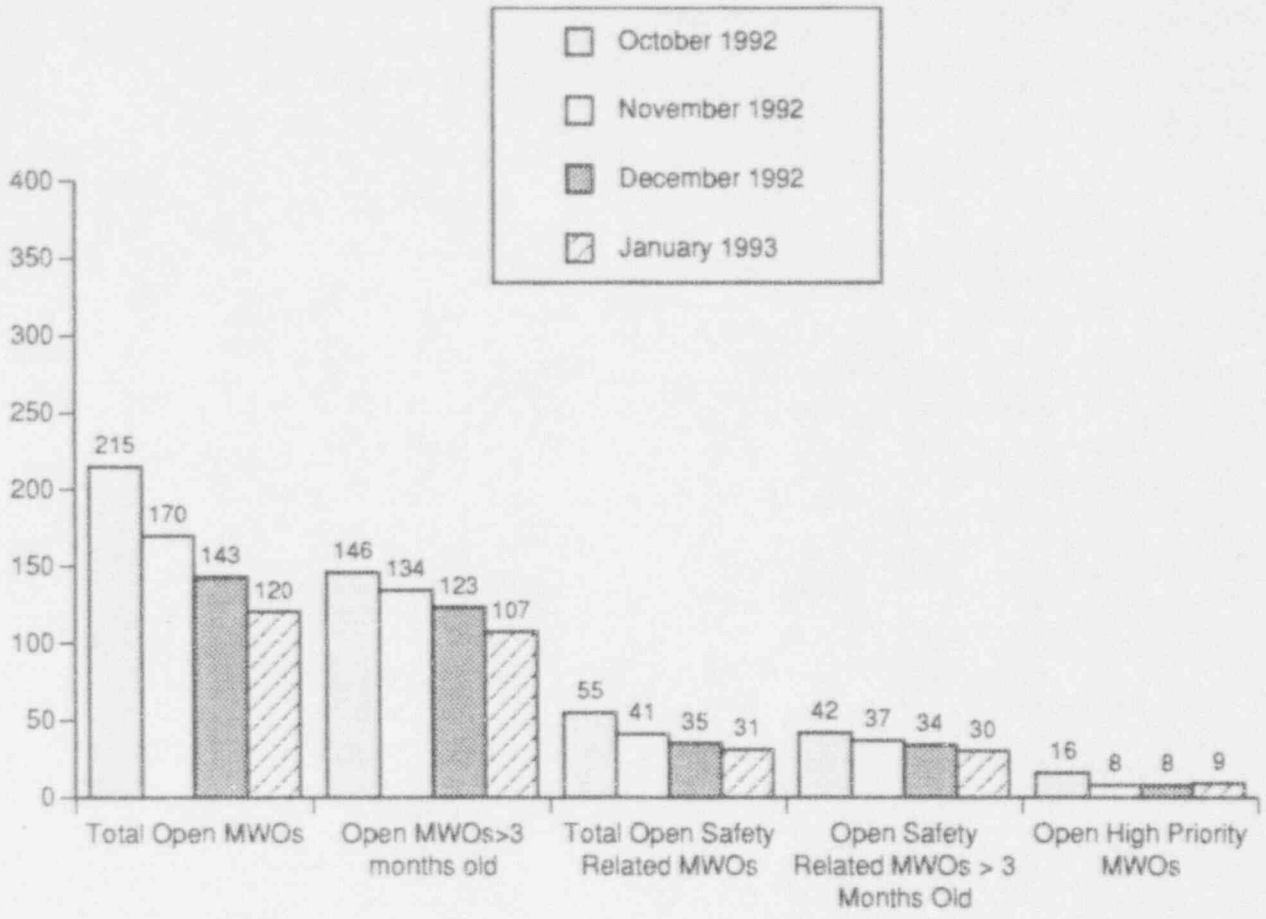
AGE OF OUTSTANDING MAINTENANCE WORK ORDERS (CORRECTIVE NON-OUTAGE)

This indicator shows the age of corrective non-outage maintenance work orders (MWOs) remaining open at the end of the reporting month.

Data Source: Chase/Schmitz (Manager/Source)

Accountability: Chase/ Bobba

Adverse Trend: None



MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE)

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

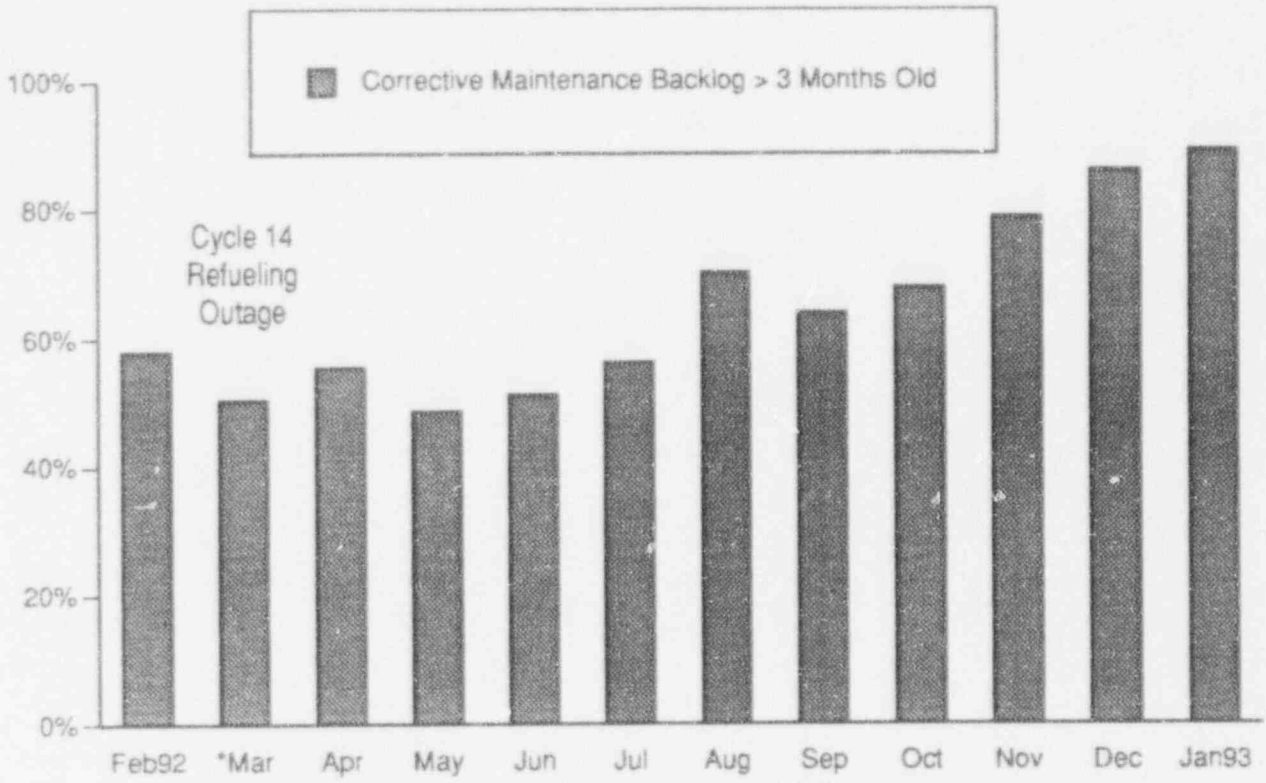
The 1993 monthly goal for this indicator is to have less than 325 total corrective non-outage maintenance work orders remaining open. The 1992 goal was to have less than 350 total corrective non-outage maintenance work orders remaining open

Data Source: Chase/Schmitz (Manager/Source)

Accountability: Chase/Bobba

Adverse Trend: None

SEP 36



*Programmatic change to reflect change in non-outage criteria.

CORRECTIVE MAINTENANCE BACKLOG GREATER THAN 3 MONTHS OLD (NON-OUTAGE)

This indicator shows the percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of the reporting month.

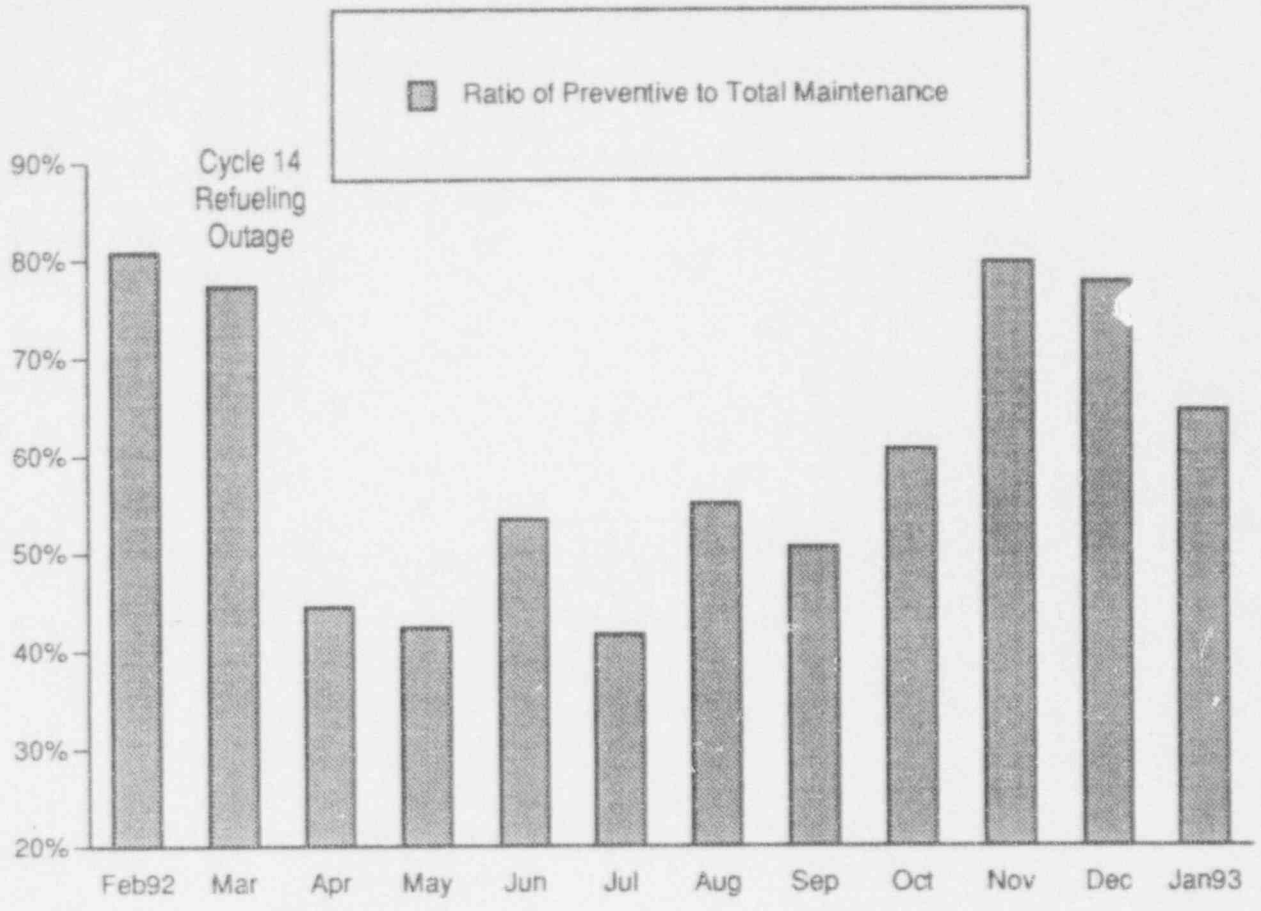
The percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of January 1993 was reported as 89.2%.

Data Source: Chase/Schmitz (Manager/Source)

Accountability: Chase/ Bobba

Adverse Trend: None. The percentage of corrective maintenance backlog greater than 3 months old has increased for four consecutive months, however, the total number of corrective non-outage MWOs (see page 29) has been decreasing during this time.

SEP 36



RATIO OF PREVENTIVE TO TOTAL MAINTENANCE

This indicator shows the ratio of completed non-outage preventive maintenance to total completed non-outage maintenance.

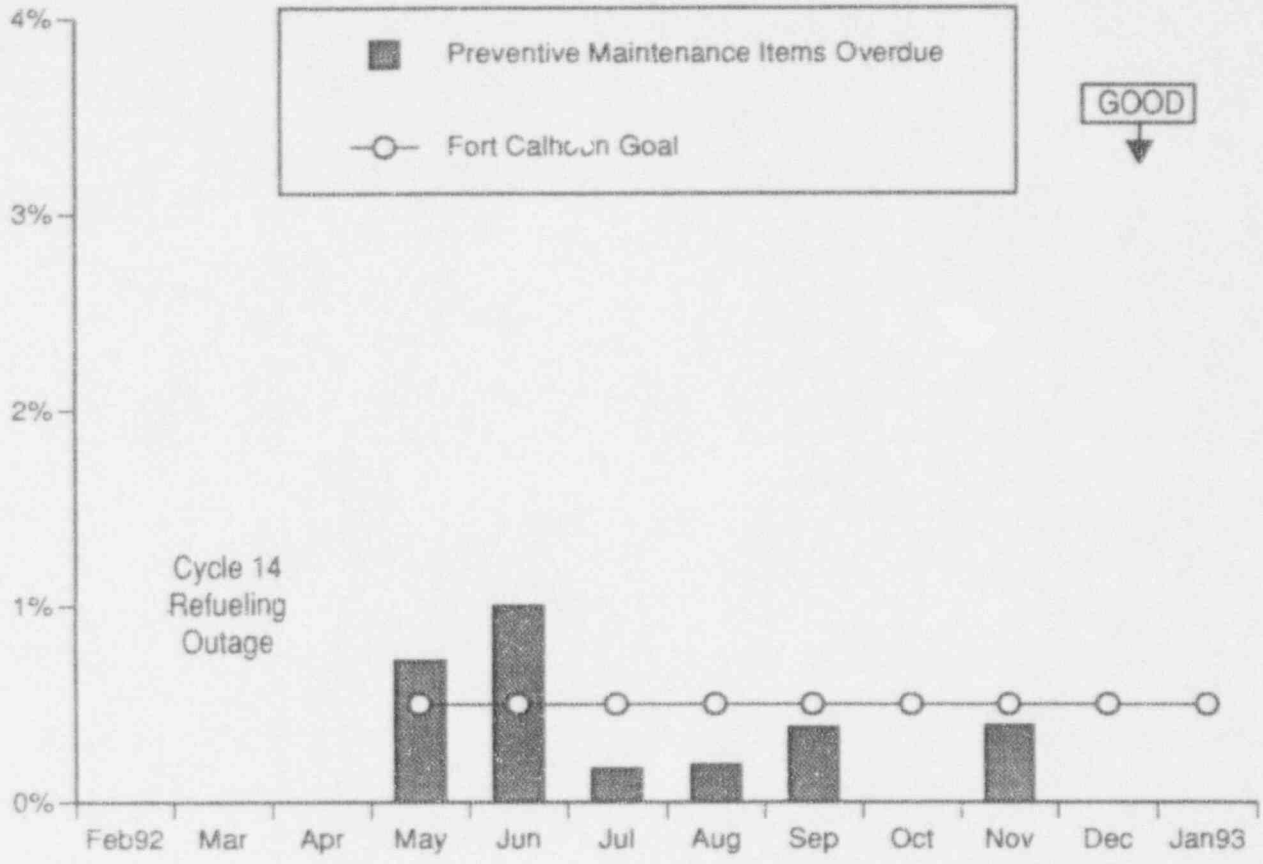
The ratio of preventive to total maintenance was 64.5% in January 1993.

Accountability: Chase/ Bobba

Data Source: Chase/Schmitz (Manager/Source)

Adverse Trend: None

SEP 41



PREVENTIVE MAINTENANCE ITEMS OVERDUE

The purpose of this indicator is to monitor progress in the administration and execution of preventive maintenance (PM) programs. A small percentage of preventive maintenance items overdue indicates a station commitment to the preventive maintenance program and an ability to plan, schedule, and perform preventive maintenance tasks as programs require.

During January 1993, 510 PM items were completed. All of these PM items were completed within the allowable grace period.

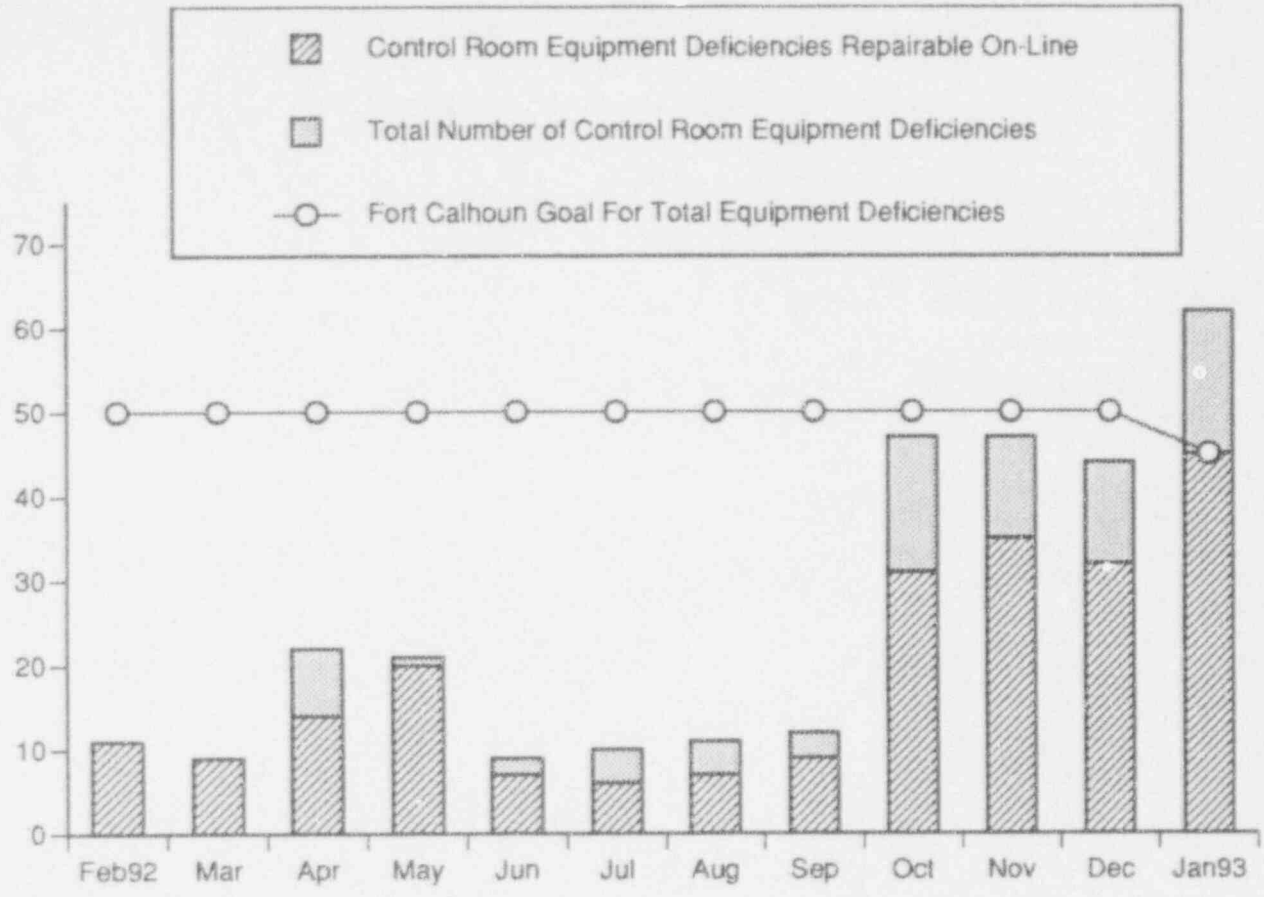
The 1992 Fort Calhoun goal is to have less than 0.5% per month of the preventive maintenance items overdue.

Data Source: Chase/Brady (Manager/Source)

Accountability: Chase/ Bobba

Adverse Trend: None

SEP 41



NUMBER OF CONTROL ROOM EQUIPMENT DEFICIENCIES

This indicator shows the number of control room equipment deficiencies, the number of deficiencies repairable during plant operations (on-line), and the 1993 and 1992 Fort Calhoun goals.

There was a total of 62 control room equipment deficiencies at the end of January 1993. 17 of these deficiencies require a plant outage to repair.

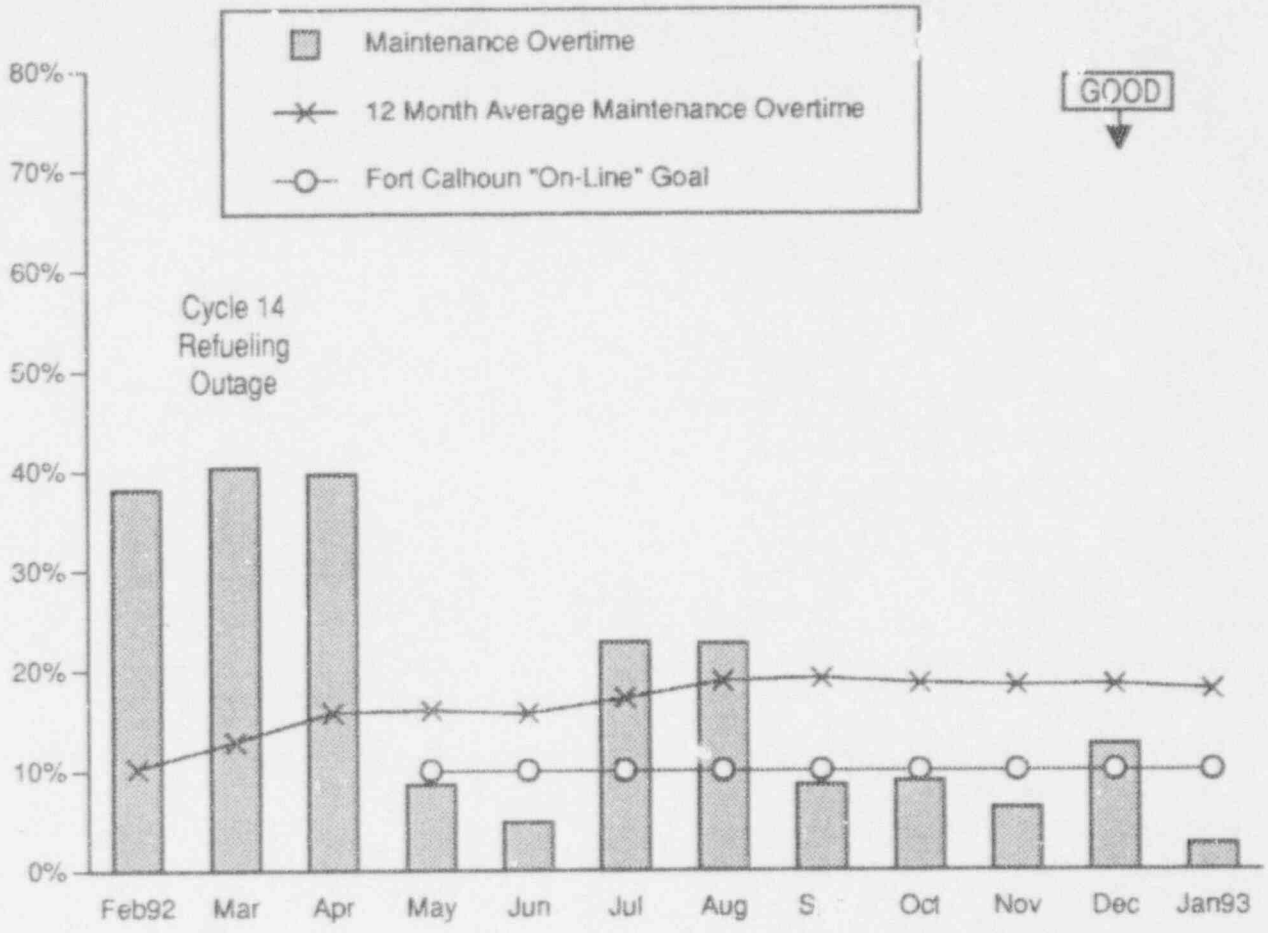
The large increase in the number of out-of-service control room instruments that occurred in October 1992 was due to a change in the criteria for defining out-of-service control room instruments. This change was necessary because INPO no longer tracks this item due to difficulty in establishing consistency among plants reporting this indicator.

The 1993 Fort Calhoun goal is to have a maximum of 45 control room equipment deficiencies. The 1992 goal was a maximum of 50 control room equipment deficiencies.

Data Source: Chase/Spilker (Manager/Source)

Accountability: Chase/ Bobba

Adverse Trend: None



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 2.6% for the month of January 1993. The 12 month average percentage of overtime hours with respect to normal hours was reported as 18% at the end of the month.

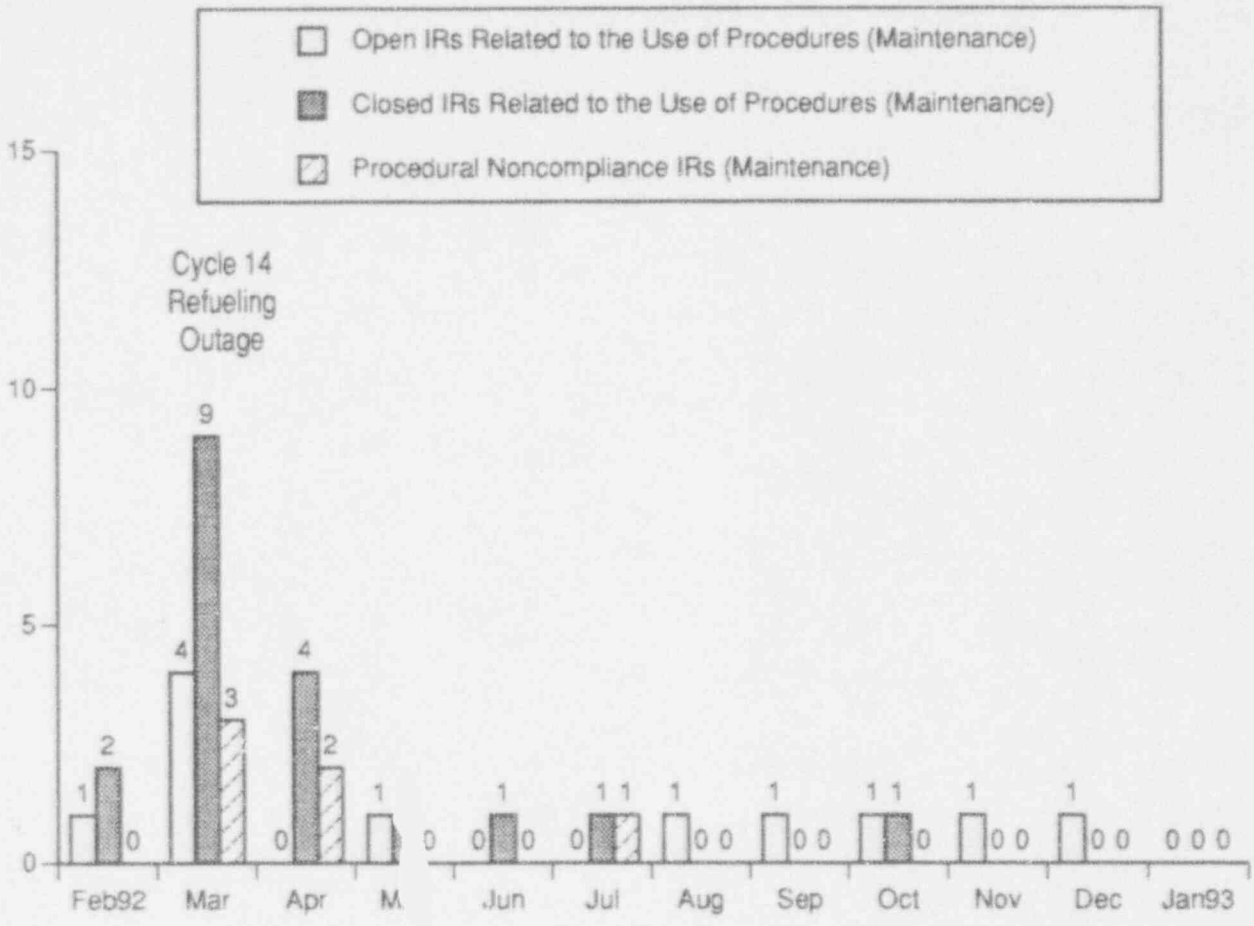
Both July and August 1992 overtime were high due to two long term (>2 weeks) forced outages.

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 NC COMPLIANCE INCIDENTS (MAINTENANCE)

This indicator shows the numbe 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.

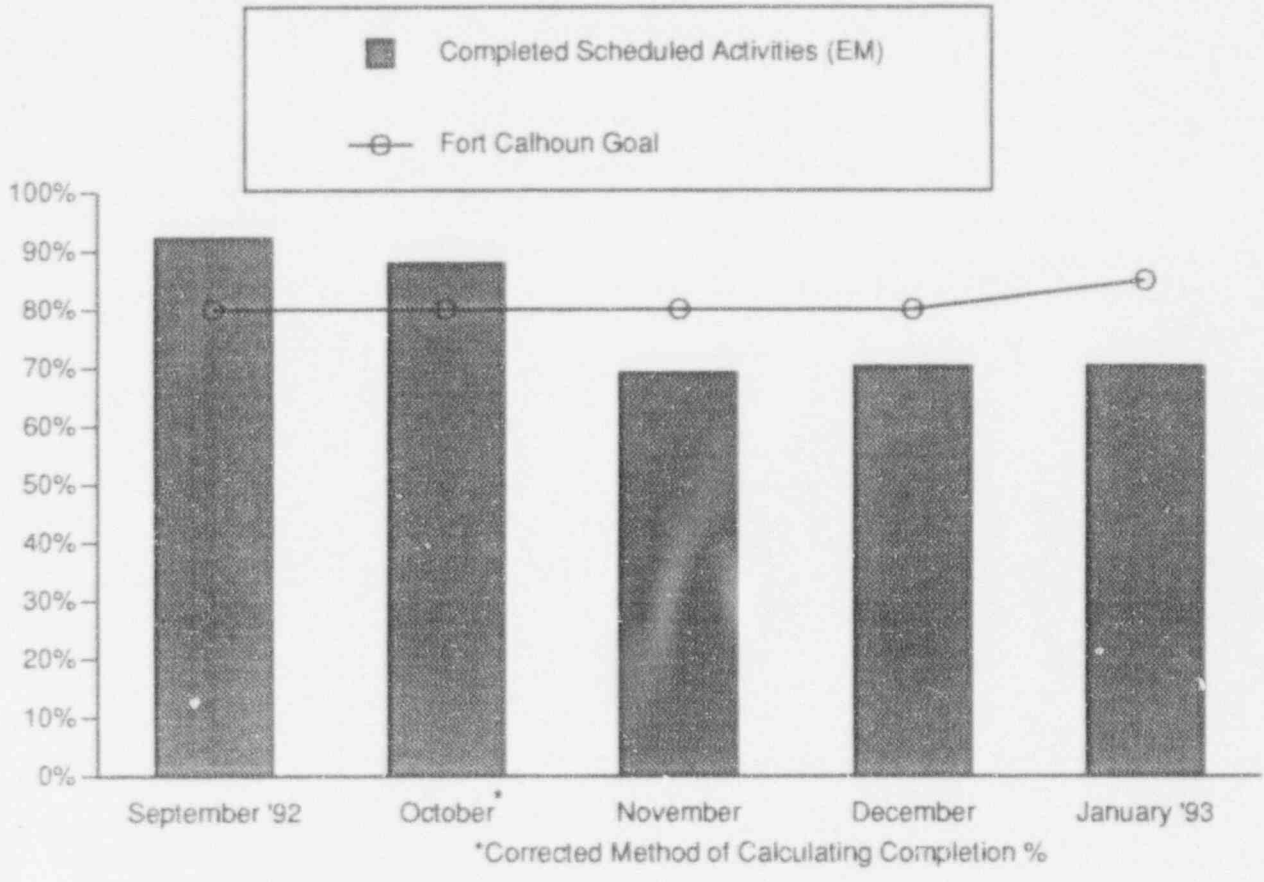
There were no procedural noncompliance incidents for maintenance reported for the month of January 1993.

Data Source: Chase/McKay (Manager/Source)

Accountability: Chase/Bobba

Adverse Trend: None

SEP 15, 41 & 44



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (ELECTRICAL MAINTENANCE)

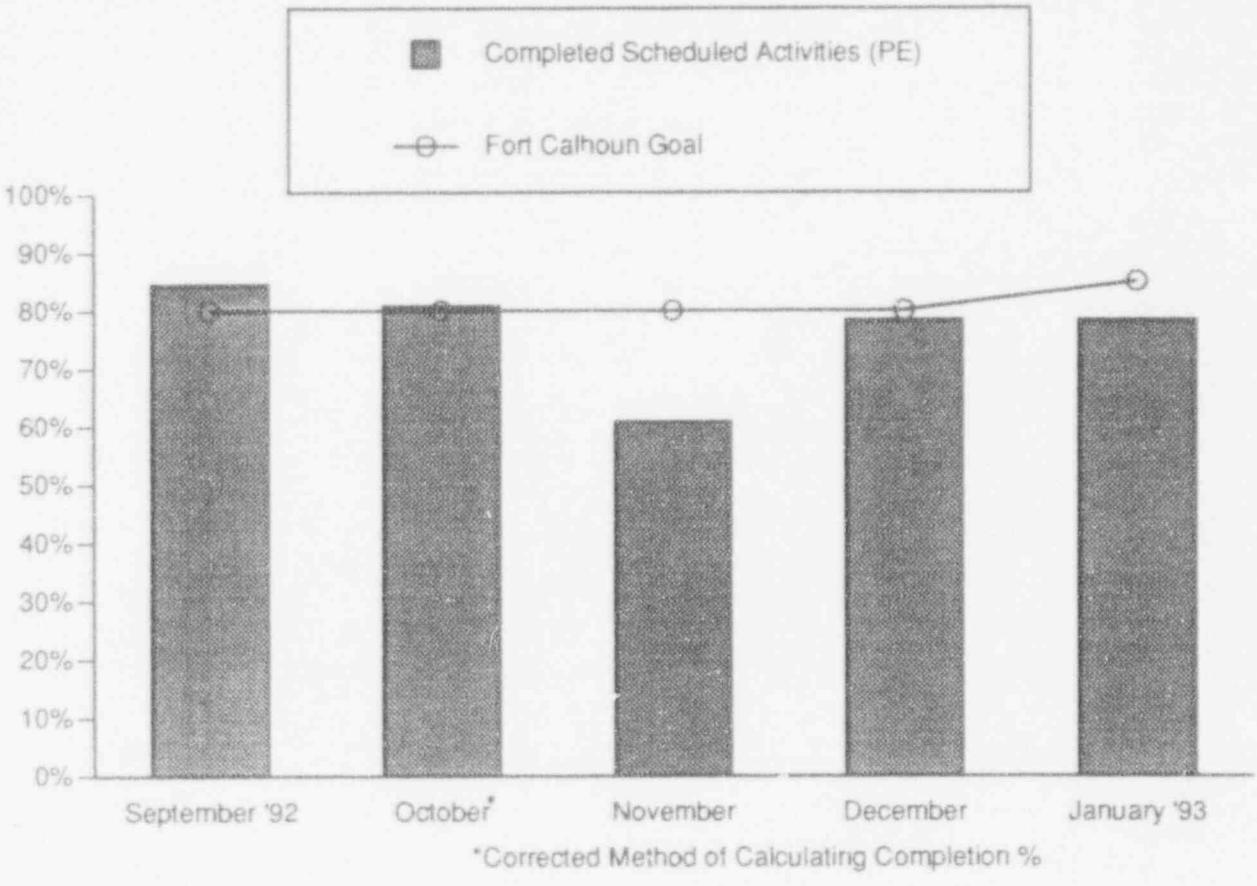
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning Electrical Maintenance. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

The 1993 Fort Calhoun Station monthly goal for this indicator is a minimum of 85%. The 1992 monthly goal was a minimum of 80%.

Reporting Month	Completed Scheduled Activities
September	92.2%
October	87.9%
November	69.1%
December	70.2%
January	70.3%

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

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (PRESSURE EQUIPMENT)

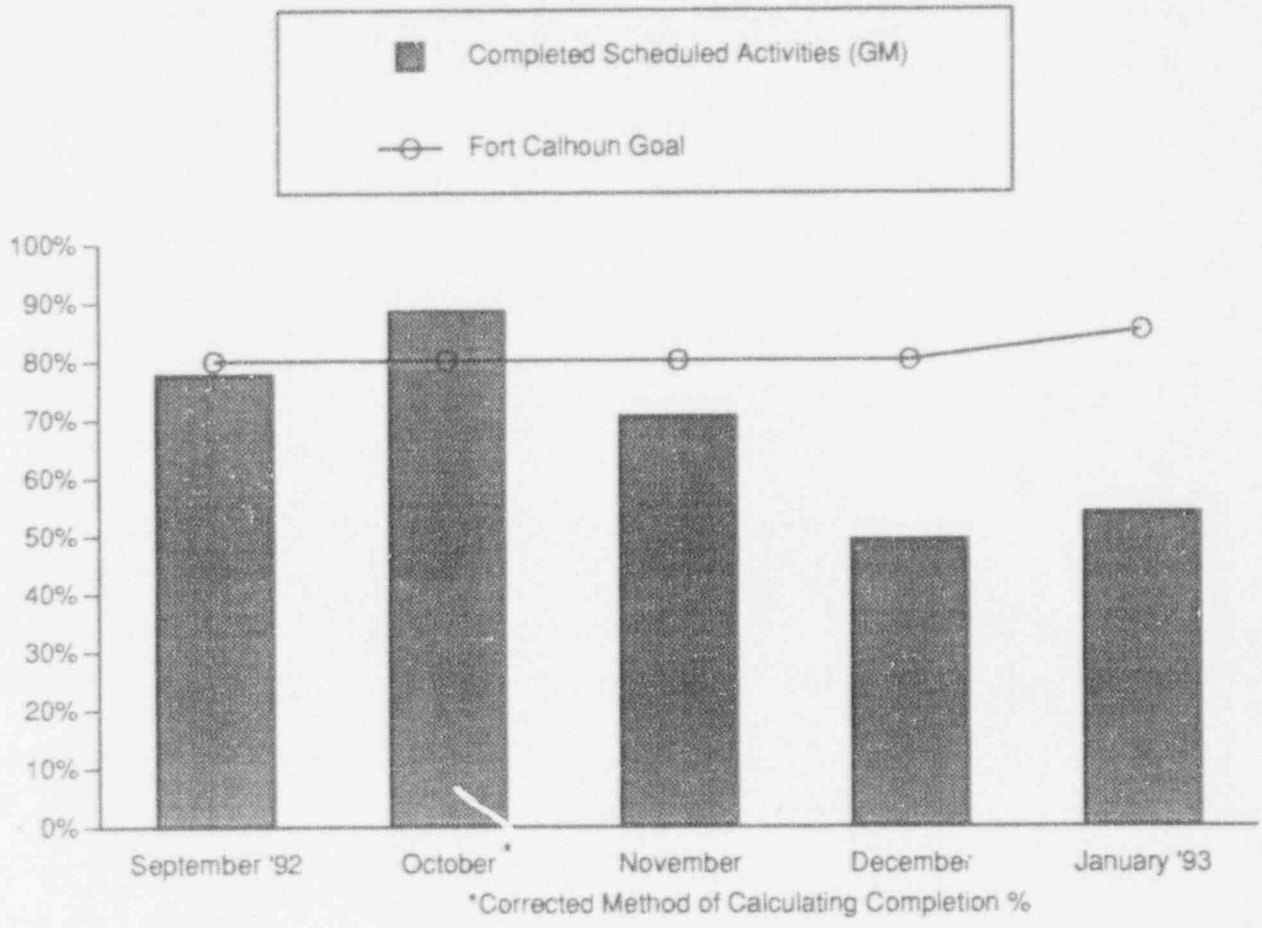
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning Pressure Equipment Maintenance. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

The 1993 Fort Calhoun Station monthly goal for this indicator is a minimum of 85%. The 1992 monthly goal was a minimum of 80%.

Reporting Month	Completed Scheduled Activities
September	84.5%
October	80.7%
November	60.7%
December	78.3%
January	78.3%

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

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (GENERAL MAINTENANCE)

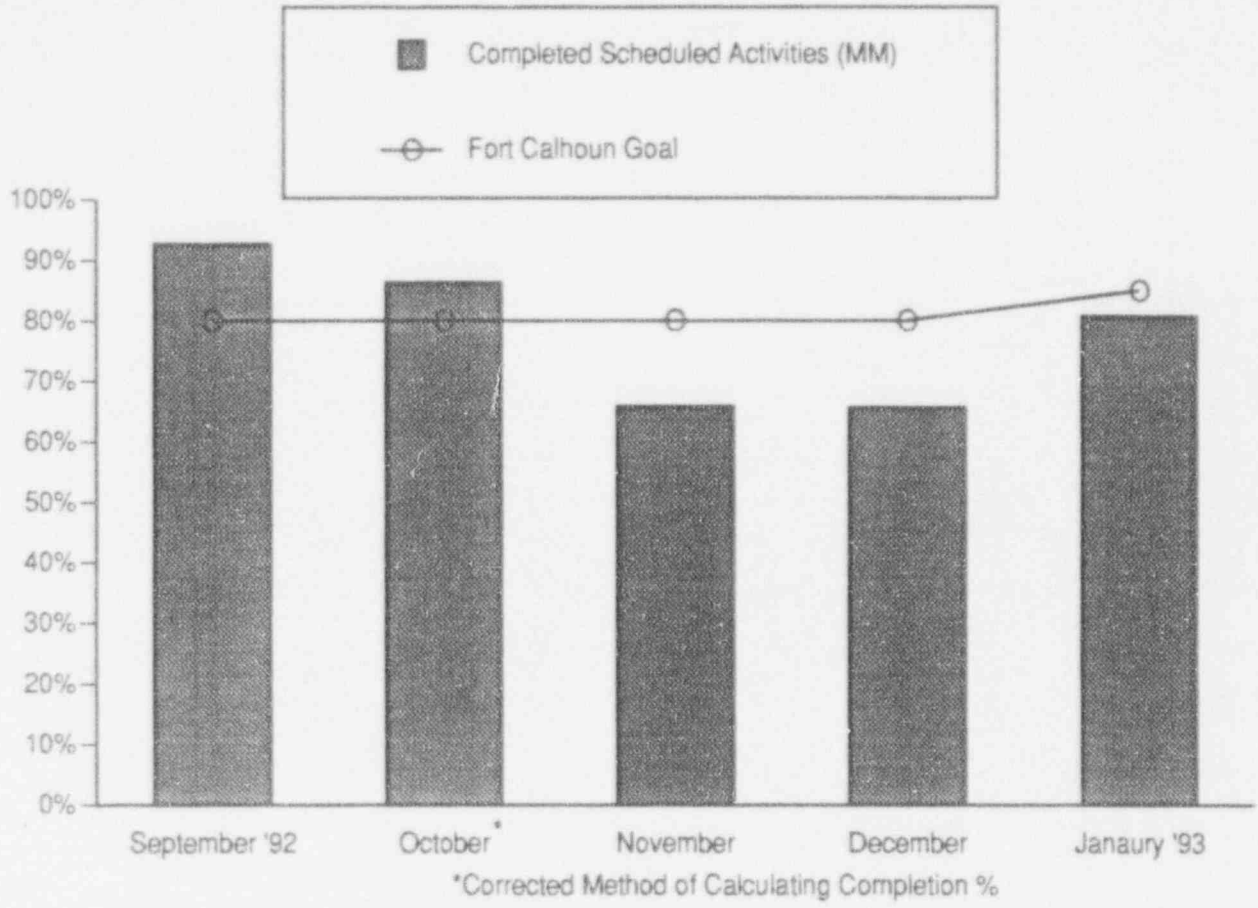
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning General Maintenance. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

The 1993 Fort Calhoun Station monthly goal for this indicator is a minimum of 85%. The 1992 monthly goal was a minimum of 80%.

Reporting Month	Completed Scheduled Activities
September	77.7%
October	88.4%
November	70.4%
December	49.2%
January	53.9%

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

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (MECHANICAL MAINTENANCE)

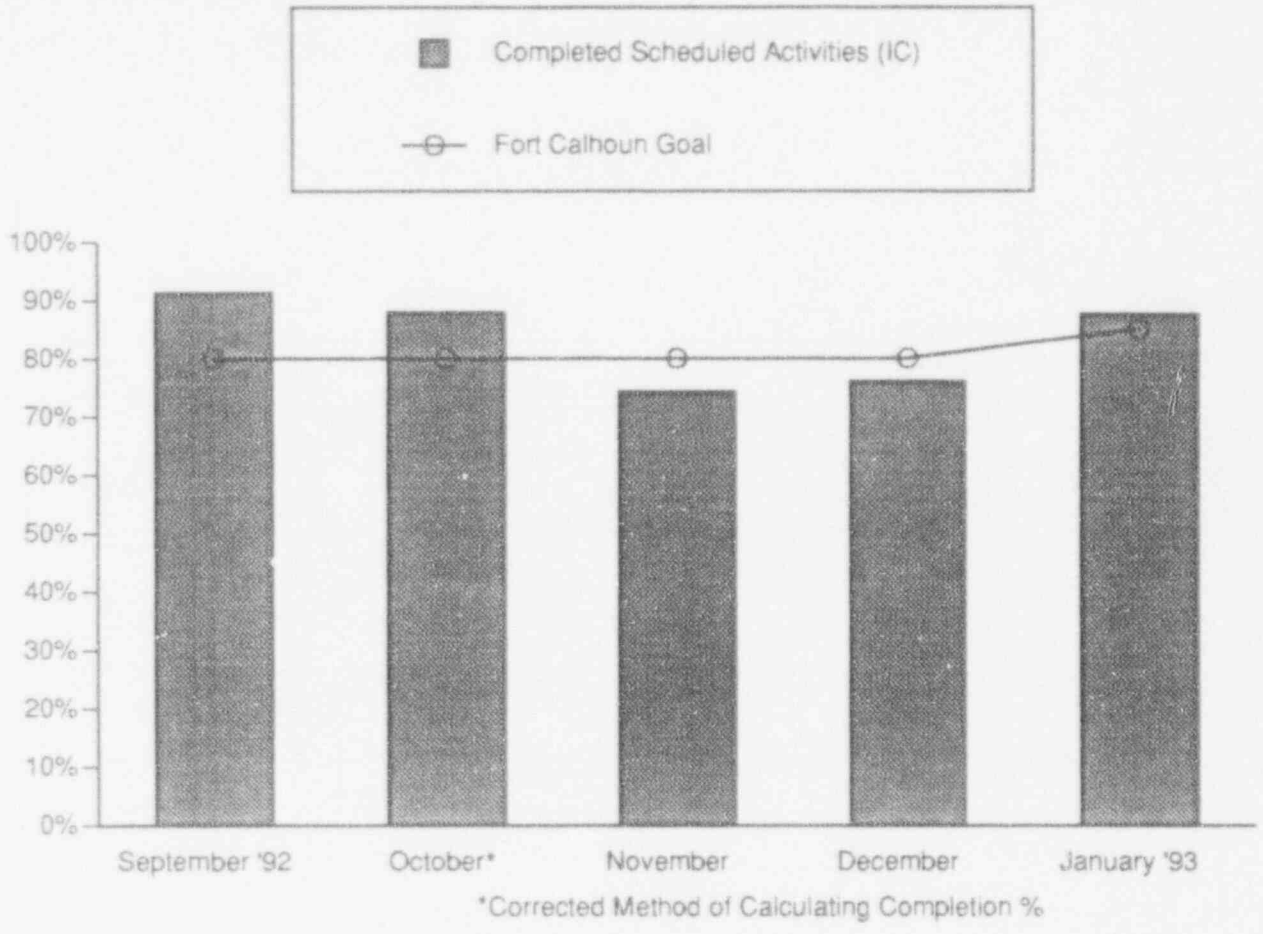
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning Mechanical Maintenance. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

The 1993 Fort Calhoun Station monthly goal for this indicator is 85%. The 1992 monthly goal was a minimum of 80%.

Reporting Month	Completed Scheduled Activities
September	92.7%
October	86.3%
November	65.8%
December	65.6%
January	80.7%

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

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (INSTRUMENTATION & CONTROL)

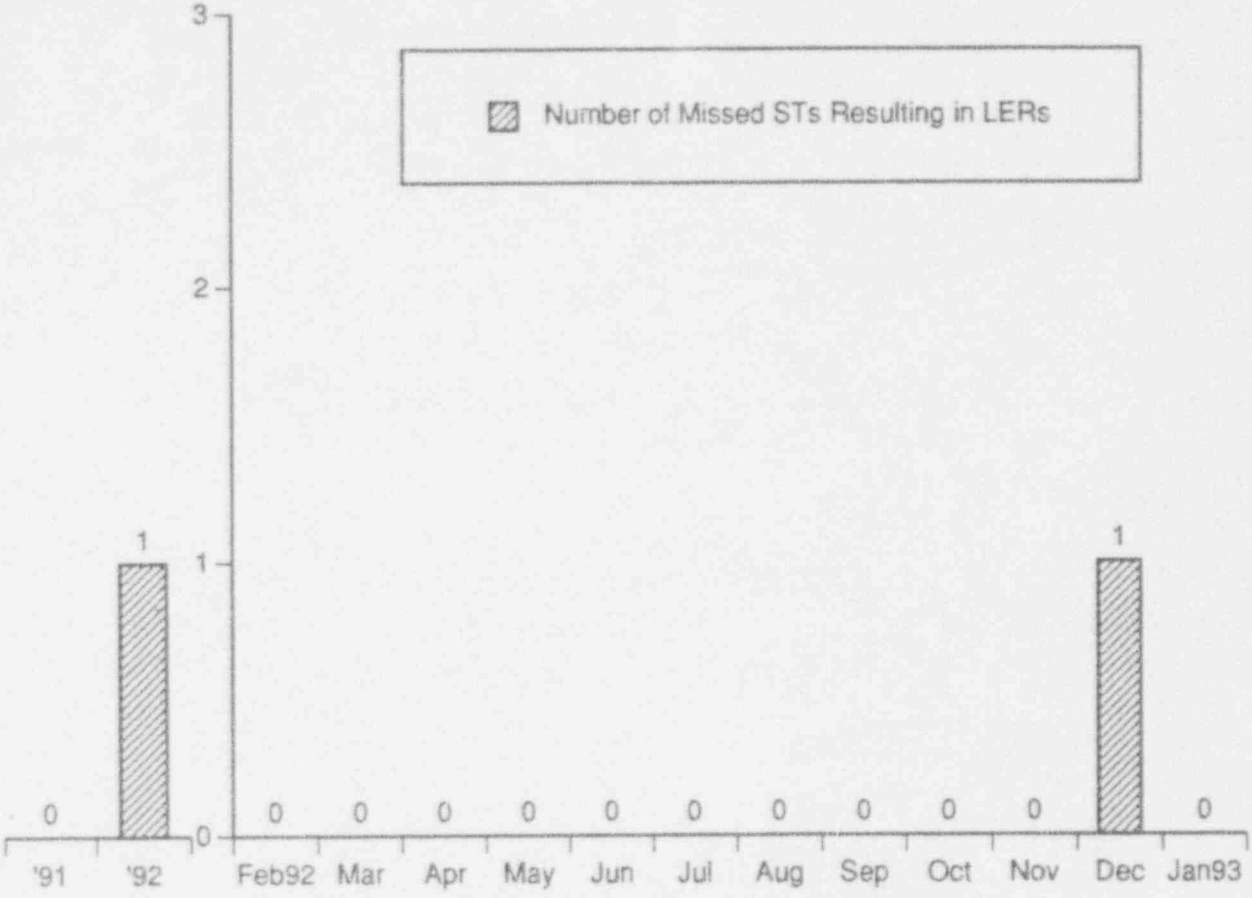
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning Instrumentation & Control. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

The 1993 Fort Calhoun Station monthly goal for this indicator is a minimum of 85%. The 1992 monthly goal was a minimum of 80%.

Reporting Month	Completed Scheduled Activities
September	91.2%
October	87.8%
November	74.2%
December	75.3%
January	87.5%

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

SEP 33



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.

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.

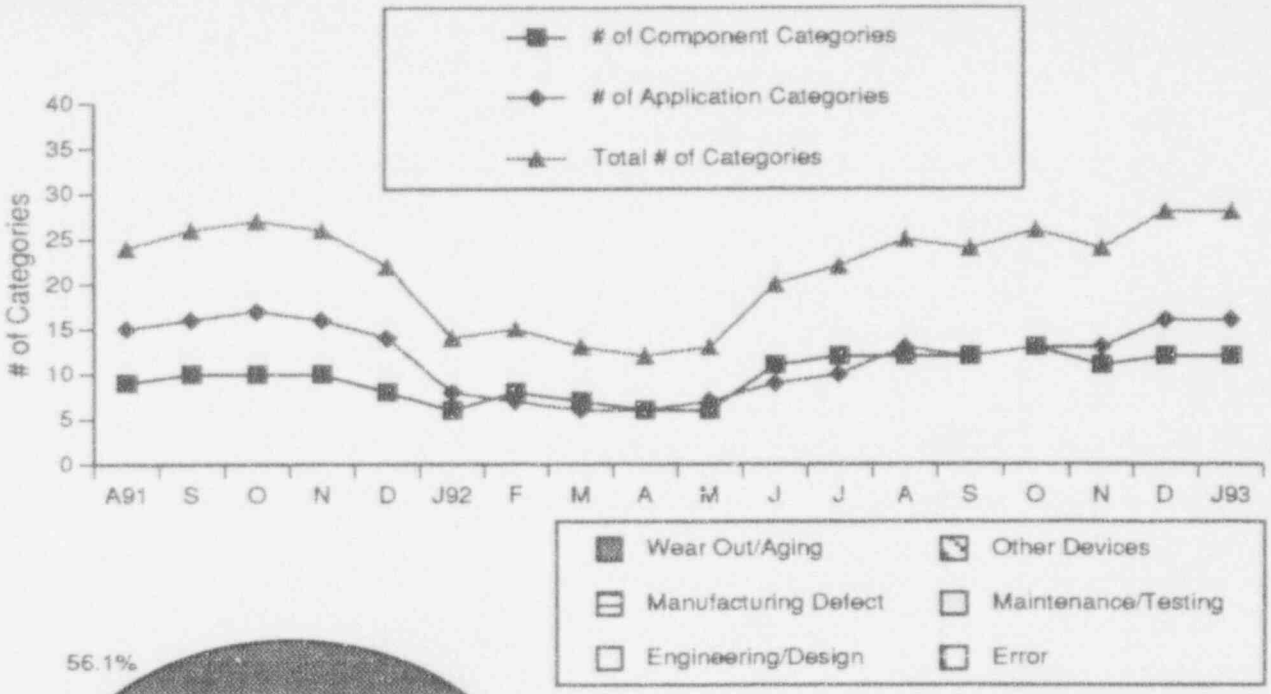
The 1993 and 1992 Fort Calhoun goals for this indicator are zero.

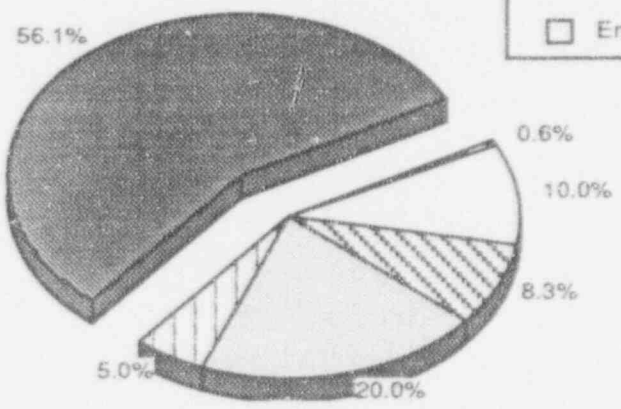
Data Source: Monthly Operating Report & Plant Licensee Event Reports (LERs)

Accountability: Chase/Jaworski

Adverse Trend: None

SEP 60 & 61





Percent of Total Failures During the Past 18 Months

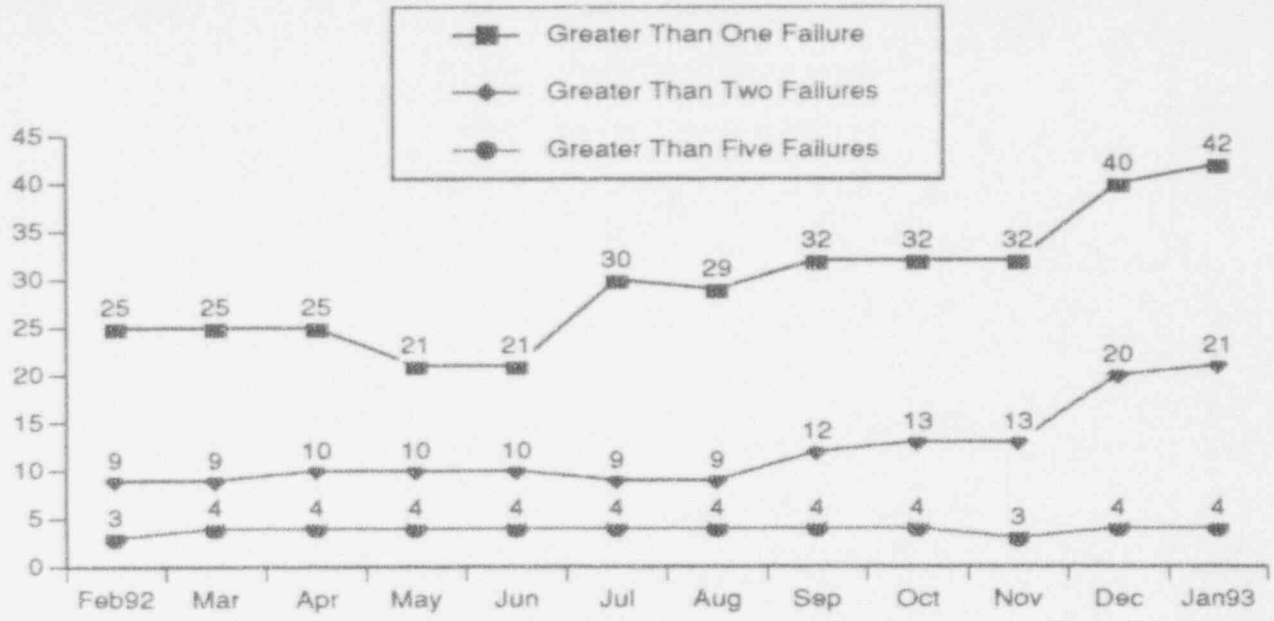
COMPONENT FAILURE ANALYSIS REPORT (CFAR) SUMMARY

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 August 1991 through January 1993). Fort Calhoun Station reported a higher failure rate in 12 of the 87 component categories (valves, pumps, motors, etc.) during the past 18 months. The station reported a higher failure rate in 16 of the 140 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 194 failure reports that were submitted to INPO by Fort Calhoun Station during the past 18 months. Of these, the failure cause was known for 180. The pie chart reflects known failure causes.

The recent increase in the failure rate for 1992 can be explained by an increase in failures reported to INPO due to changes in INPO reporting guidance. Also, 1992 was a refueling outage year, and refueling outage years historically have higher failure rates than non-outage years.

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



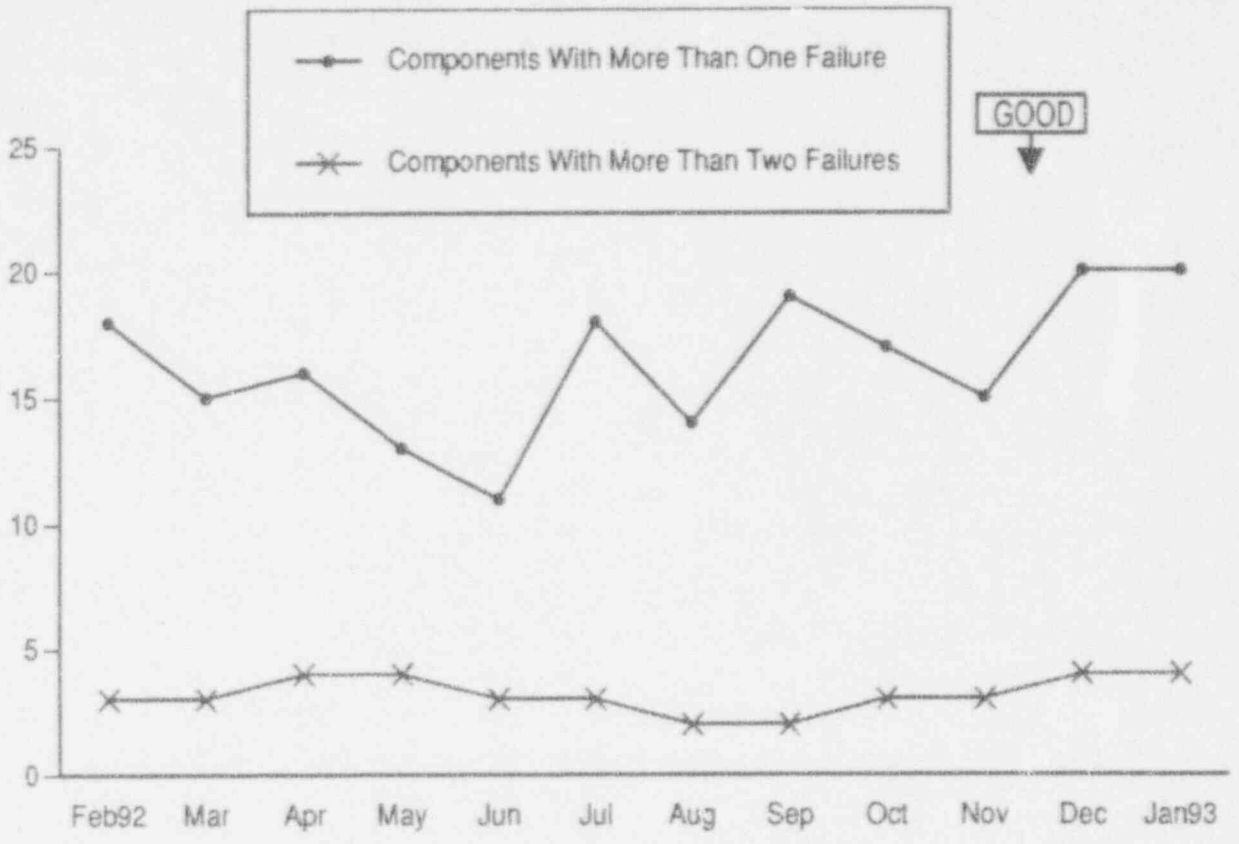
NUMBER OF NPRDS MULTIPLE FAILURES

This indicator shows the number of multiple NPRDS reportable failures over the preceding eighteen months sorted by component manufacturer and model number. The indicator is divided into three parts: manufacturer model numbers with more than one failure in eighteen months, manufacturer model numbers with more than two failures in eighteen months, and manufacturer model numbers with more than five failures in eighteen months.

The purpose of this indicator is to use NPRDS to determine when a particular component model has undergone considerable maintenance. This information should be used to determine if adequate parts are still in stock for this component model.

During the past eighteen months, there were 42 model types that had more than one failure in eighteen months. 21 of these had more than two failures. 4 component types: General Electric 50-570-01 power supplies, Byron Jackson 28RXL pumps, Jayco Incorporated 150 valves and Gaulin P18 pumps had more than five failures. The model types with more than two failures are: GE AK-2A-25 circuit breakers (4 failures), GE THEF circuit breakers (3 failures), Electromotive Diesel Generator Motor (3 failures), CE DT-1748-1 computation module (3 failures), Fisher 546 computation module (3 failures), S-P Manufacturing DA3R computation modules (3 failures), General Electric 50-570 power supplies (12 failures), Byron Jackson DVMX pumps (3 Failures), Byron Jackson 28 RXL pumps (6 failures), Gaulin P18 pumps (7 failures), GE 12HEA61 relays (4 failures), Crosby HB-BP-86 valves (4 failures), Dresser 1975C valves (3 failures), Dresser 3707RAX valves (3 failures), Jayco Incorporated 150 valves (6 failures), Norgren 11-024-0 valves (4 failures), Copes-Vulcan D-100-60 valve operators (3 failures), Power Conversion Products Battery Charger (3 failures), Sigma 9223 Indicator/ switches (3 failures) and Fisher Controls 657-60 valve operators (3 failures).

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



MAINTENANCE EFFECTIVENESS

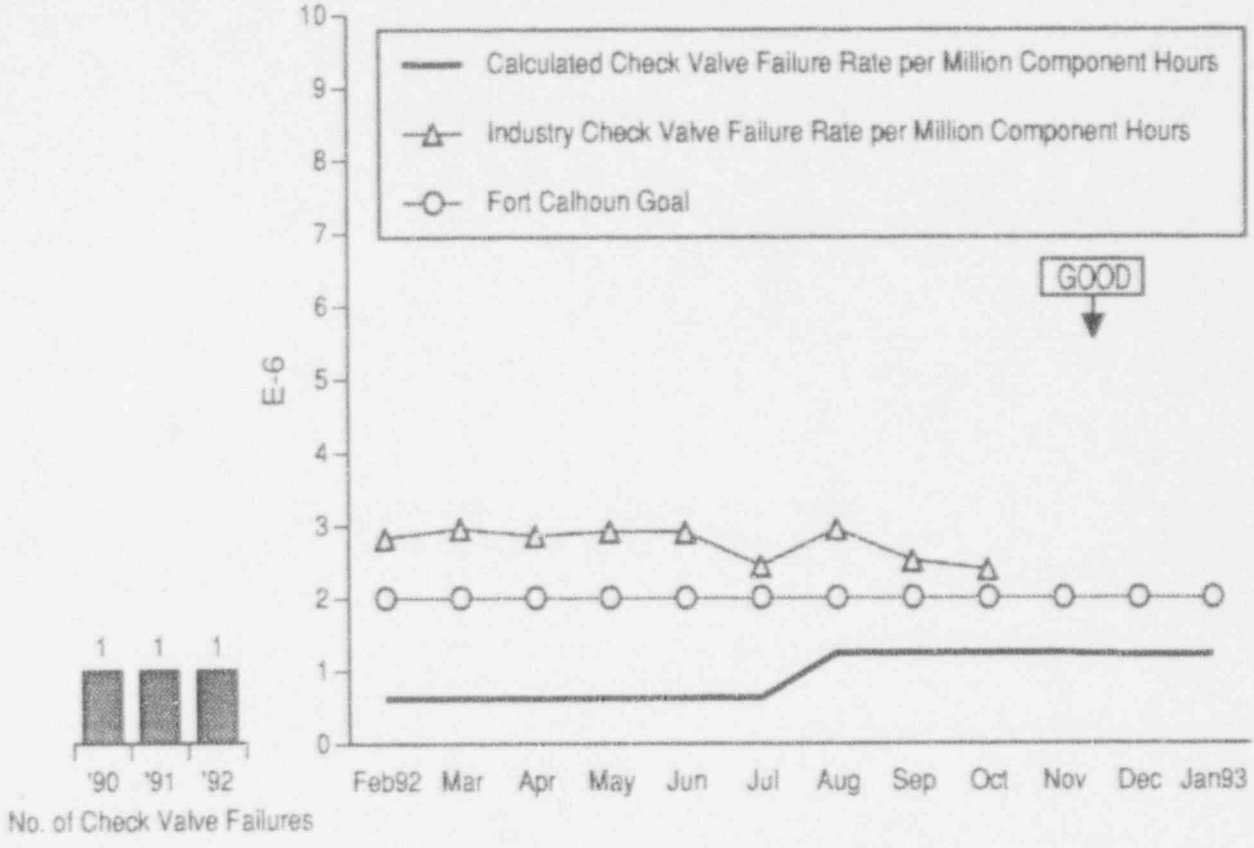
The Maintenance Effectiveness Indicator was developed following guidelines set forth by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data (NRC/AEOD). The NRC/AEOD is currently developing and verifying a maintenance effectiveness indicator using the Nuclear Plant Reliability Data System (NPRDS) component failures.

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 20 NPRDS components with more than 1 failure. 4 of the 20 had more than two failures. The tag numbers of the components with more than two failures are CH-1A, CH-1B, EE-1G-M and RC-142.

The recent increase in component failures during the last eighteen months for Fort Calhoun Station is under investigation by the System Engineering Department's Test and Performance Group. The investigation is expected to be completed next month.

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 October 1992, the Fort Calhoun Station reported an actual check valve failure rate of 1.21 E-6, while the industry reported an actual failure rate of 2.39 E-6. The increase in the failure rate for the month of August is due to the failure of check valve CH-288. At the end of January 1993, the Fort Calhoun Station reported a calculated check valve failure rate of 1.21 E-6.

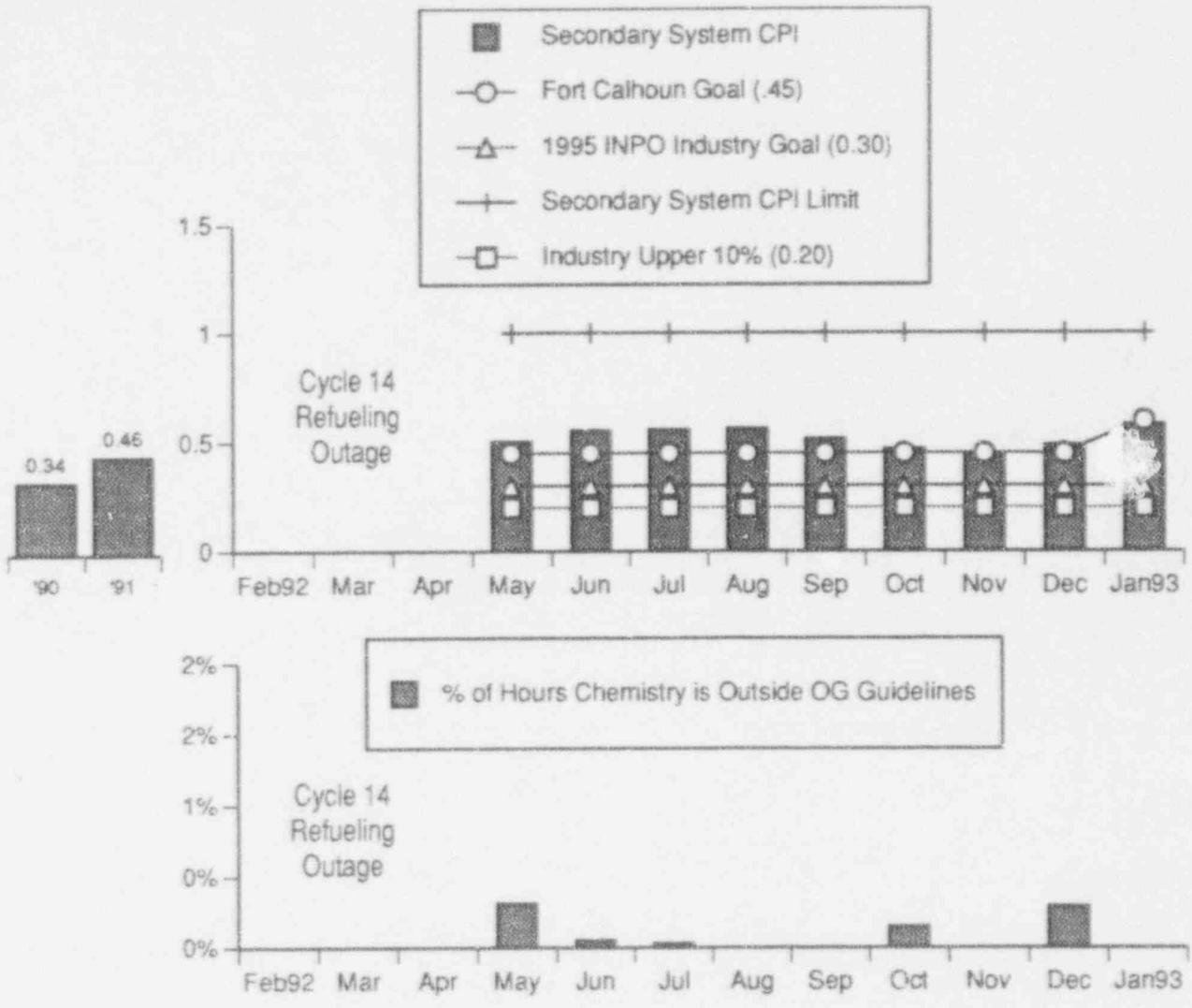
The 1993 and 1992 Fort Calhoun goals for this indicator are a maximum failure rate of 2.00 E-6.

Data Source: Jaworski/Dowdy (Manager/Source)

Accountability: Jaworski/Rollins

Adverse Trend: None

SEP 43



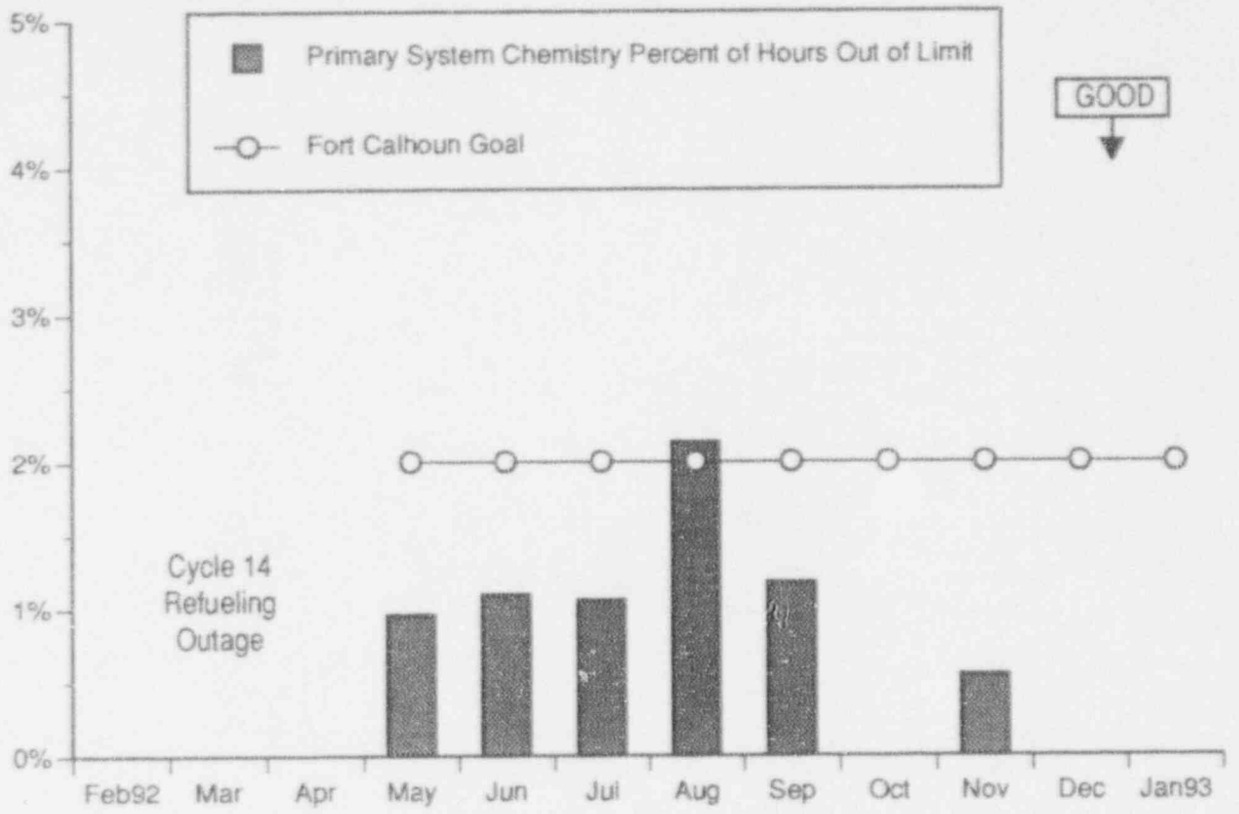
SECONDARY SYSTEM CHEMISTRY

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 was reported as 0.582 for the month of January 1993. The percent of hours outside the OG guidelines was reported as 0% for the month.

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 industry upper ten percentile value for this indicator was approximately 0.20 for the twelve months from 7/91 through 6/92.

Data Source: Franco/Glantz (Manager/Source)
Accountability: Chase/Schmidt
Adverse Trend: None



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. Typically, lithium is the parameter that is out of limit. 100% equates to all six parameters being out of limit for the month.

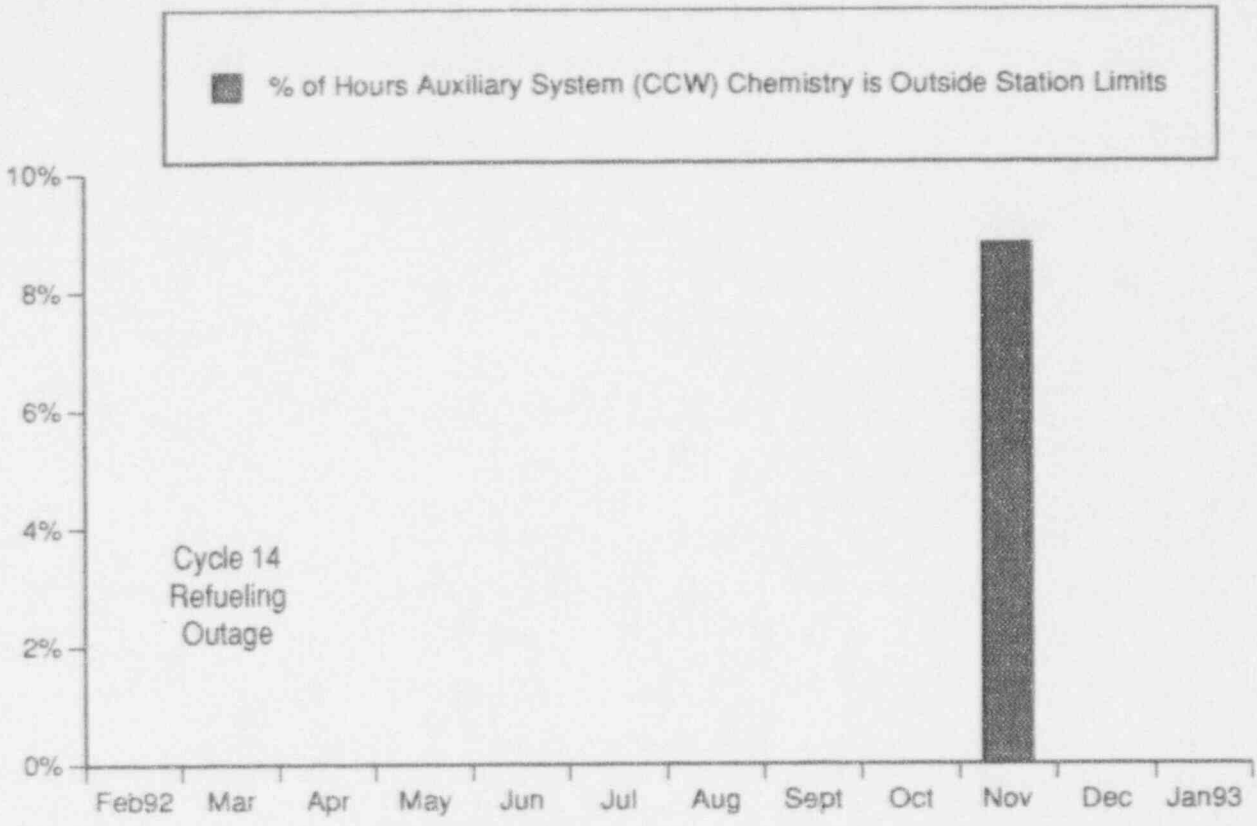
The Primary System Chemistry Percent of Hours Out of Limit was reported as 0% for the month of January 1993.

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

Data Source: Franco/Glantz (Manager/Source)

Accountability: Chase/Smith

Adverse Trend: None



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

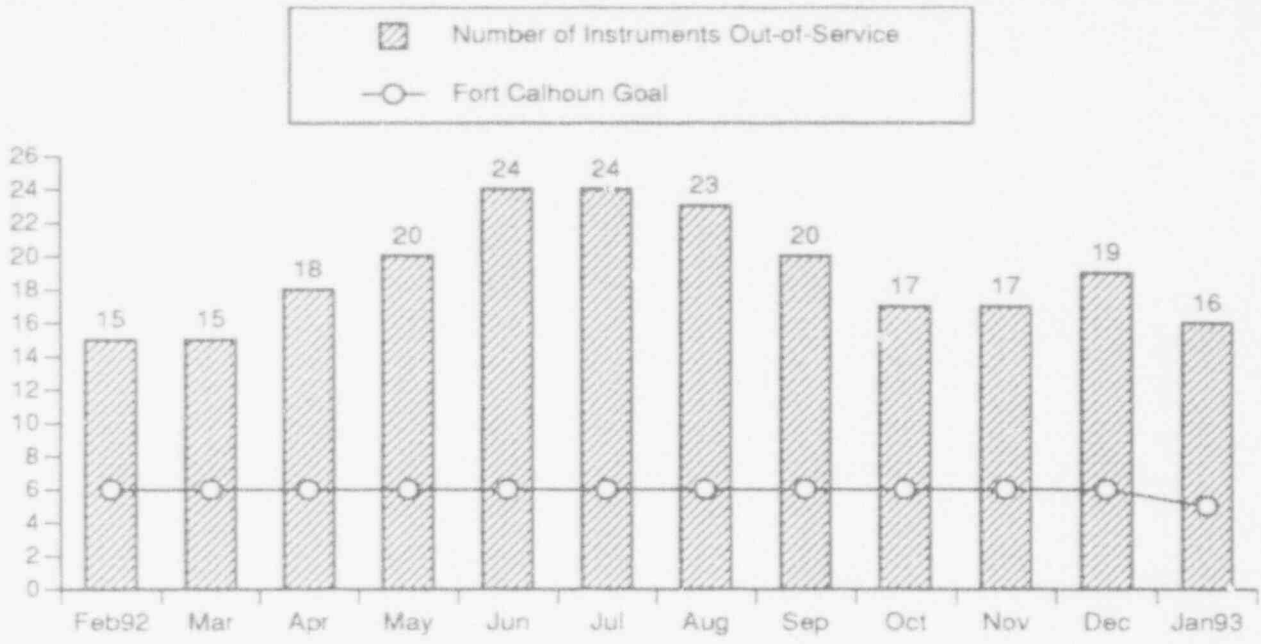
The Auxiliary System Chemistry Percent of Hours Outside Station Limits indicator tracks the monthly percent of hours that the Component Cooling Water (CCW) system is outside the station chemistry limit.

The auxiliary system chemistry percent of hours outside station limits was reported as 0% for the month of January 1993. The high value (8.8%) reported for November was attributable to nitrites, which were lower than specifications. Prior to November, the last outside of station limits condition occurred in June 1991 and was due to a low nitrite level in CCW coolant.

Data Source: Franco/Glantz (Manager/Source)

Accountability: Chase/Smith

Adverse Trend: None



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).

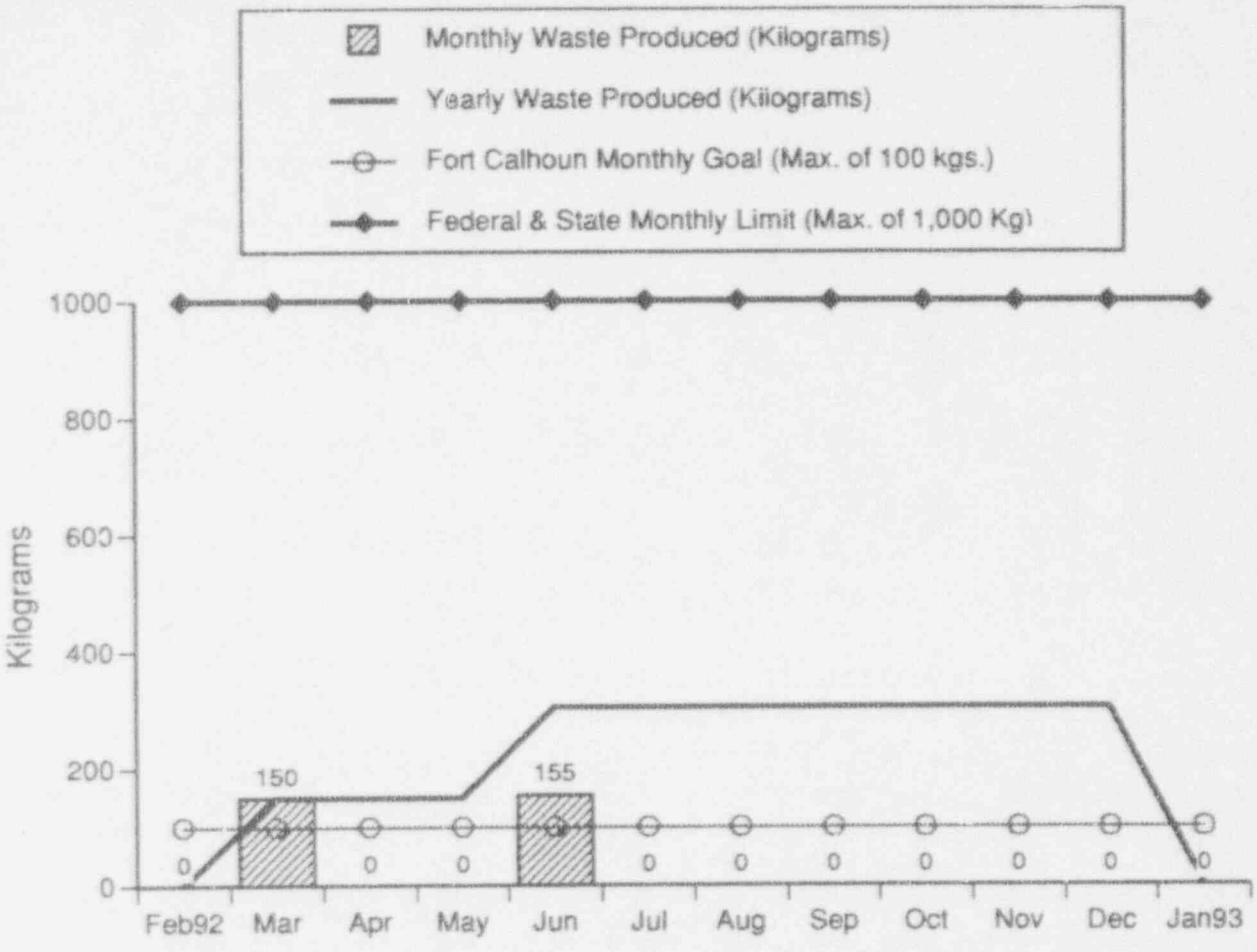
At the end of January there was a total of 16 in-line chemistry instruments out-of-service. Of these 16 instruments, 14 were from the Secondary System and 2 were from PASS.

The trend for PASS instruments for this reporting period has decreased due to PASS liquid isotopic detector being placed in service. The trend for Secondary instruments this reporting period has decreased by two. The entire secondary panel remains out-of-service because of failure of the AI-125 data logger. (ECN 92-469 has been issued to replace the data logger). Three instruments are out-of-service on AI-107, two because of recorder failure and one because of instrument malfunction. One 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, 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 Fort Calhoun each month, the monthly 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 January 1993, 0 kilograms of non-halogenated hazardous waste was produced, 0 kilograms of halogenated hazardous waste was produced, and 0 kilograms of other hazardous waste was produced. The yearly total for hazardous waste produced is 0 kilograms.

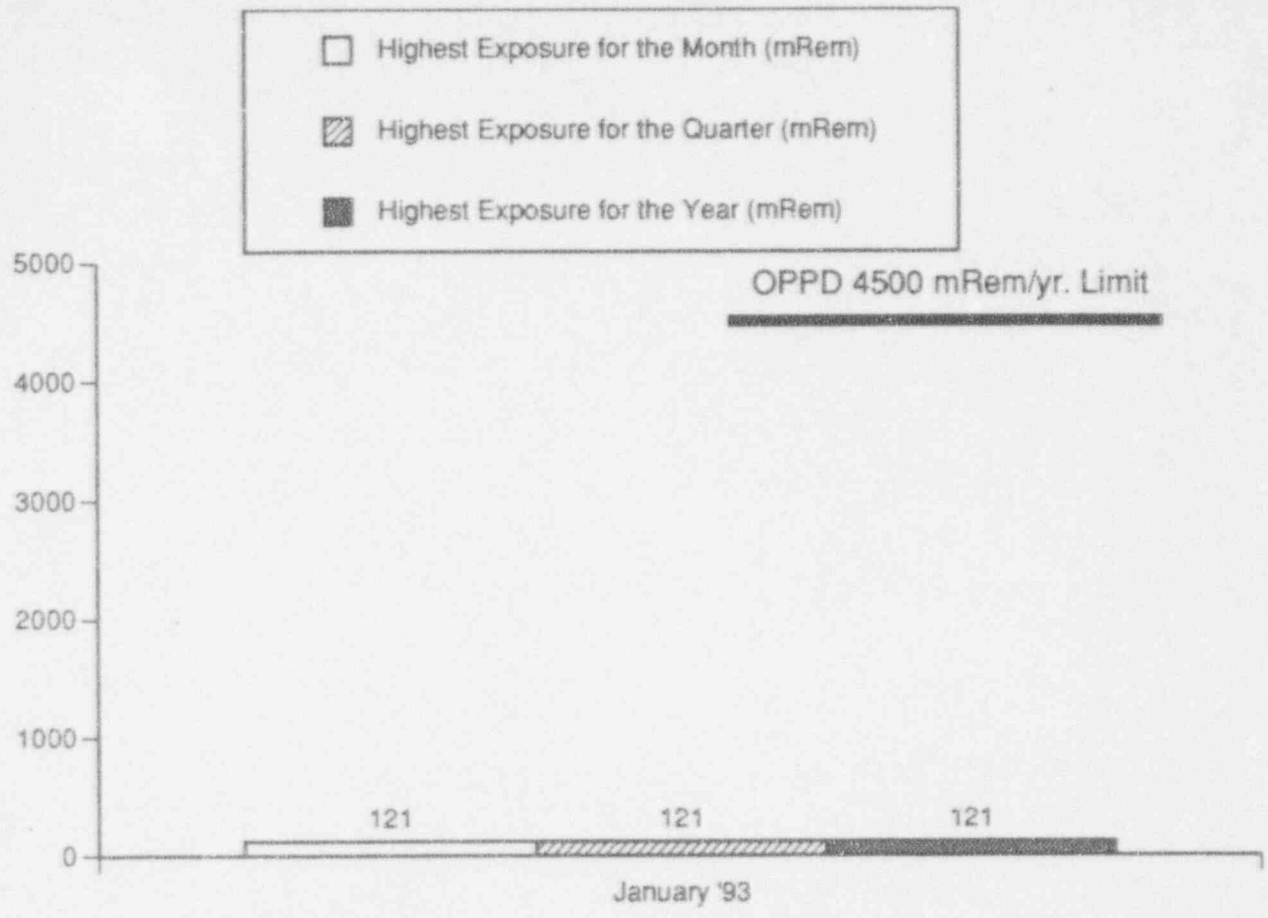
Hazardous waste is counted based upon a full drum of waste.

The 1993 goal for hazardous waste produced is a maximum of 100 kilograms per month.

Date Source: Chase/Henning (Manager/Source)

Accountability: Chase/Henning

Adverse Trend: None



MAXIMUM INDIVIDUAL RADIATION EXPOSURE

During January 1993, an individual accumulated 121 mRem which was the highest individual exposure for the month.

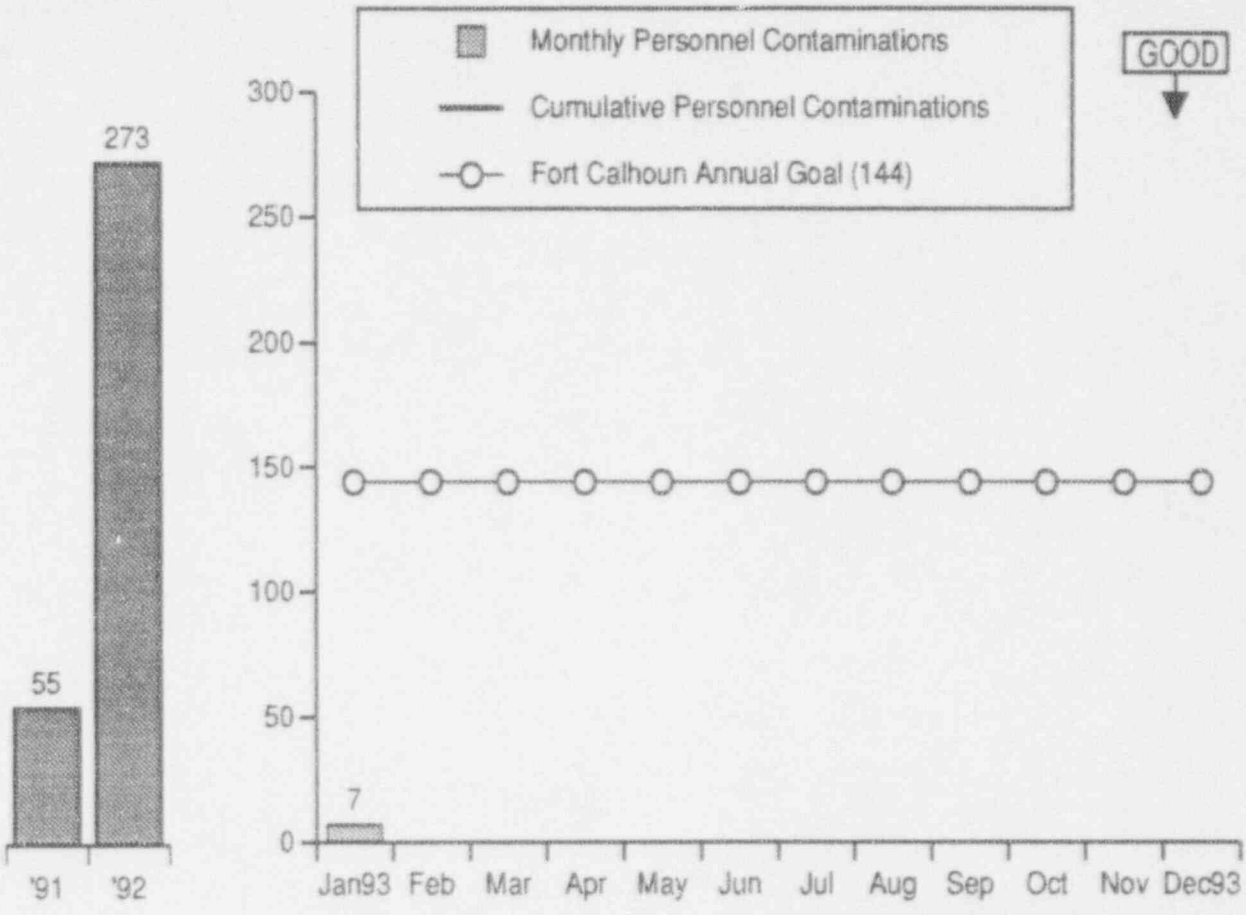
The maximum individual exposure to date for the first quarter of 1993 was 121 mRem.

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



TOTAL SKIN AND CLOTHING CONTAMINATIONS

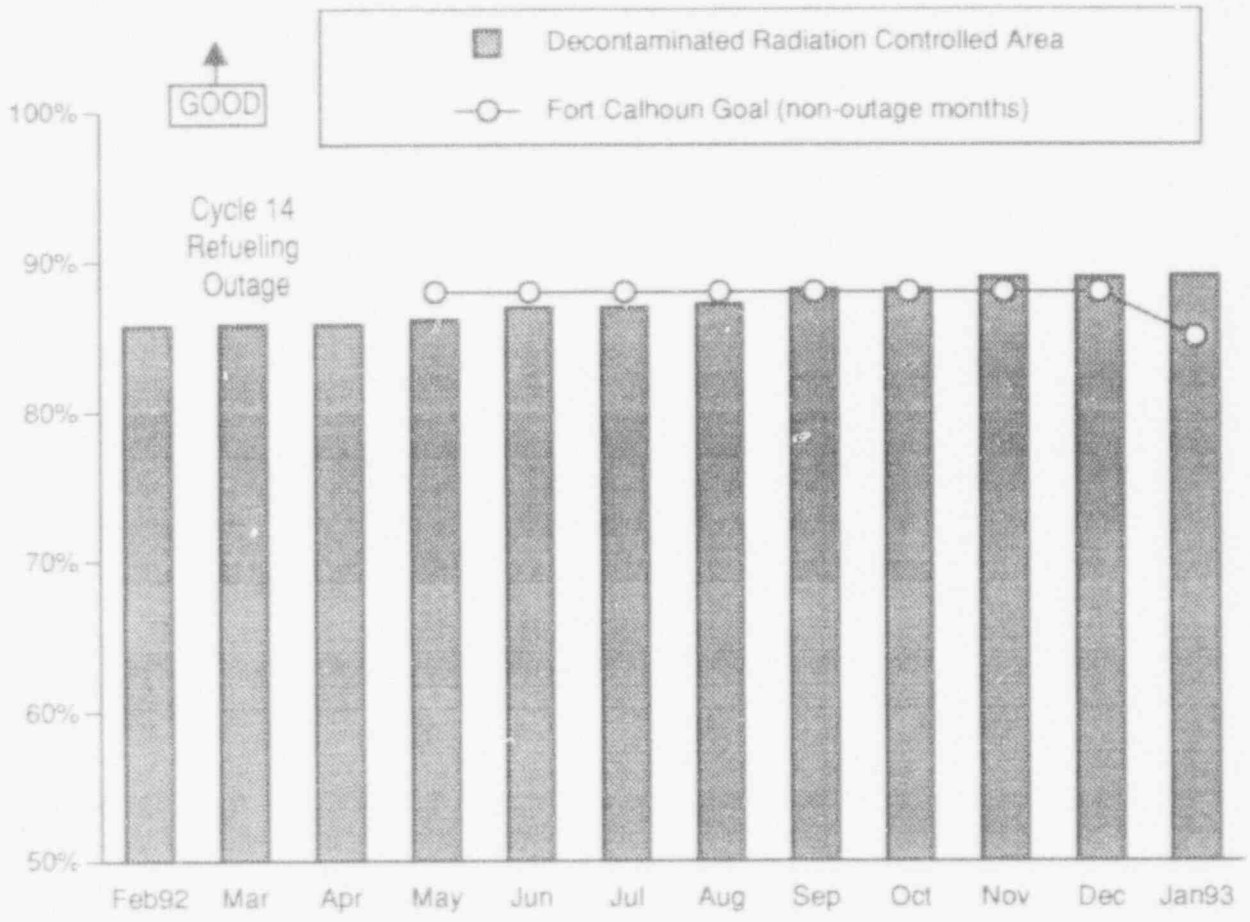
This indicator shows the number of skin and clothing contaminations for the reporting month. A total of 7 contaminations have occurred during January 1993. The contaminations were: 1) An individual's skin was contaminated when he touched an overhead pipe while turning off a door alarm box; 2) An individual's clothing was contaminated while removing a scaffold in Room 5 cage; 3) An individual received a skin contamination while in Room 67; 4) An individual received a clothing contamination while deposting a contaminated area in Room 68 5) An individual received a clothing contamination while touring clean areas of the Aux. and Radwaste Buildings; 6) An individual was contaminated while surveying lead blankets in the countroom; and 7) An individual was contaminated while frisking and handling freshly laundered PCs.

There was a total of 273 skin and clothing contaminations in 1992. There was a total of 55 skin and clothing contaminations in 1991.

The 1993 goal for skin and clothing contaminations is a maximum of 144.

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

SEP 15 & 54



DECONTAMINATED RADIATION CONTROLLED AREA

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

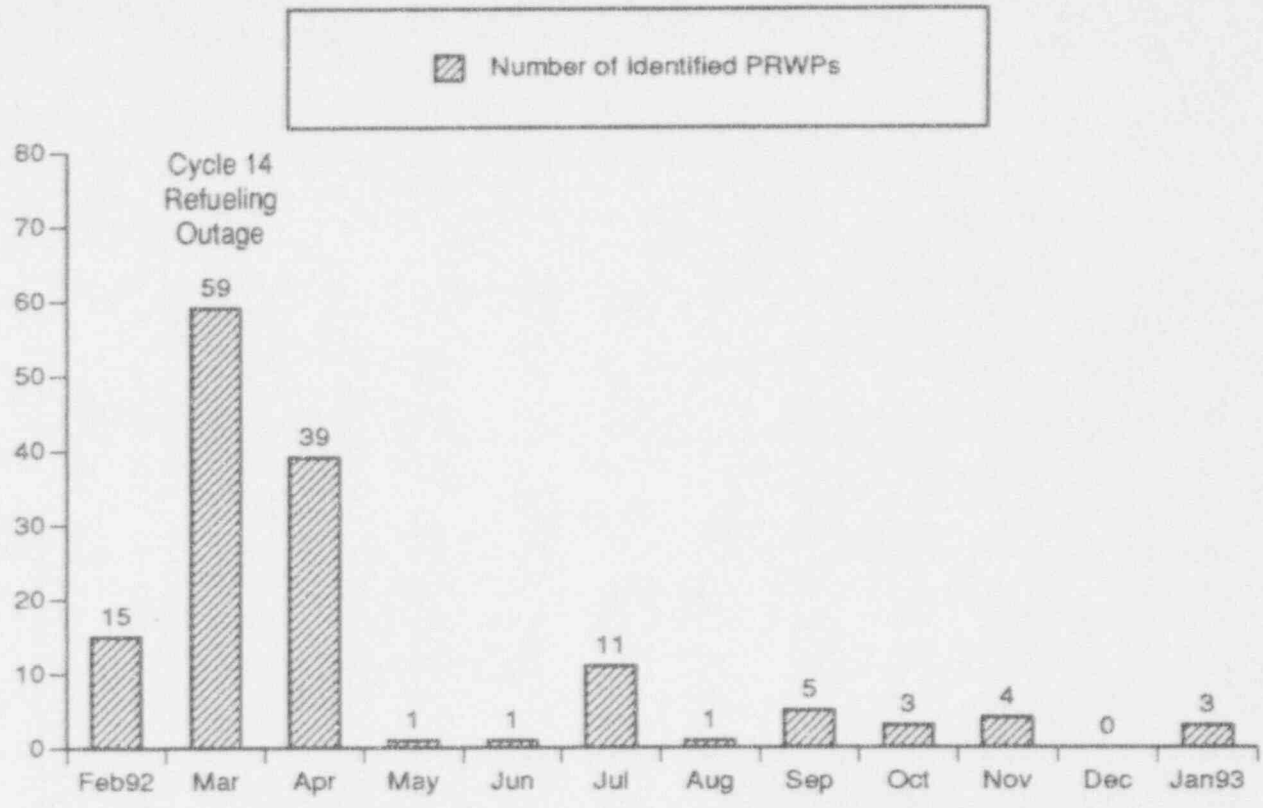
At the end of the reporting month, 89.1% of the total square footage of the RCA was decontaminated.

Date Source: Chase/Gundal (Manager/Source)

Accountability: Chase/Lovett

Adverse Trend: None

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 a review of the monthly Radiological Occurrence Reports and Personnel Contamination Reports.

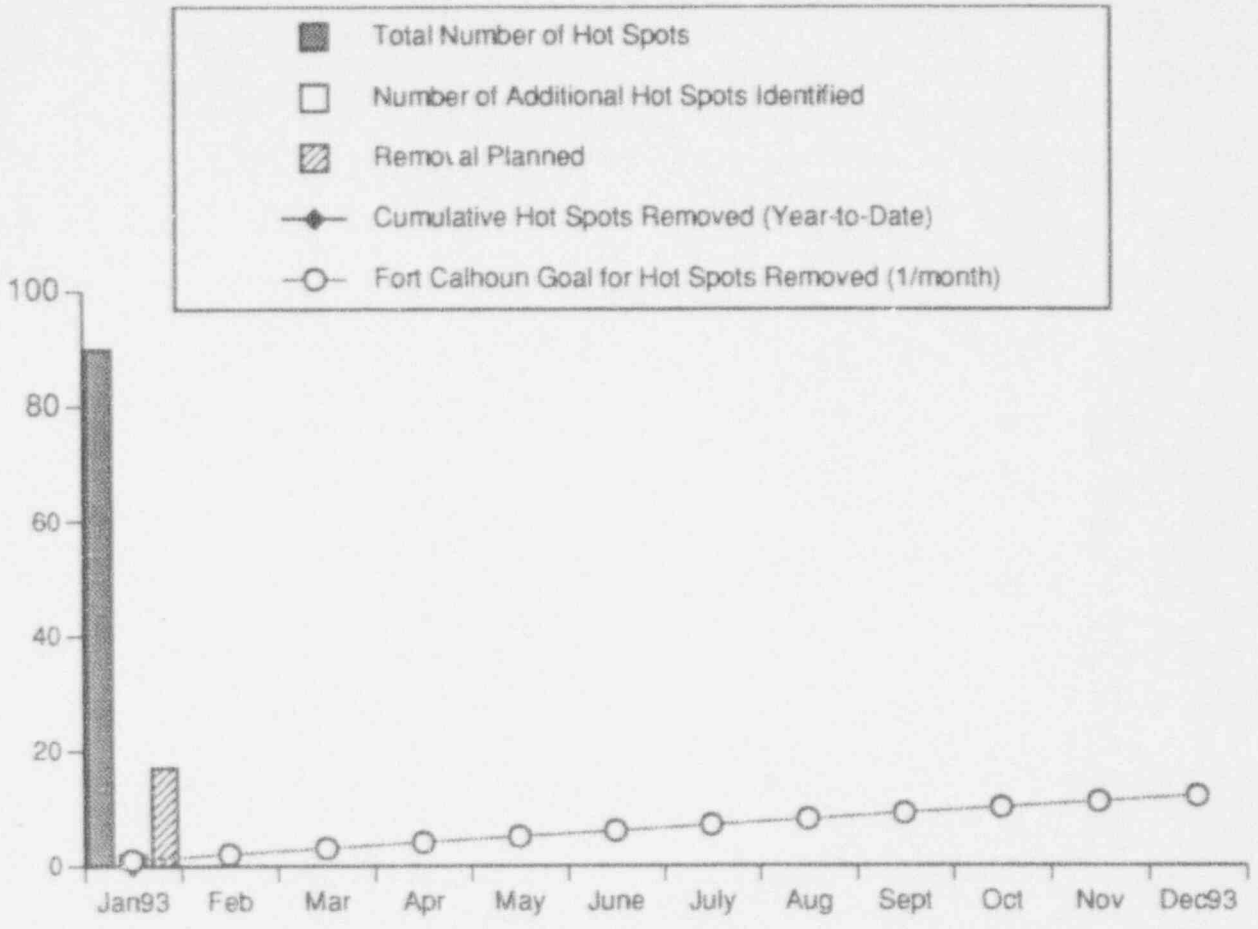
The number of PRWPs which are identified each month should indirectly provide a means to qualitatively assess supervisor accountability for their workers' radiological performance.

During the month of January 1993, the following 3 PRWPs (2 PCRs and 1 ROR) were identified: 1) an individual received a skin contamination after handling an overhead pipe which later proved to be contaminated; 2) an individual received a clothing contamination from floor paint chips while posting an area as contaminated; and 3) an individual read and signed an RWP, but failed to receive dosimetry or be logged into PRISM before entering the RCA.

The 1993 monthly 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

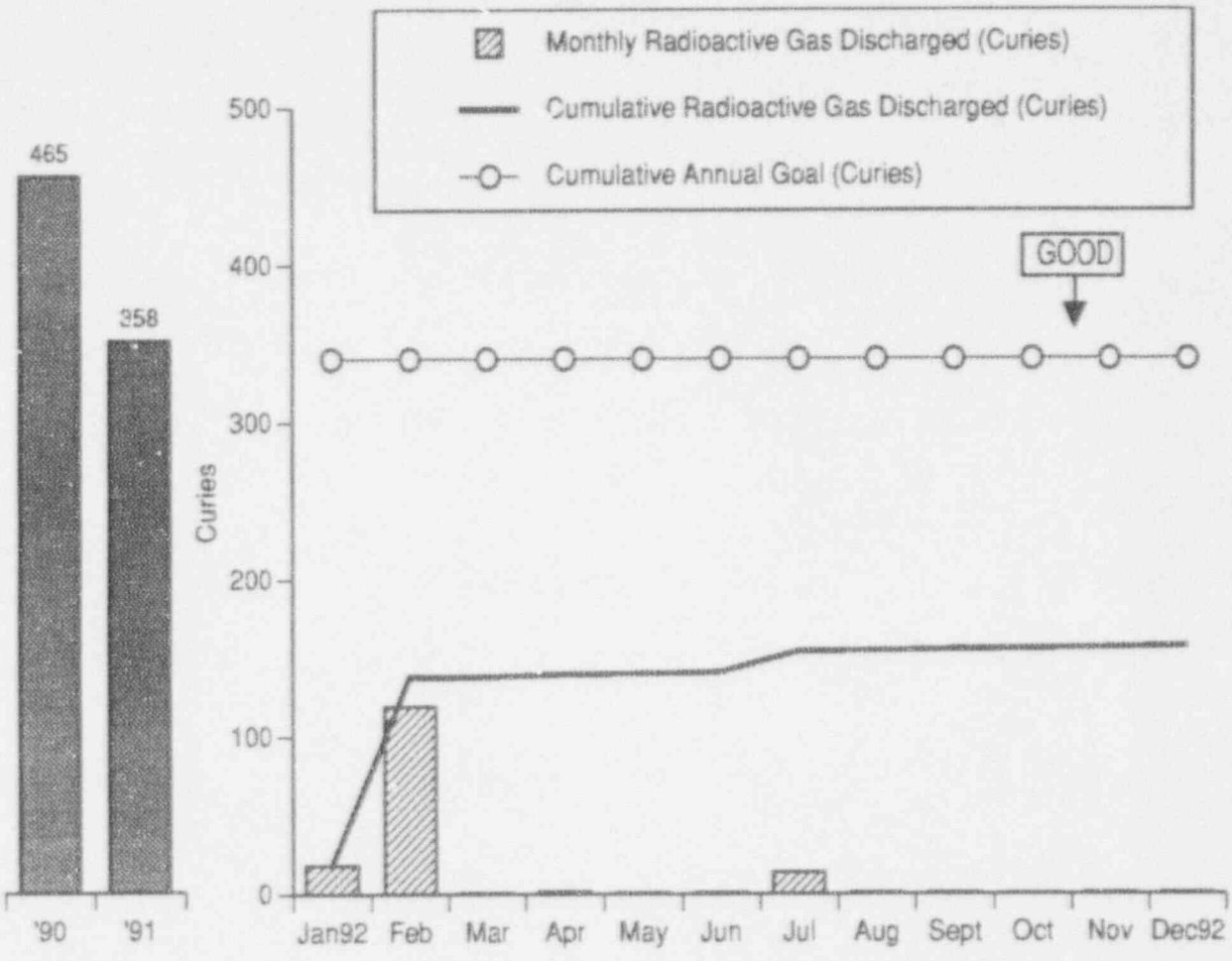
This indicator shows the total number of hot spots which have been identified to exist in the Fort Calhoun Station and have been documented through the use of a hot spot identification sheet. A hot spot is defined as a small localized source of high radiation. A hot spot occurs when the contact dose 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.

At the end of January 1993, there were 90 hot spots identified. No (0) hot spots were removed during the month. 2 new hot spots were identified in January in the following locations: 1) On the southeast end of the shutdown cooling heat exchanger in Room 15; 2) On the RCS supply to the shutdown cooling heat exchanger in Room 14.

Removal is planned for 17 hot spots.

The 1993 Fort Calhoun goal is to remove one hot spot per month.

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



GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT.

The gaseous radioactive waste being discharged to the environment is shown for January 1, 1992 through December 31, 1992. A total of 157.5 curies have been released to the environment during this time.

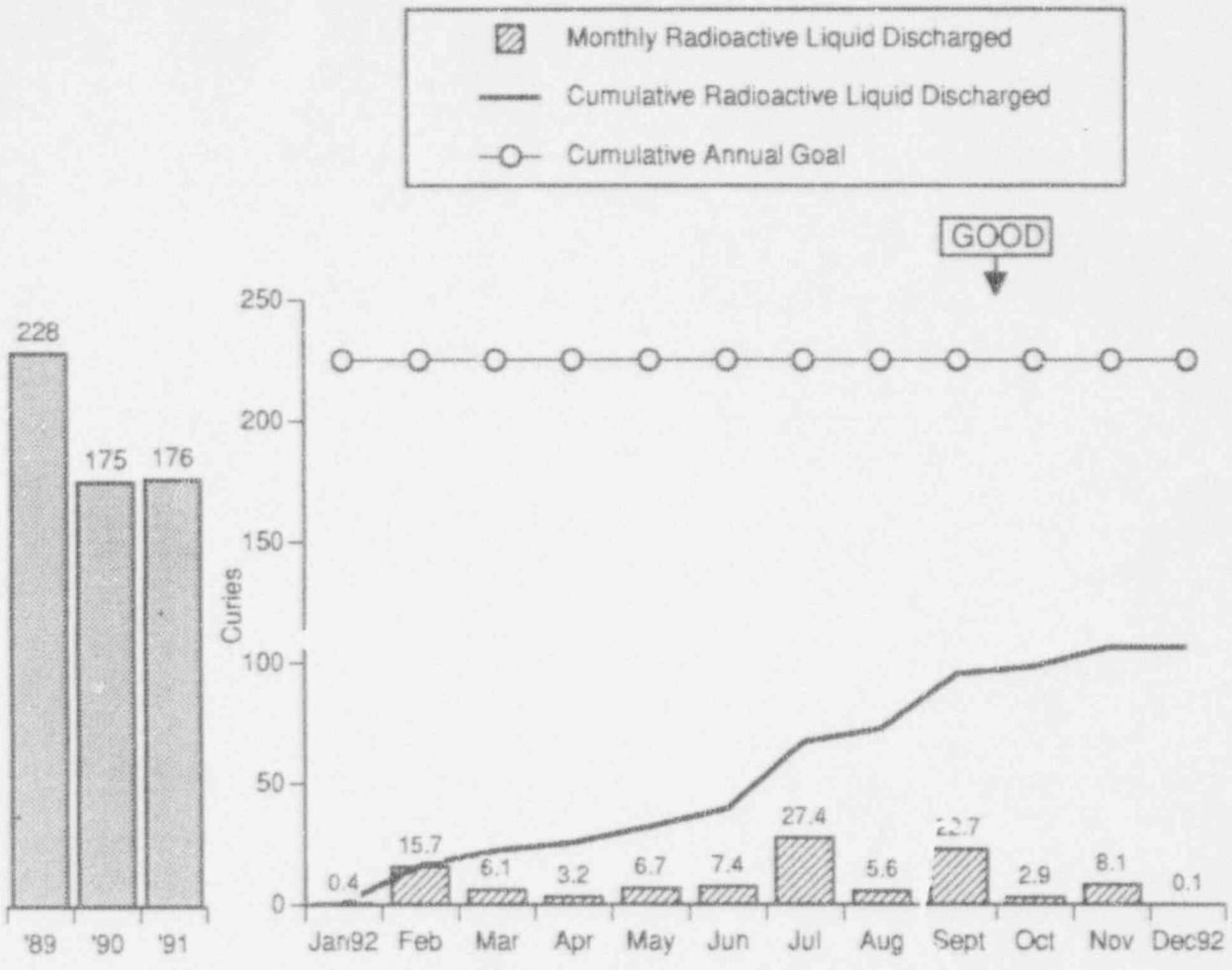
The Fort Calhoun Station cumulative annual goal for 1992 is a maximum of 340 curies.

The gaseous radioactive waste being discharged to the environment is calculated every six months.

Data Source: Franco/Krist (Manager/Source)

Accountability: Chase/Tills

Positive Trend



LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

The liquid radioactive waste being discharged to the environment is shown for January 1, 1992 through December 31, 1992. The liquid radioactive waste that was discharged to the environment from all sources totaled 106.3 curies during this time.

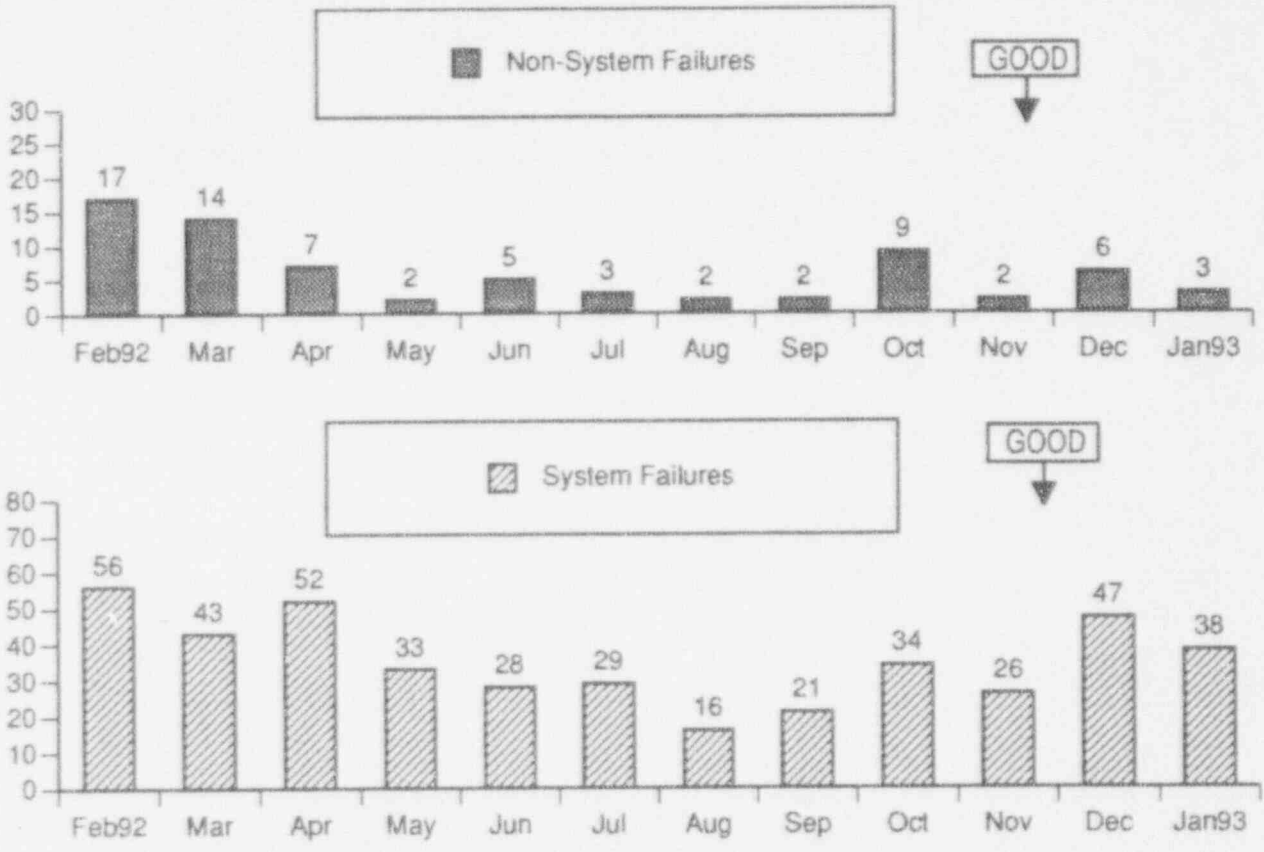
The Fort Calhoun Station cumulative annual goal for 1992 is a maximum of 225 curies.

The liquid radioactive waste being discharged to the environment is calculated every six months.

Data Source: Franco/Krist (Manager/Source)

Accountability: Chase/Lovett

Positive Trend



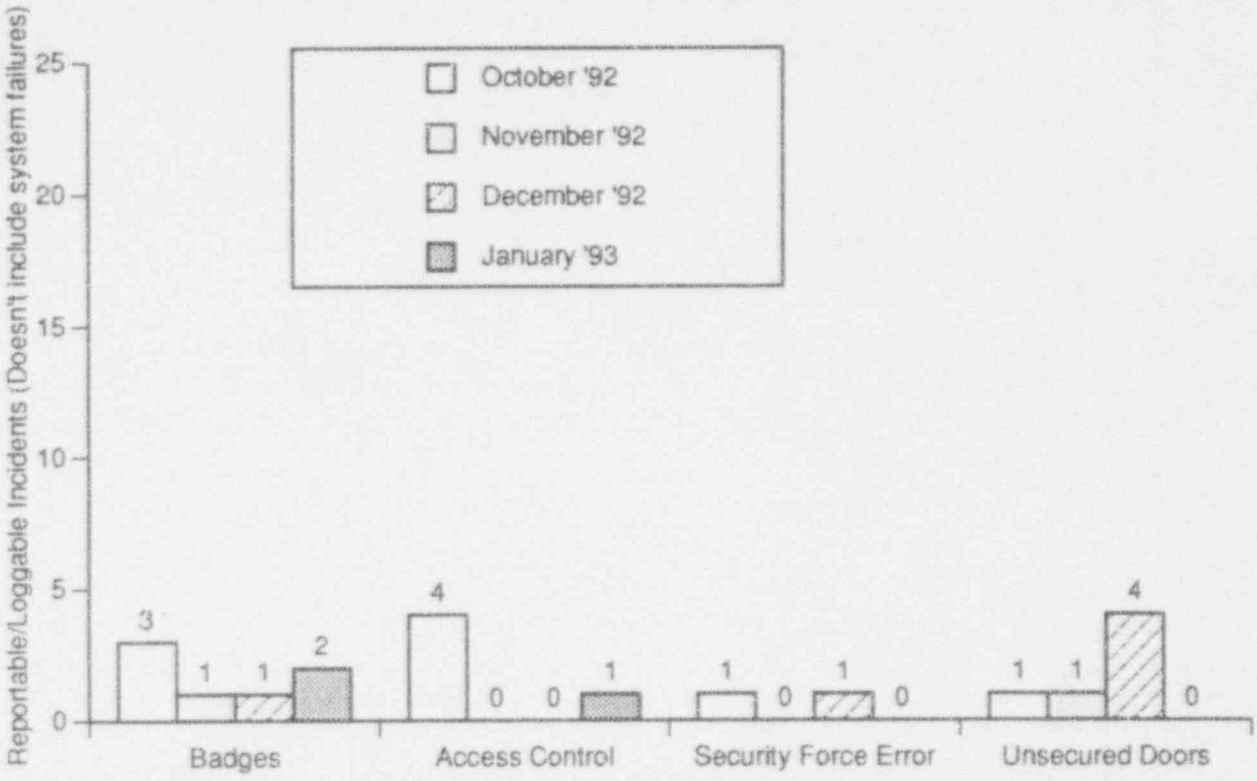
LOGGABLE/REPORTABLE INCIDENTS (SECURITY)

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 January 1993, there were 41 loggable/reportable incidents identified. System failures accounted for 38 (93%) of the loggable/reportable incidents, and 26 (68%) of these were environmental failures. The majority of the environmental failures continue to be camera sun glare (16 of the 26 loggables). An ECN to install sun shades on selected cameras around the perimeter was issued, however, the ECN is currently being revised to install sun shades on all perimeter cameras. This revision was based on a recent EAR analysis which recommended that sun shades be installed on all outside perimeter cameras. Other environmental failures were primarily due to severe weather conditions during the first part of the reporting month.

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

SEP 58



SECURITY NON-SYSTEM FAILURES

This indicator shows the number of loggable/reportable non-system failures for the reporting month. These items include: Security Badges, Access Control and Authorization, Security Force Error, and Unsecured Doors.

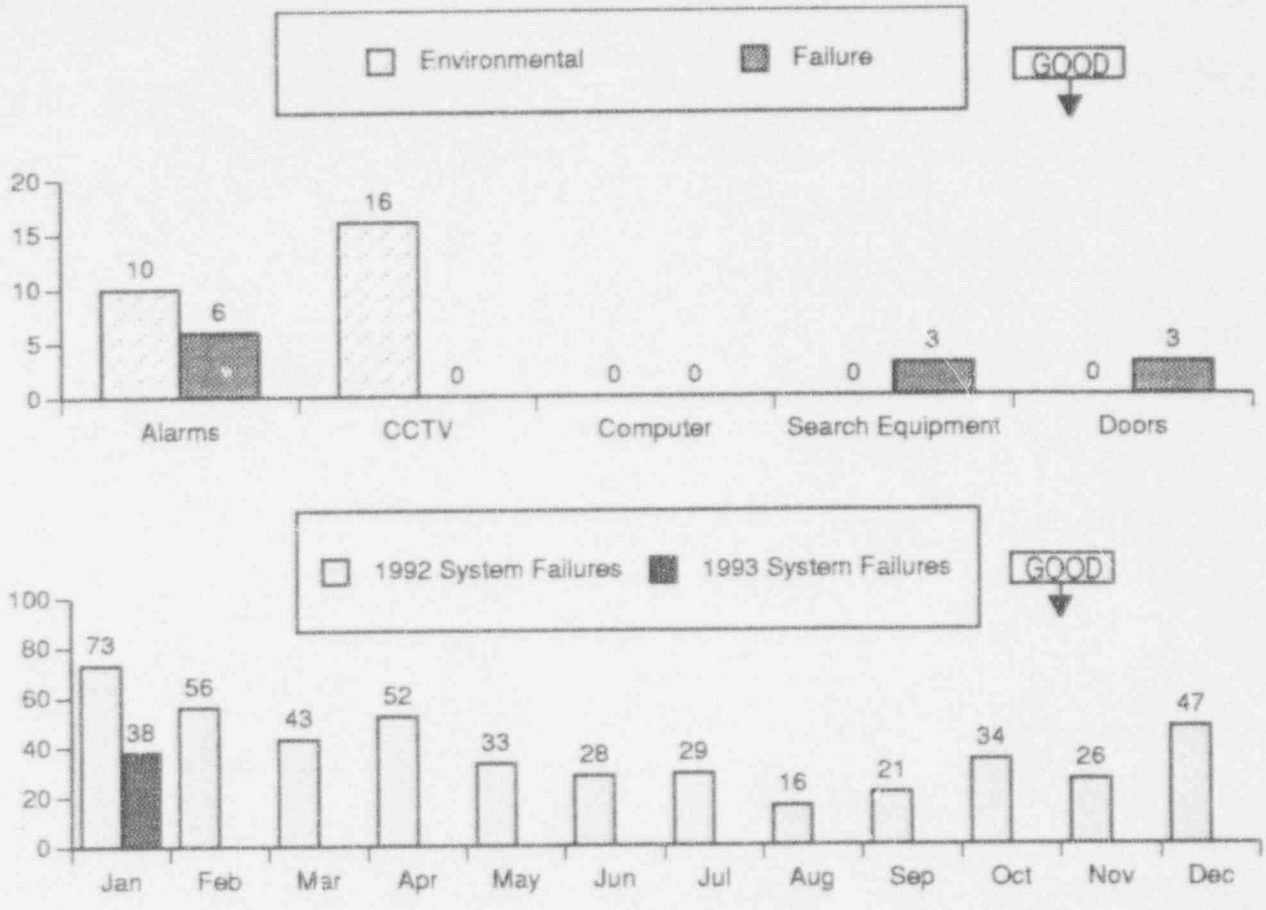
Non-System Failures	Number of Incidents	
	January '93	December '92
Security Badges	2	1
Access Control and Authorization	1	0
Security Force Error	0	1
Unsecured Doors	0	4
Total	3	6

Data Source: Sefick/Woerner (Manager/Source)

Accountability: Sefick

Adverse Trend: None

SEP 58

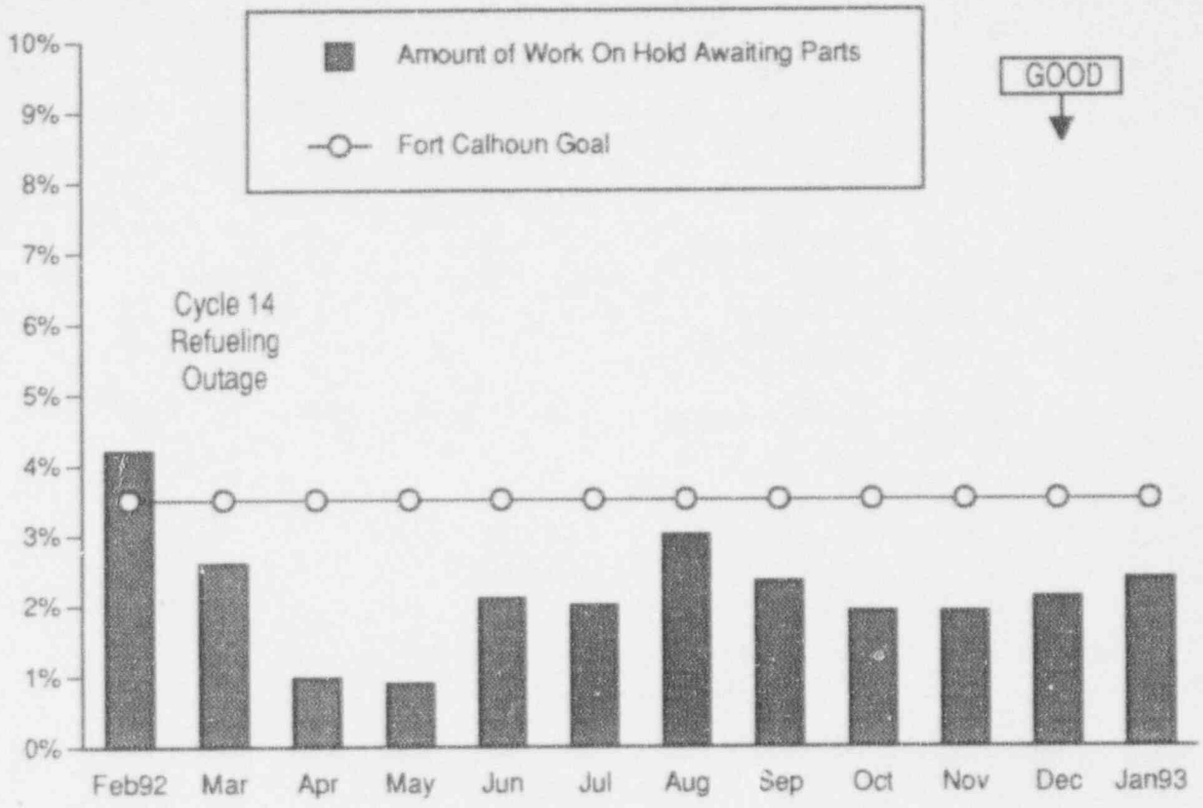


SECURITY SYSTEM FAILURES

This indicator shows the number of loggable/reportable system failures for the reporting month. These items include: Alarm System Failures, CCTV failures, Security Computer Failures, Search Equipment Failures and Door Hardware Failures. Alarm systems and CCTV failures will be divided into two categories: environmental failures and failures as defined in the performance indicator definitions. Also, the 1992 and 1993 System Failures will be compared on a monthly basis.

System	Number of Incidents			
	January '93		December '92	
	Environs	Failures	Environs	Failures
Alarms	10	6	5	12
CCTV	16	0	20	0
Computer	N/A	0	N/A	0
Search Equipment	N/A	3	N/A	4
Door Hardware	N/A	3	N/A	6
Totals	26	12	25	22

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



AMOUNT OF WORK ON HOLD AWAITING PARTS (NON-OUTAGE)

This procurement indicator displays the percentage of open, non-outage maintenance items that are on hold awaiting parts, to the total amount of open, non-outage maintenance items.

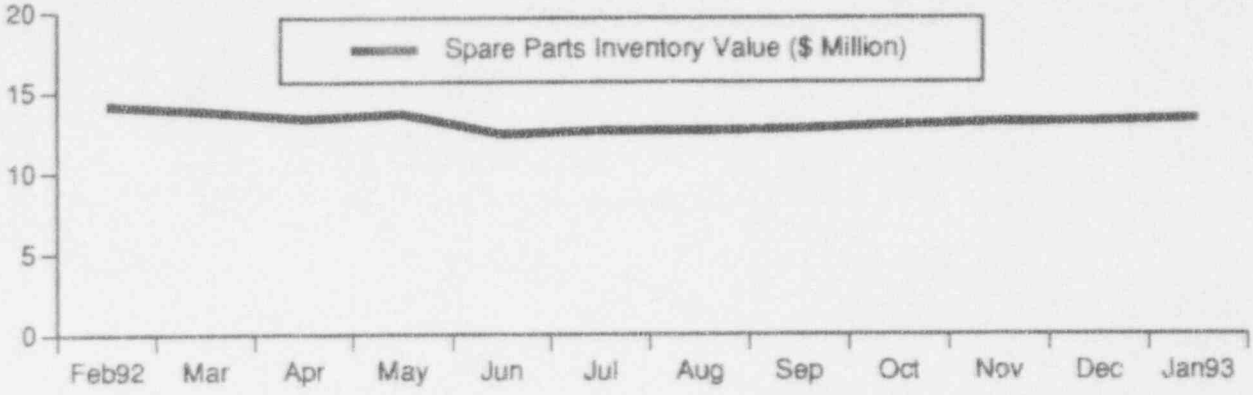
There was a total of 971 open, non-outage maintenance work orders (MWOs) with 23 (2.37%) of these MWOs on hold awaiting parts at the end of January 1993.

The 1993 and 1992 Fort Calhoun Goals for this indicator are to have less than 3.5% of the total number of open, non-outage MWOs awaiting parts.

Data Source: Willrett/CHAMPS (Manager/Source)

Accountability: Willrett/Fraser

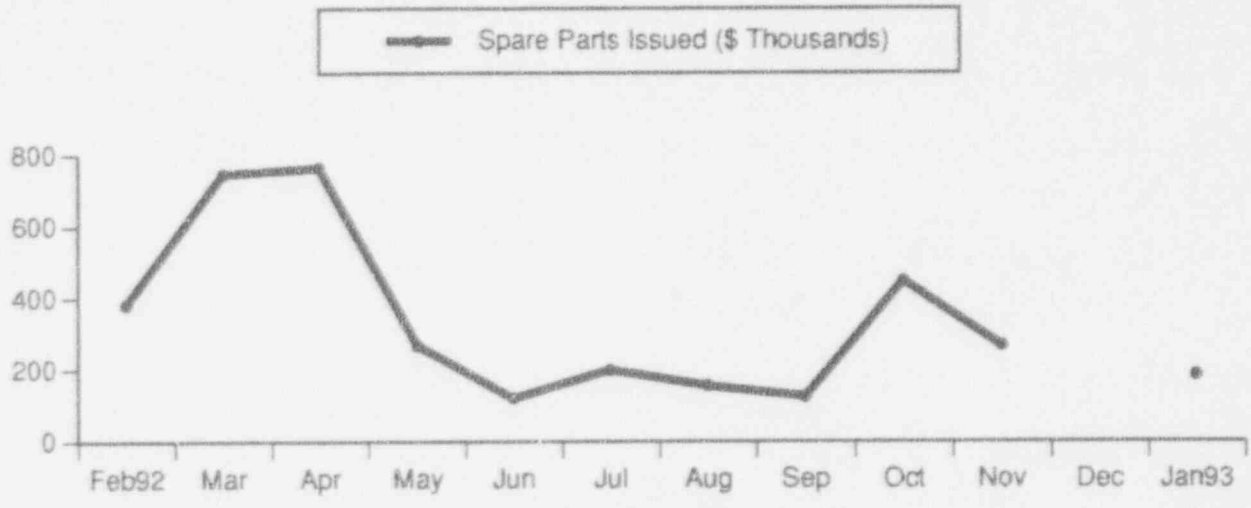
Adverse Trend: None



SPARE PARTS INVENTORY VALUE

The spare parts inventory value at the Fort Calhoun Station at the end of January 1993 was reported as $13,305,627.

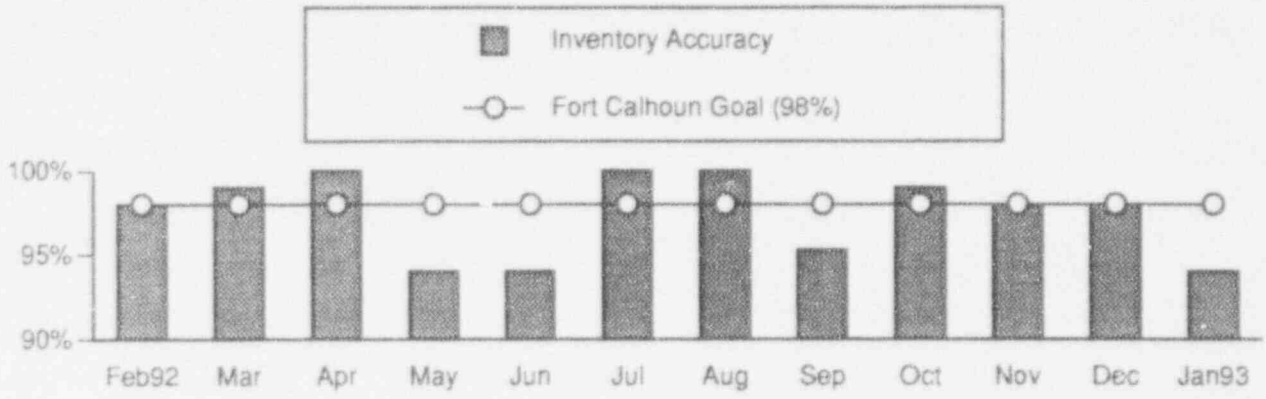
Data Source: Steele/Huliska (Manager/Source)
Accountability: Willrett/McCormick
Adverse Trend: None



SPARE PARTS ISSUED

The value of the spare parts issued during January 1993 was $182,794. December 1992 data was unavailable due to a printer problem.

Data Source: Steele/Miser (Manager/Source)
Accountability: Willrett/McCormick
Adverse Trend: None

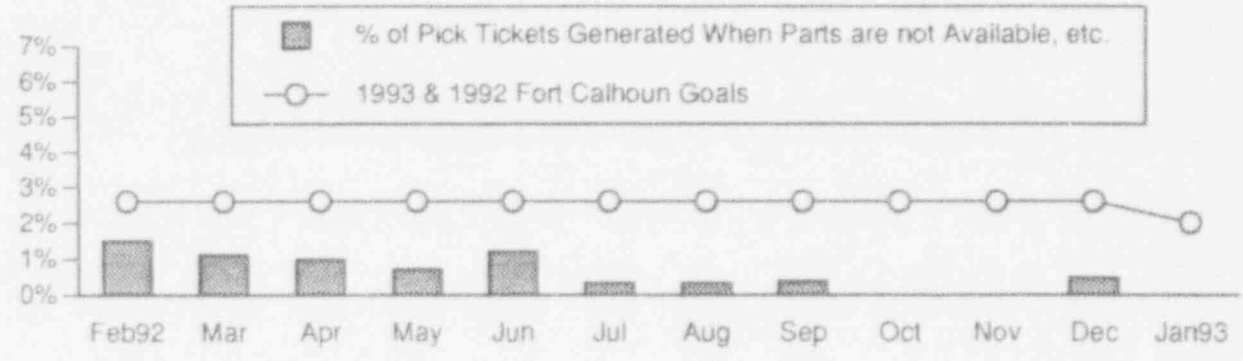


INVENTORY ACCURACY

This indicator shows the accuracy of the actual parts count for the warehouse compared to the counts contained in the MMIS computer system for the reporting month.

During January 1993, 482 different line items were counted in the warehouse. Of the 482 line items counted, 30 items needed count adjustments. The inventory accuracy for the month of January was reported as 94%. The Fort Calhoun 1993 and 1992 monthly goals for this indicator are a minimum inventory accuracy of 98%.

Data Source: Willrett/McCormick (Manager/Source)
Accountability: Willrett/McCormick Adverse Trend: None

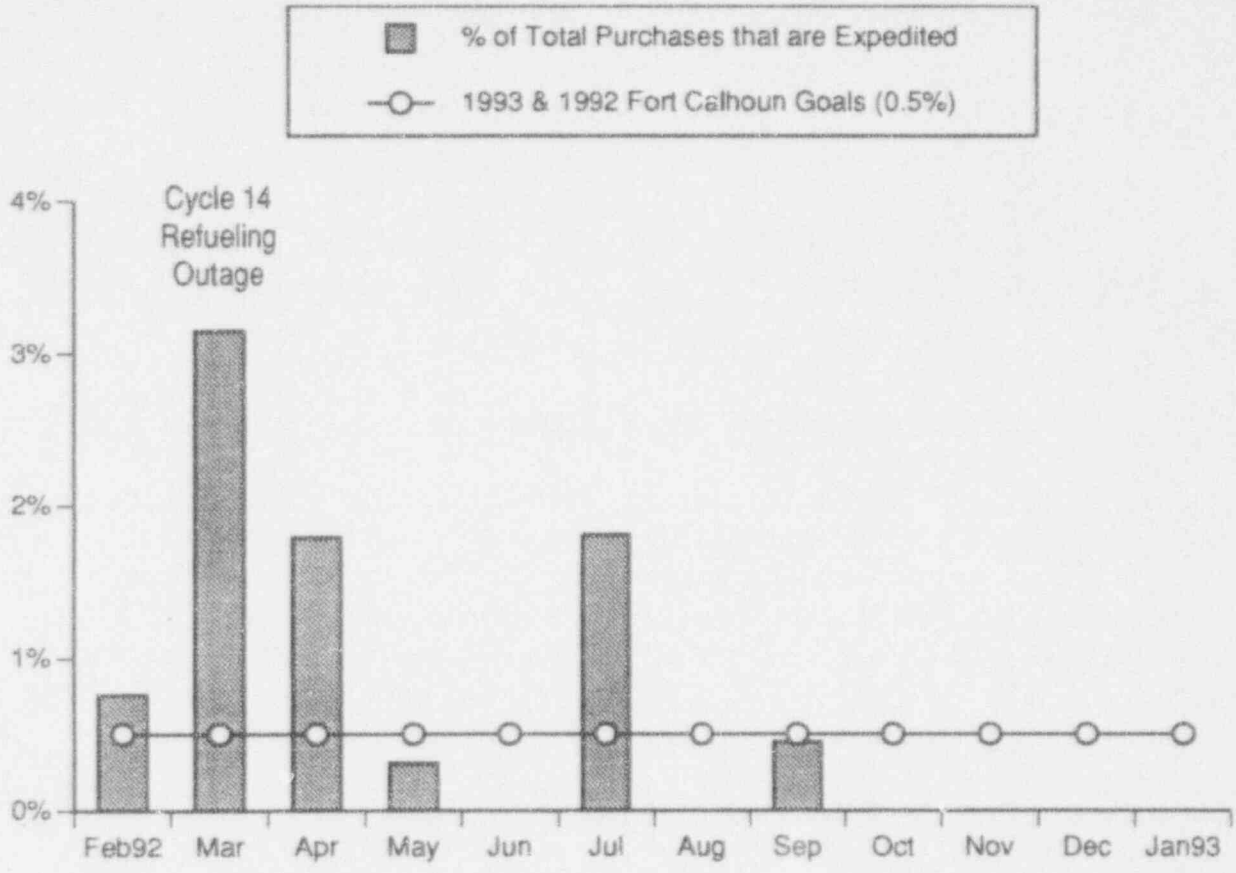


STOCKOUT RATE

This indicator shows the percentage of the number of Pick Tickets generated when the amount of parts requested is equal to or less than the minimum stocking level and parts are not available.

During January 1993, a total of 1,061 Pick Tickets were generated. Of the 1,061 Pick Tickets generated, none were generated when the amount of parts requested was equal to or less than the minimum stocking level and parts were not available. The Fort Calhoun 1993 goal for this indicator is a maximum of 2.0%. The 1992 goal was 2.6%.

Data Source: Willrett/McCormick (Manager/Source)
Accountability: Willrett/McCormick
Adverse Trend: None



EXPEDITED PURCHASES

This indicator shows the percentage of expedited purchases compared to the total number of purchase orders generated during the reporting month.

During January, there was a total of 387 purchase orders generated. Of the 387 purchase orders generated, there were 0 expedited purchases.

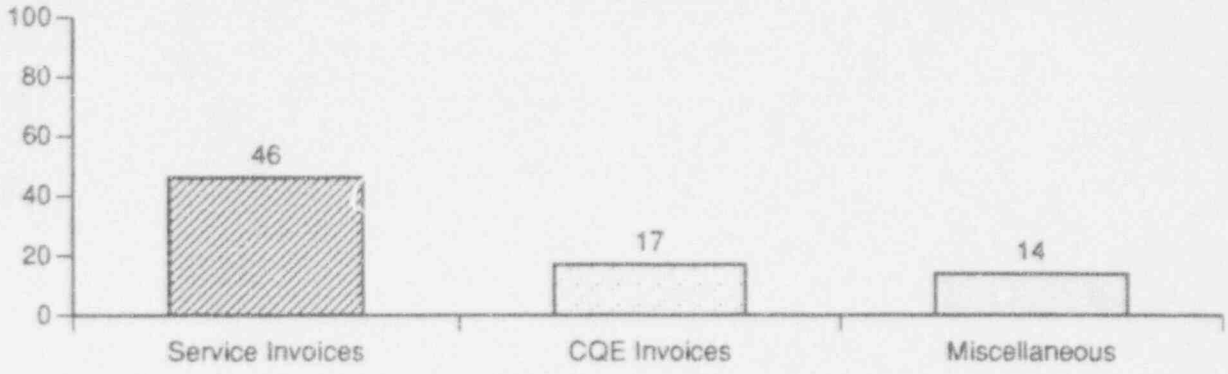
The 1993 Fort Calhoun monthly goal for this indicator is a maximum of 0.5%.

The number of expedited purchases was above the Fort Calhoun goal during the months of February, March and April 1992 due to the ordering of items related to the Cycle 14 Refueling Outage.

Date Source: Willrett/Fraser (Manager/Source)

Accountability: Willrett/Fraser

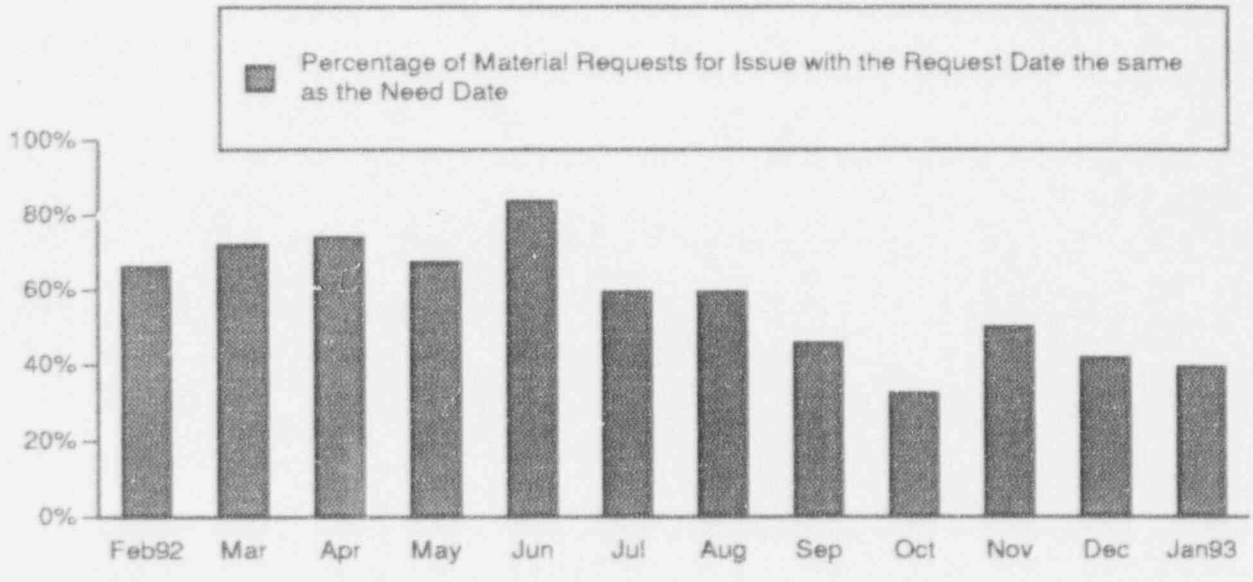
Adverse Trend: None



INVOICE BREAKDOWN

This indicator shows the number of service invoices, CQE invoices, and miscellaneous invoices for the month of January 1993.

Date Source: Willrett/Fraser (Manager/Source)
Accountability: Willrett/Fraser
Adverse Trend: None

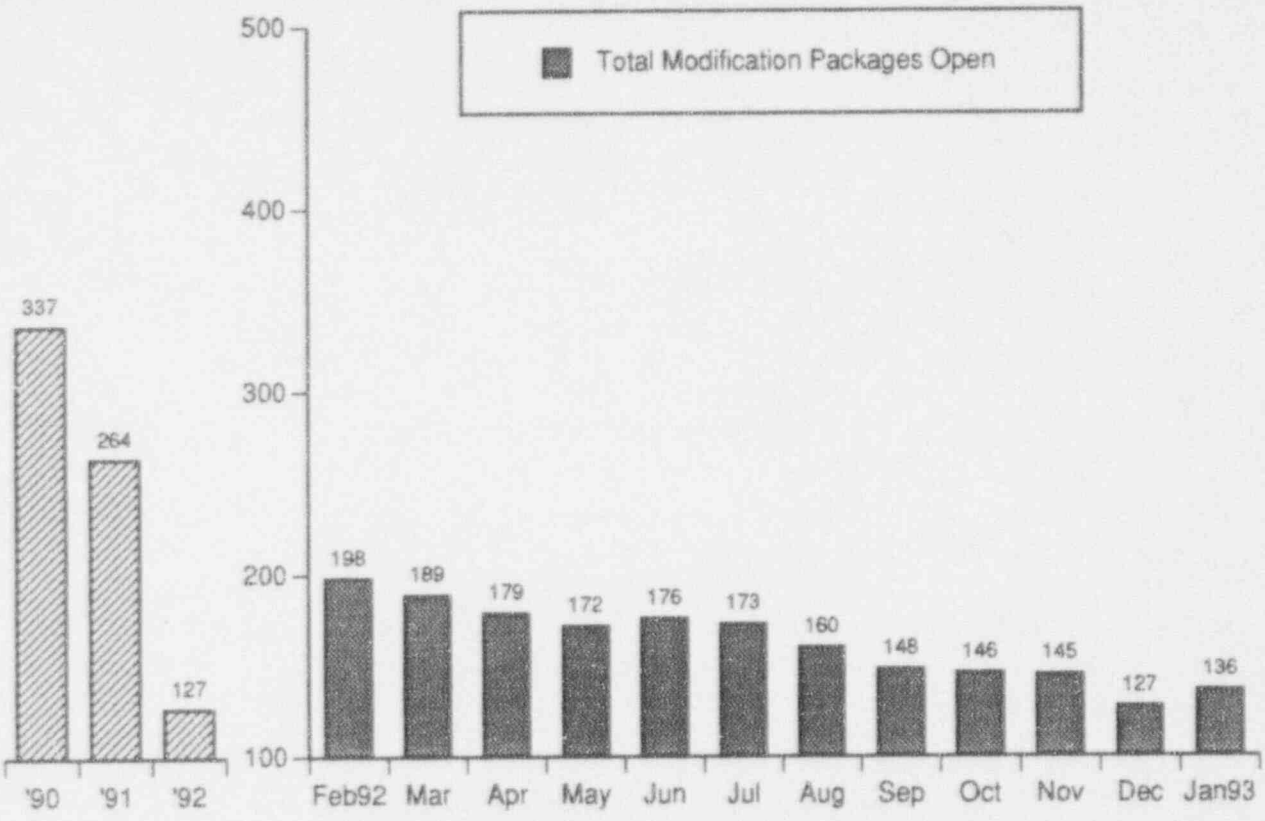


MATERIAL REQUEST PLANNING

This indicator shows the percentage of material requests (MRs) for issue with their request date the same as their need date compared to the total number of MRs for issue for the reporting month.

During the month of January 1993, a total of 1,061 MRs were received by the warehouse. Of the 1,061 total MRs received by the warehouse, 39.3% of the MRs (417) were for issue with their request date the same as their need date.

Data Source: Willrett/McCormick (Manager/Source)
Accountability: Willrett/McCormick
Adverse Trend: None



OUTSTANDING MODIFICATIONS

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

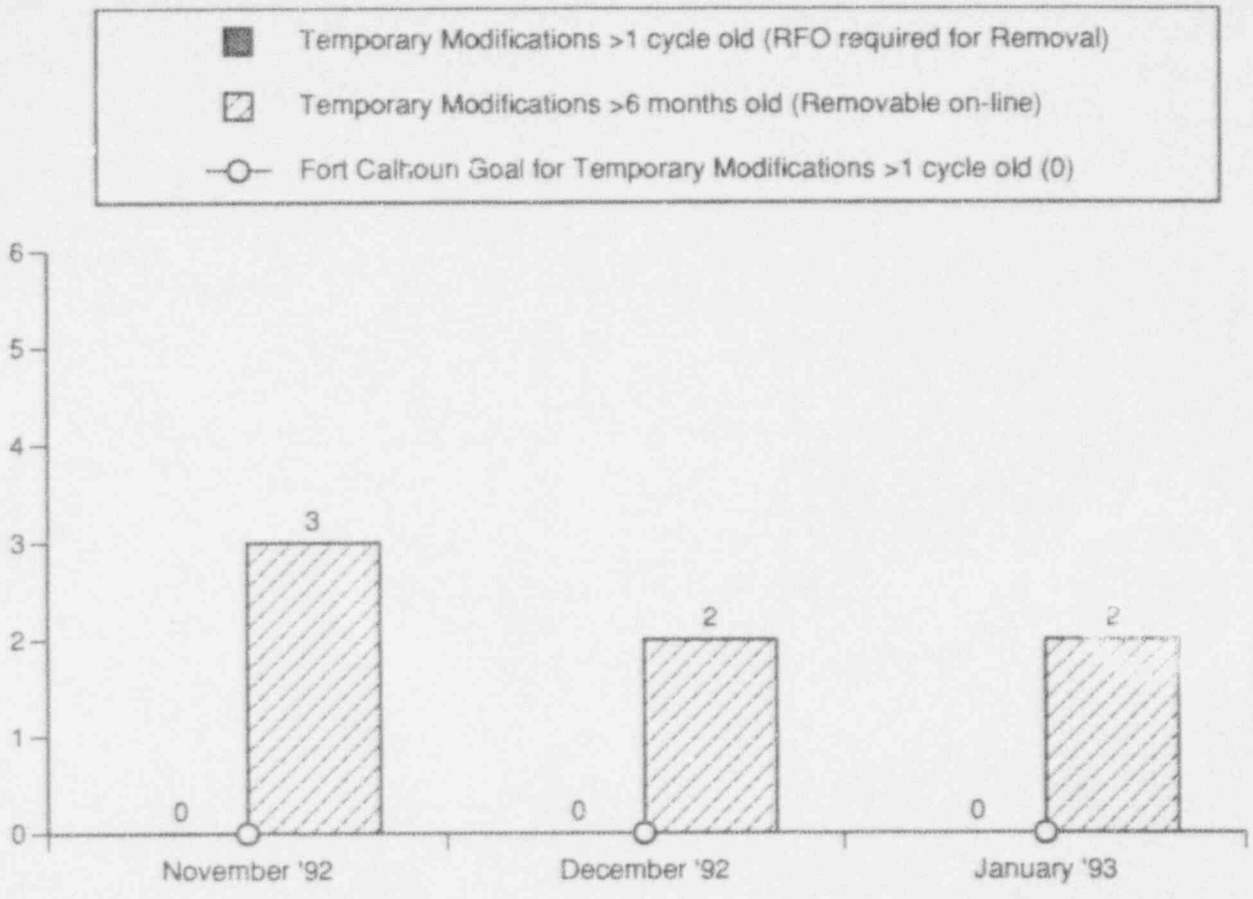
Category	Reporting Month
Form FC-1133 Backlog/In Progress	10
Mod. Requests Being Reviewed	10
Design Engr. Backlog/In Progress	74
Construction Backlog/In Progress	29
Design Engr. Update Backlog/In Progress	13
Total	136

At the end of January 1993, 5 additional modification requests had been issued this year and 5 modification requests had been cancelled. The Nuclear Projects Review Committee (NPRC) had completed 11 backlog modification request reviews this year. The Nuclear Projects Committee (NPC) had completed no backlog modification request reviews this year.

Data Source: Jaworski/Turner (Manager/Source)
Scofield/Lounsbery (Manager/Source)

Accountability: Scofield/Phelps

Adverse Trend: None



TEMPORARY MODIFICATIONS (EXCLUDING SCAFFOLDING)

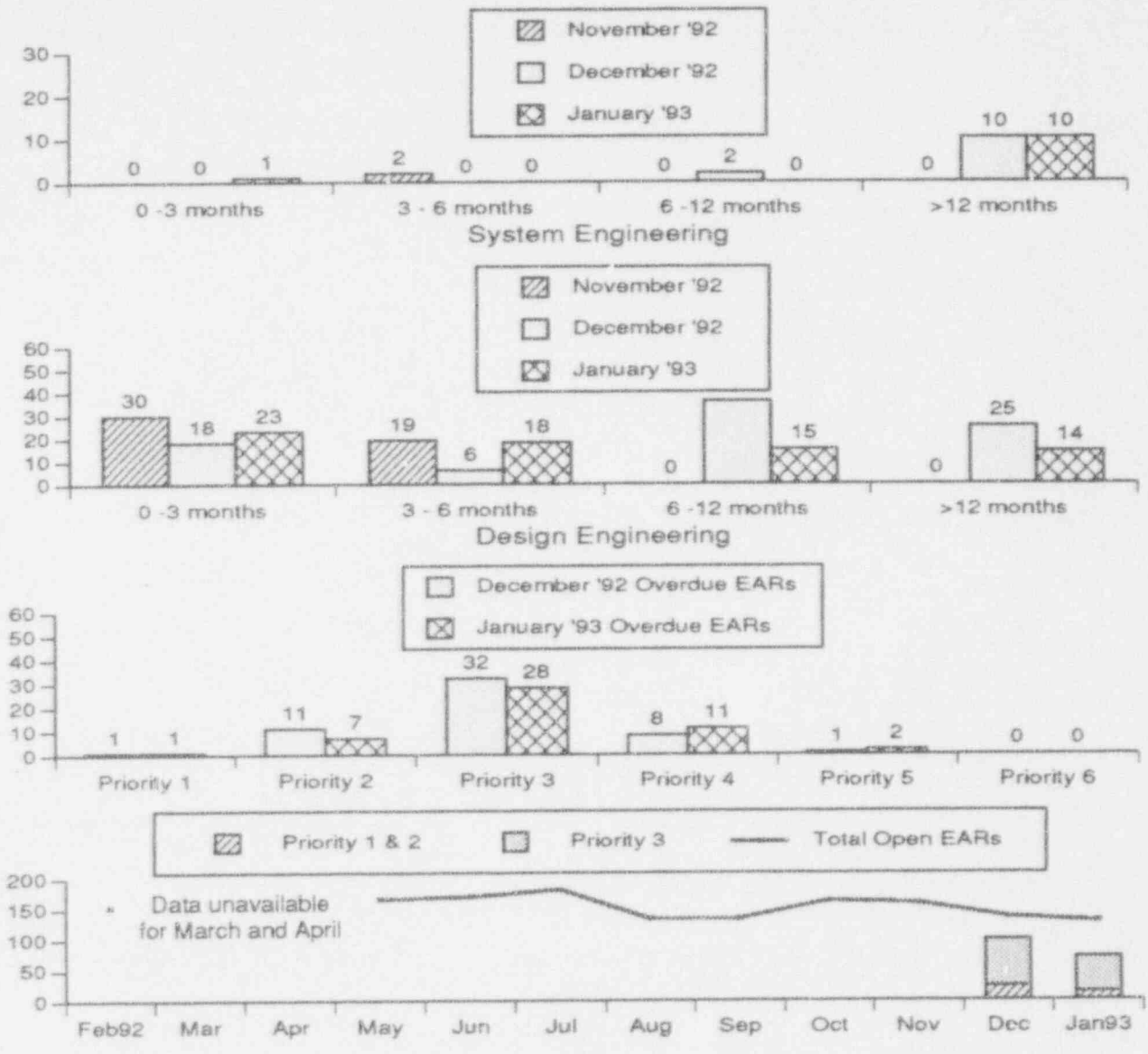
This indicator provides information on the number of temporary modifications greater than one fuel cycle old requiring a refueling outage (RFO) for removal and the number of temporary modifications removable on-line that are greater than six months old. Also provided is the Fort Calhoun goal for temporary 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 January 1993 there were 2 temporary modifications installed that were greater than six months old that can be removed on-line. These were: 1) handjack close of CCW/RW valves, in which OPS is scheduled to revise S.O. O-44 by 2/15/93. The progress of this task will be tracked by CID 920953; 2) potable water supply piping temporary repair, which is in progress awaiting completion of MWOs 894520 and 912718.

At the end of January 1993, there was a total of 25 TMs installed in the Fort Calhoun Station. 4 of the 25 installed TMs require an outage for removal and 11 are removable on-line. In 1993 a total of 4 temporary modifications have been installed.

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

SEP 62 & 71



ENGINEERING ASSISTANCE REQUEST (EAR) BREAKDOWN

This indicator shows a breakdown of the number of EARs assigned to Design Engineering and System Engineering awaiting a technical response from engineering.

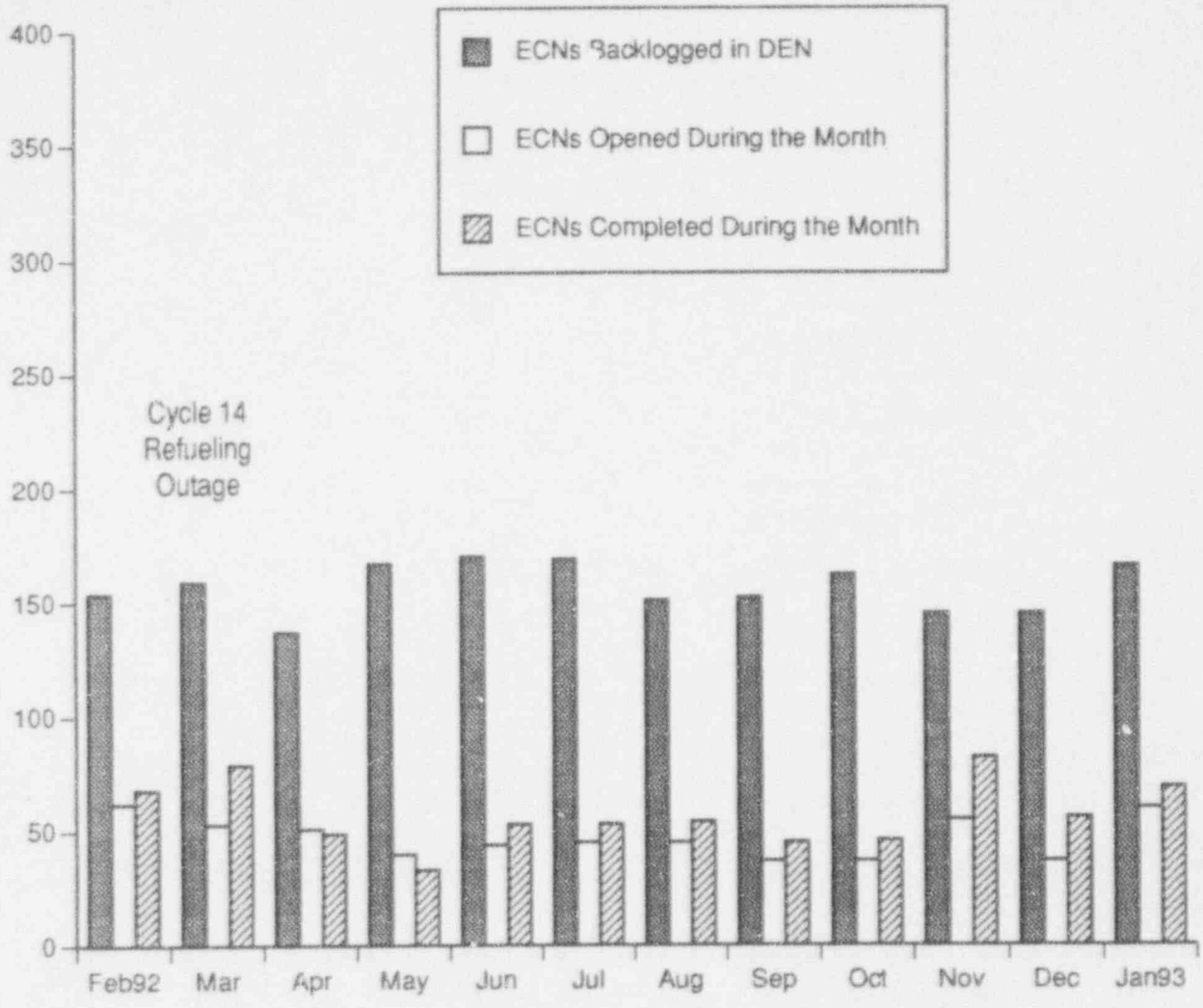
At the end of January 1993, 46 EARs had been resolved and were going through the closeout process. There was 1 EAR awaiting a technical response from Nuclear Projects and 1 EAR awaiting a technical response from Nuclear Procurement.

Total EAR breakdown is as follows:

EARs opened during the month	13
EARs closed during the month	24
Total EARs open as of the end of the month	129

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 January 1993, there was a total of 166 DEN backlogged open ECNs. There were 60 ECNs opened, and 69 ECNs completed during the month.

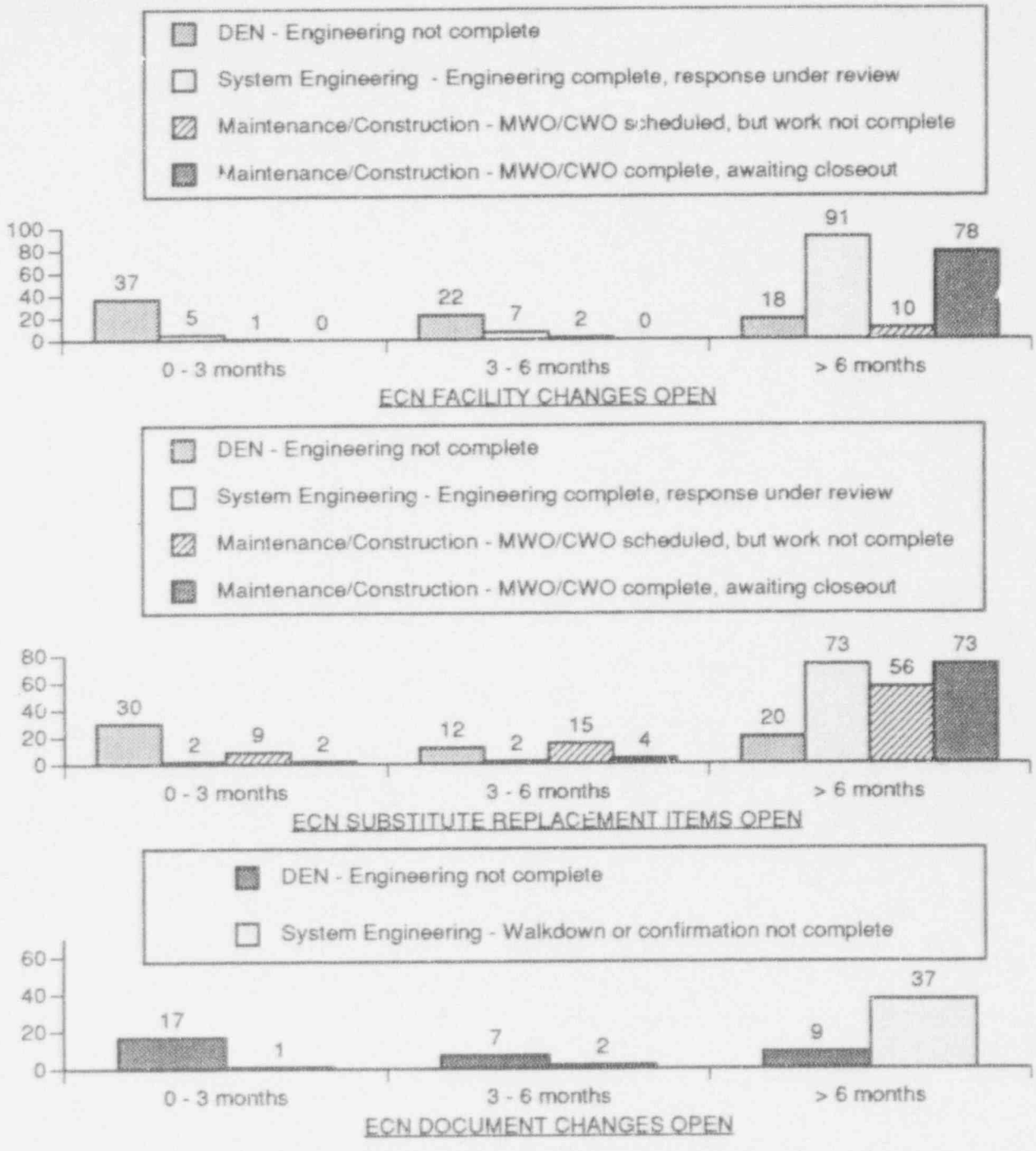
Although the number of open ECNs is currently high, activities are in progress to reduce the backlog of open ECNs. It is expected that the number of open ECNs will continue to decrease.

Data Source: Phelps/Pulverenti (Manager/Source)

Accountability: Phelps/Jaworski

Adverse Trend: None

SEP 62

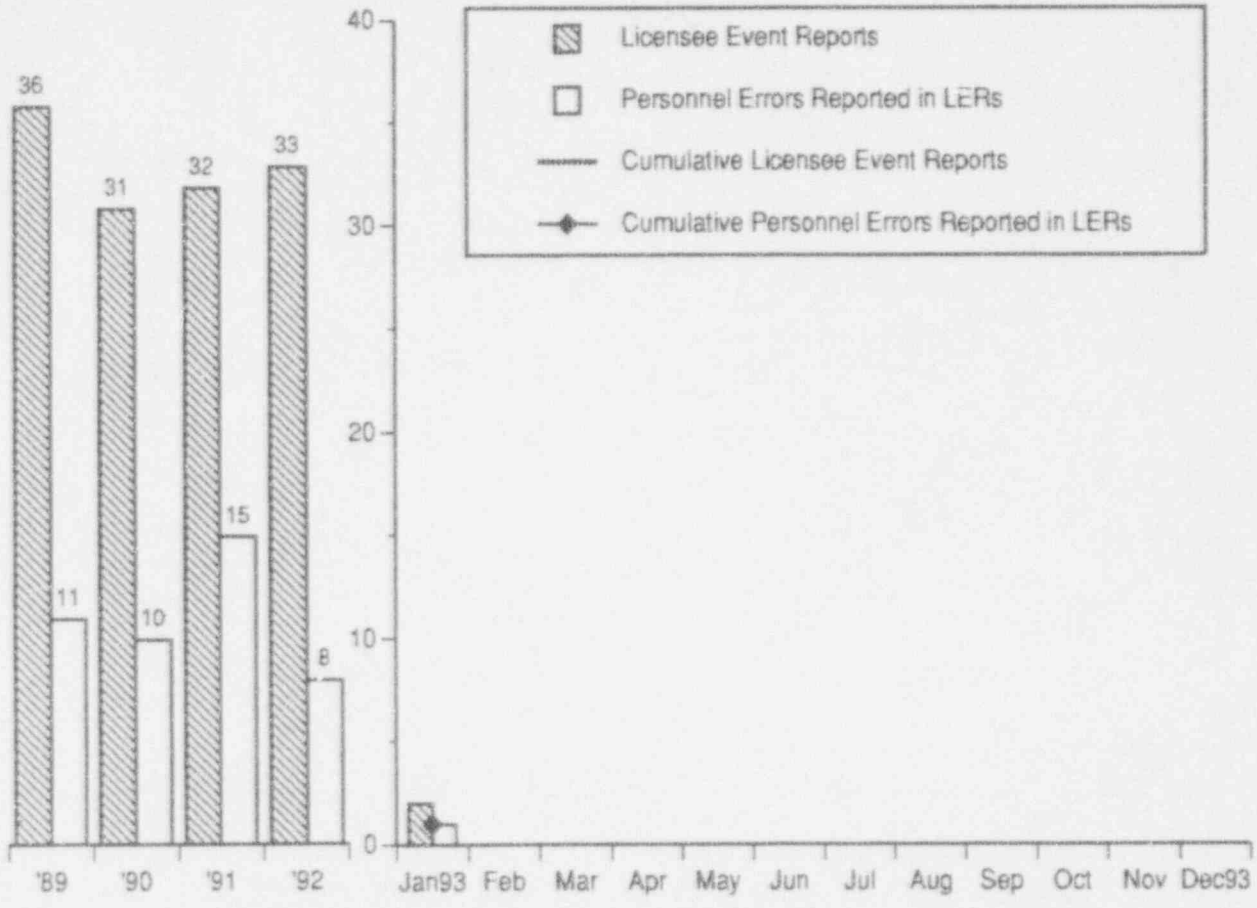


ENGINEERING CHANGE NOTICE BREAKDOWN

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 the reporting month. The graphs provide data on ECN Facility Changes Open, ECN Substitute Replacement Items Open, and ECN Document Changes Open.

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

SEP 62



NUMBER OF PERSONNEL ERRORS REPORTED IN LERS

This indicator shows the number of Licensee Event Reports (LERs) submitted during each month of 1993, the LERs attributed to personnel error for each month, and the cumulative totals of both. The year-end totals for the four previous years are also shown.

In January, there was a total of two (2) LERs reported , one of which was attributed to Licensed Operator error. The following LERs were submitted during this reporting period:

LER 92-031 - Inoperability of Fire Suppression Water System

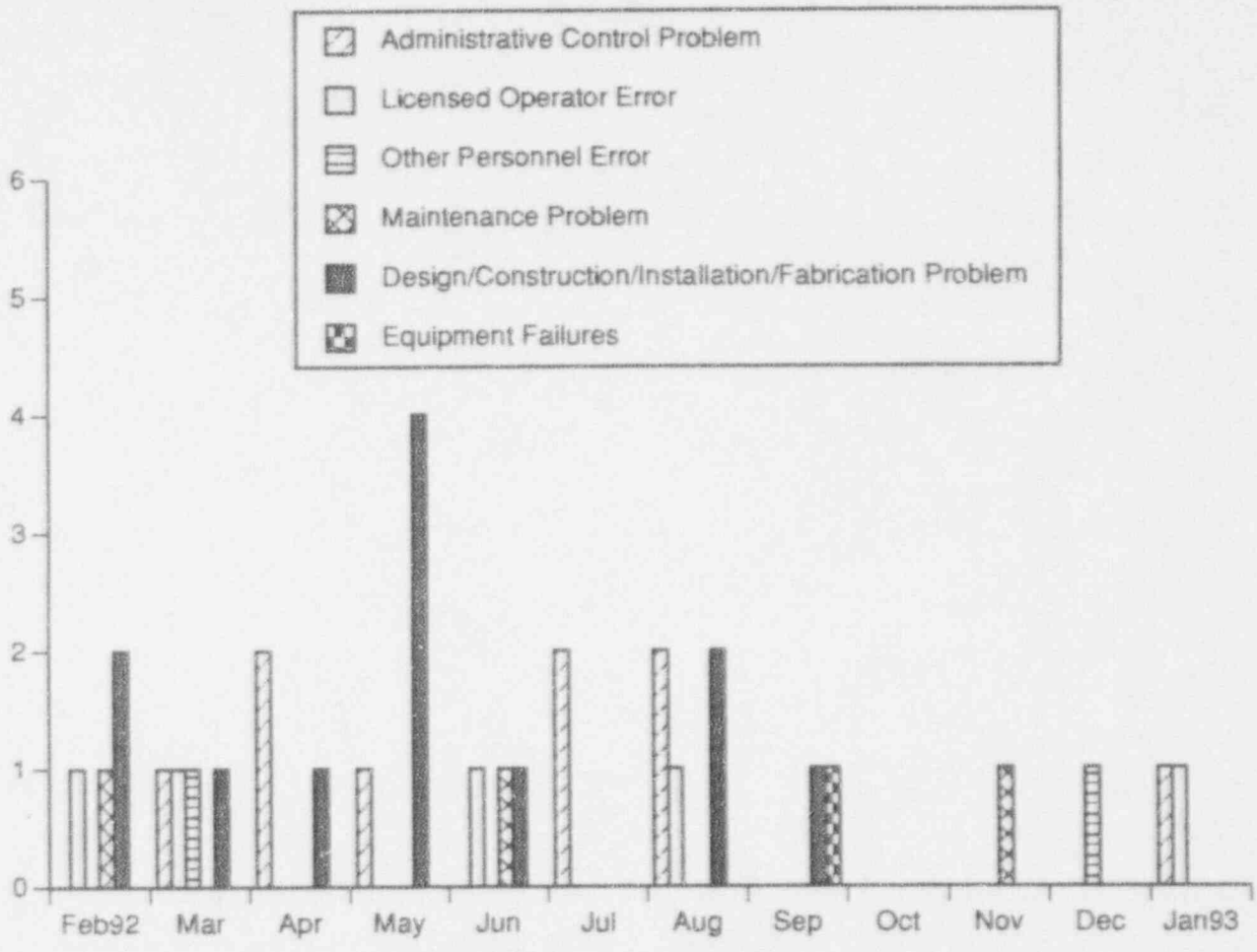
LER 92-032 - Failure to Satisfy Fire Watch Requirements for Impaired Halon System (This LER was attributed to personnel error.)

Data Source: Short/Lippy (Manager/Source)

Accountability: Chase

Adverse Trend: None

SEP 15



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 February 1, 1992 through January 31, 1993.

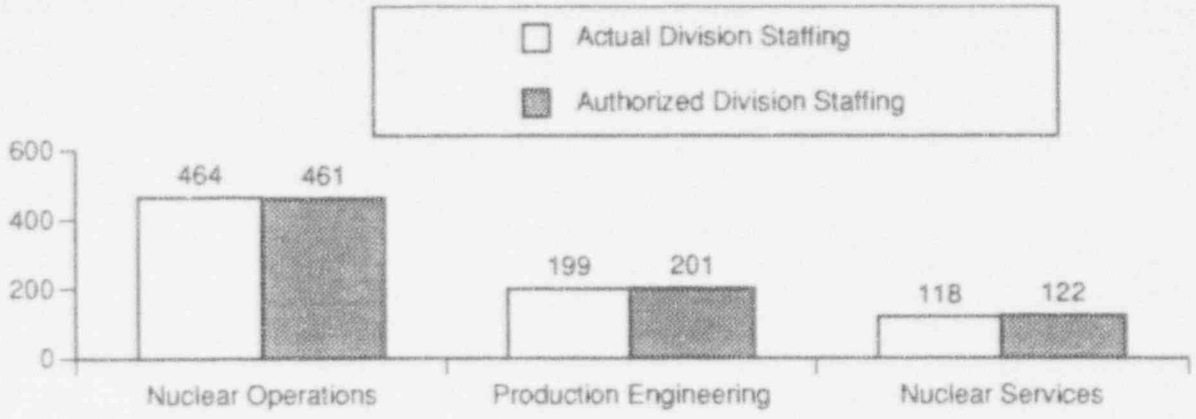
The cause codes are intended to identify possible programmatic deficiencies. In order to be consistent with industry reporting, the Root Cause Codes have been revised to reflect the NRC's sequence coding. For detailed descriptions of these codes, see the "Performance Indicator Definitions" section of this report.

There were two LERs submitted in January 1993, one of which was attributed to an Administrative Control Problem and the other was attributed to Licensed Operator Error.

Data Source: Short/Lippy (Manager/Source)

Accountability: Chase

Adverse Trend: None

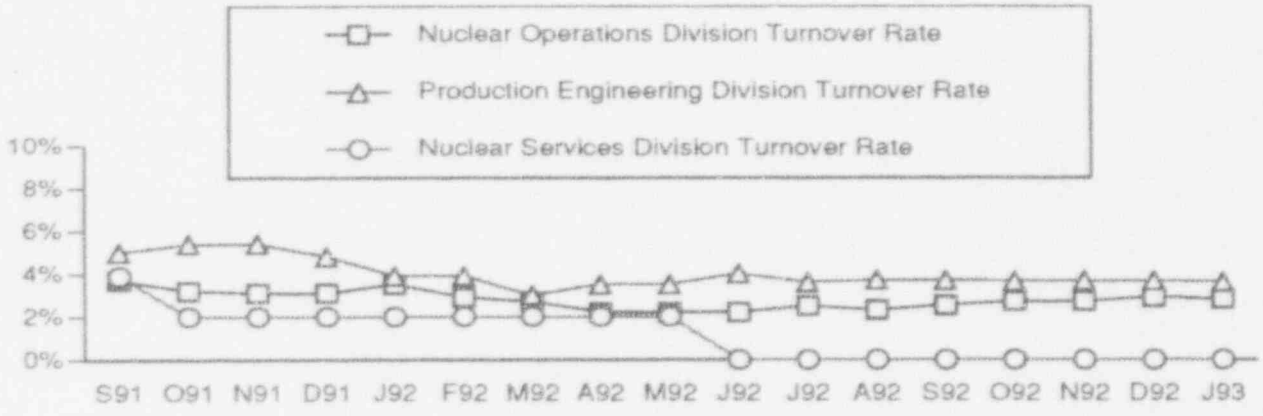


STAFFING LEVEL

The authorized and actual staffing levels are shown for the three Nuclear Divisions.

Data Source: Sorenson/Burke (Manager/Source)
Accountability: Waszak
Adverse Trend: None

SEP 24



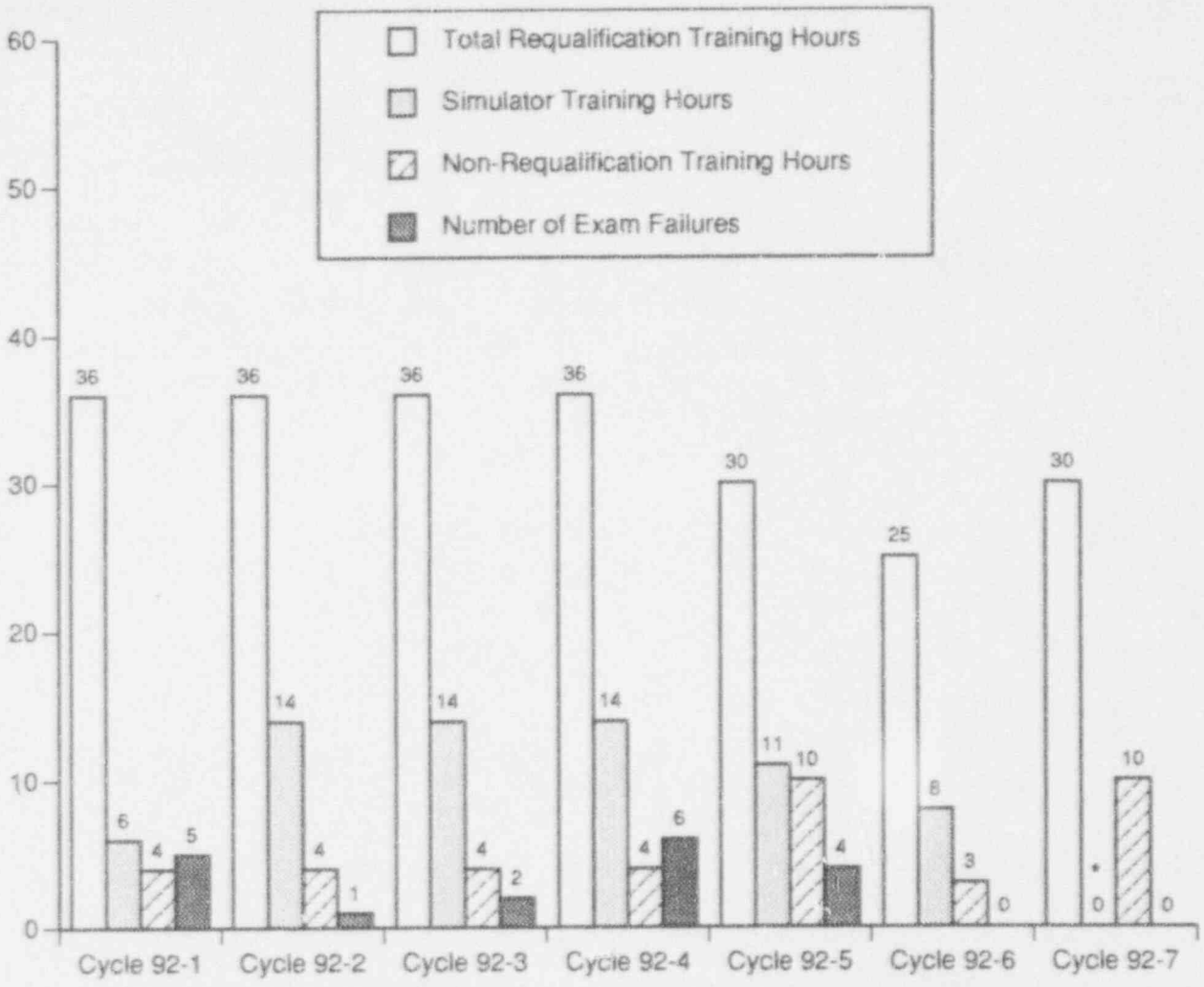
PERSONNEL TURNOVER RATE

The turnover rates for the three Divisions are calculated using only resignations from OPPD.

Division	Turnover Rate
NOD	2.8%
PED	3.5%
NSD	0.0%

Currently, the OPPD corporate turnover rate is being reported as approximately 2.5%. This OPPD corporate turnover rate is based on the turnover rate over the last four years.

Data Source: Sorenson/Burke (Manager/Source)
Accountability: Waszak
Adverse Trend: None



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

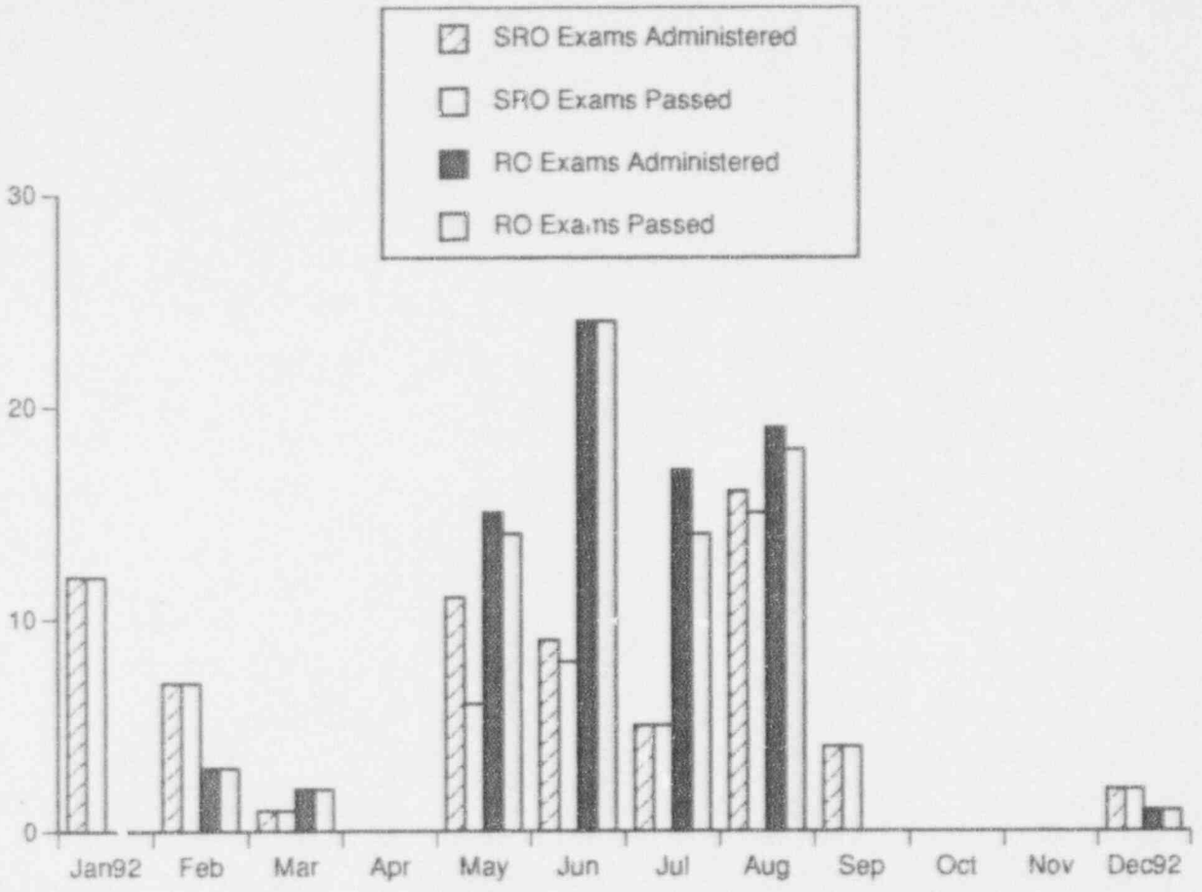
LICENSED OPERATOR REQUALIFICATION TRAINING

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.

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

SEP 68



LICENSE CANDIDATE EXAMS

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

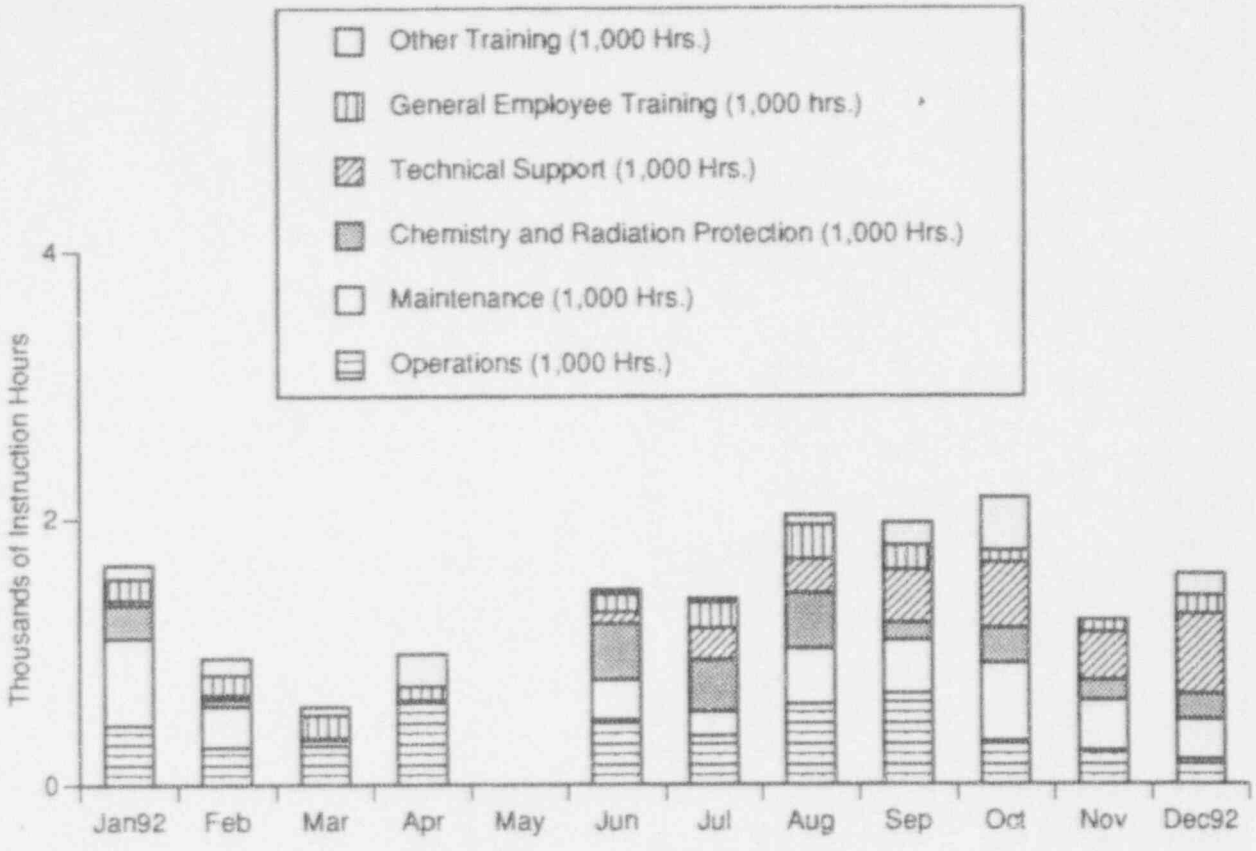
There were no exams given during the month of January 1993.

During the month of December 1992, there were internally administered SRO exams and one RO exam given. All three individu. . passed those exams.

There were no NRC administered SRO or RO exams during January 1993 or December 1992.

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

SEP 68



TOTAL INSTRUCTION HOURS

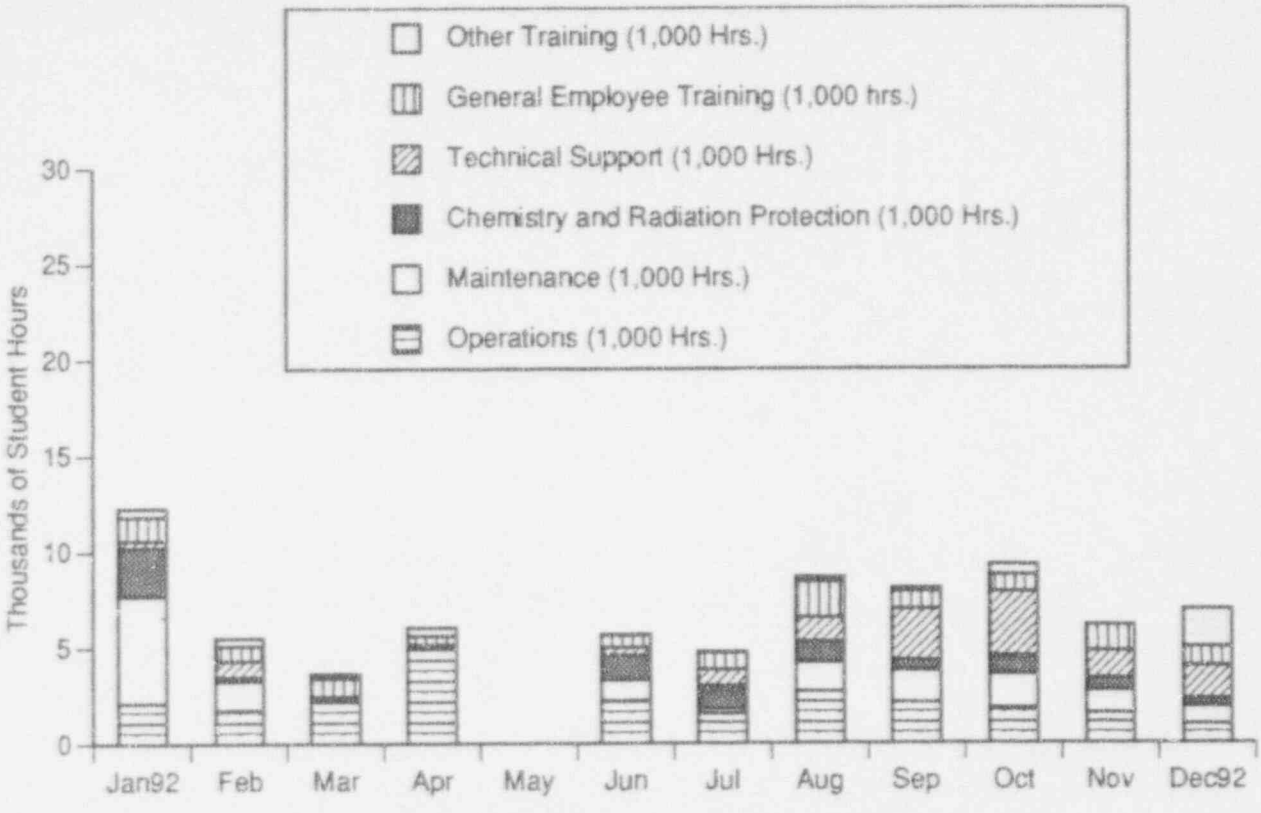
This indicator shows the total number of instruction hours for Operations, Maintenance, Chemistry and Radiation Protection, Technical Support, General Employee Training, and Other Training conducted for the Fort Calhoun Station.

Due to the transition of responsibilities for training performance indicators, data for the month of May was unavailable for this indicator.

This indicator is normally one month behind the reporting month due to the time required for data collection and processing.

DEPARTMENT	December '92
Operations	186
Maintenance	297
Chemistry and Radiation Protection	194
Technical Support	595
General Employee Training	141
Other	165
Total	1,578

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



TOTAL HOURS OF STUDENT TRAINING

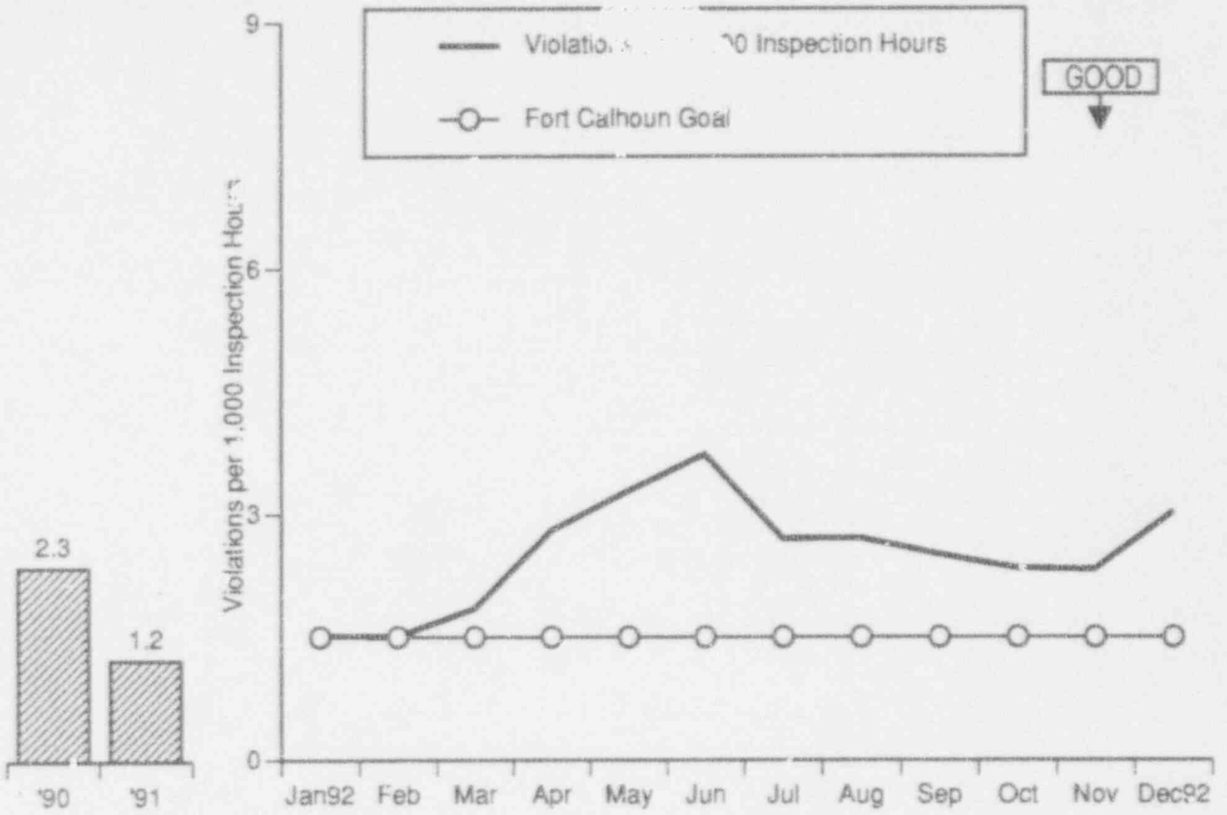
This indicator shows the total number of student hours for Operations, Maintenance, Chemistry and Radiation Protection, Technical Support, General Employee Training, and Other Training conducted for the Fort Calhoun Station.

Due to the transition of responsibilities for training performance indicators, data for the month of May was unavailable for this indicator.

This indicator is normally one month behind the reporting month due to the time needed to collect and evaluate the data.

DEPARTMENT	December '92
Operations	976
Maintenance	908
Chemistry and Radiation Protection	403
Technical Support	1,752
General Employee Training	961
Other	1,964
Total	6,964

Data Source: Gasper/Podoll (Manager/Source)
Accountability: Gasper
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 3.03 for the twelve months from January 1, 1992 through December 31, 1992.

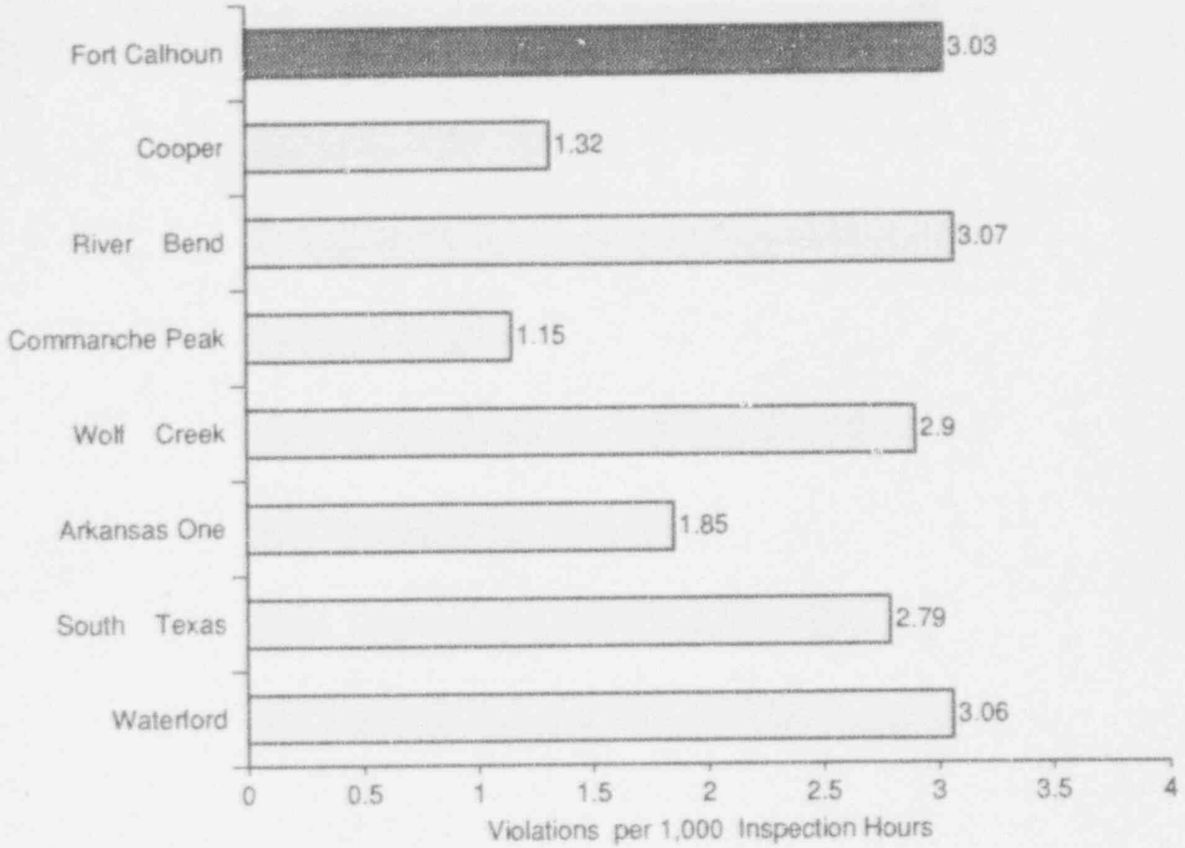
The following NRC inspection ended during this reporting period:

IER No.	Title	No. or Hrs.
92-32	Solid Radwaste Management & Transportation of Rad Material	40

There were seven violations issued during this reporting period in IER 92-32.

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/Lippy (Manager/Source)
Accountability: Short
Adverse Trend: None



COMPARISON OF VIOLATIONS AMONG REGION IV PLANTS

This indicator provides a comparison of violations per 1,000 inspection hours among Region IV nuclear power plants. The data is compiled for a twelve month period from January 1, 1992 through December 31, 1992.

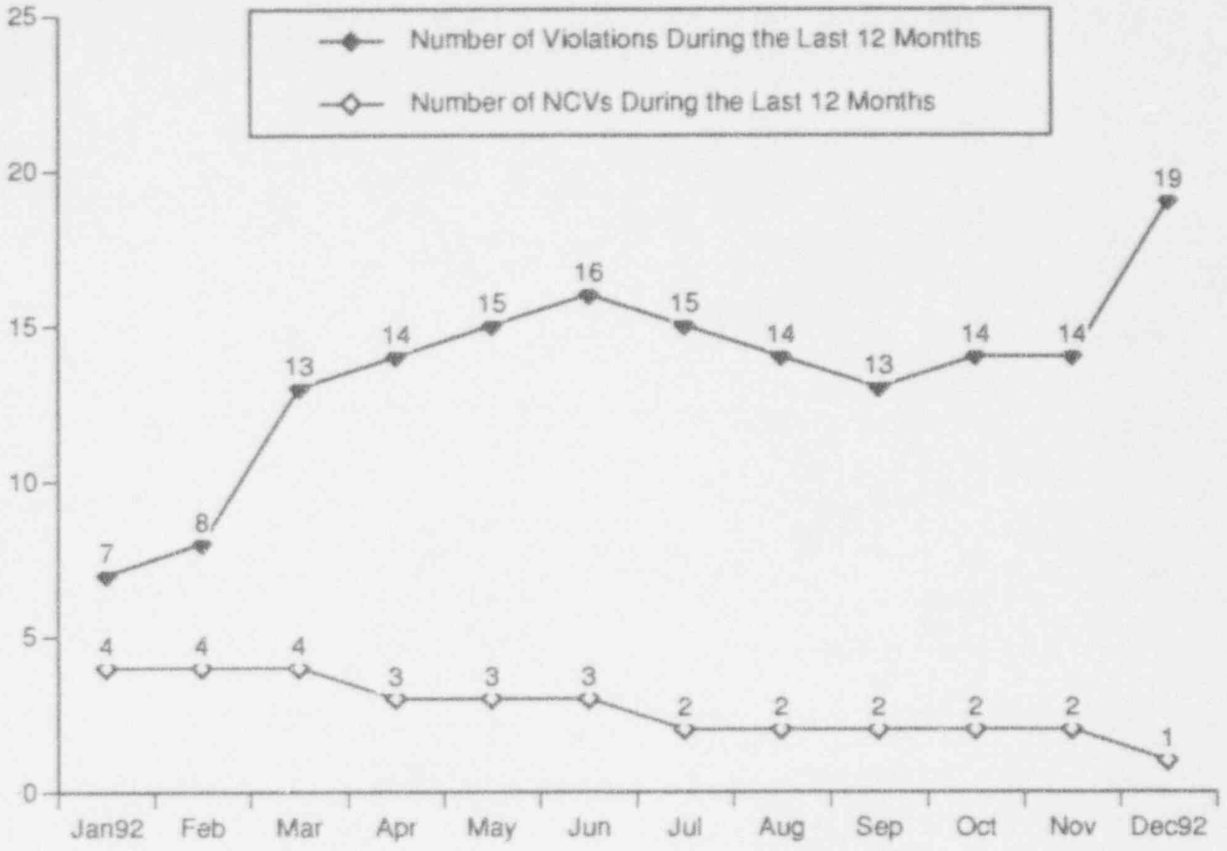
The Fort Calhoun goals for 1993 and 1992 are a maximum of 1.5 violations per 1,000 inspection hours.

This indicator is one month behind the reporting month due to the time involved with collecting and processing the data.

Data Source: Short/Lippy (Manager/Source)

Accountability: Short

Adverse Trend: None



CUMULATIVE VIOLATIONS AND NCVs (TWELVE-MONTH RUNNING TOTAL)

The Cumulative Violations and Non-Cited Violations (NCVs) indicator shows the cumulative number of violations and the cumulative number of NCVs for the last twelve months.

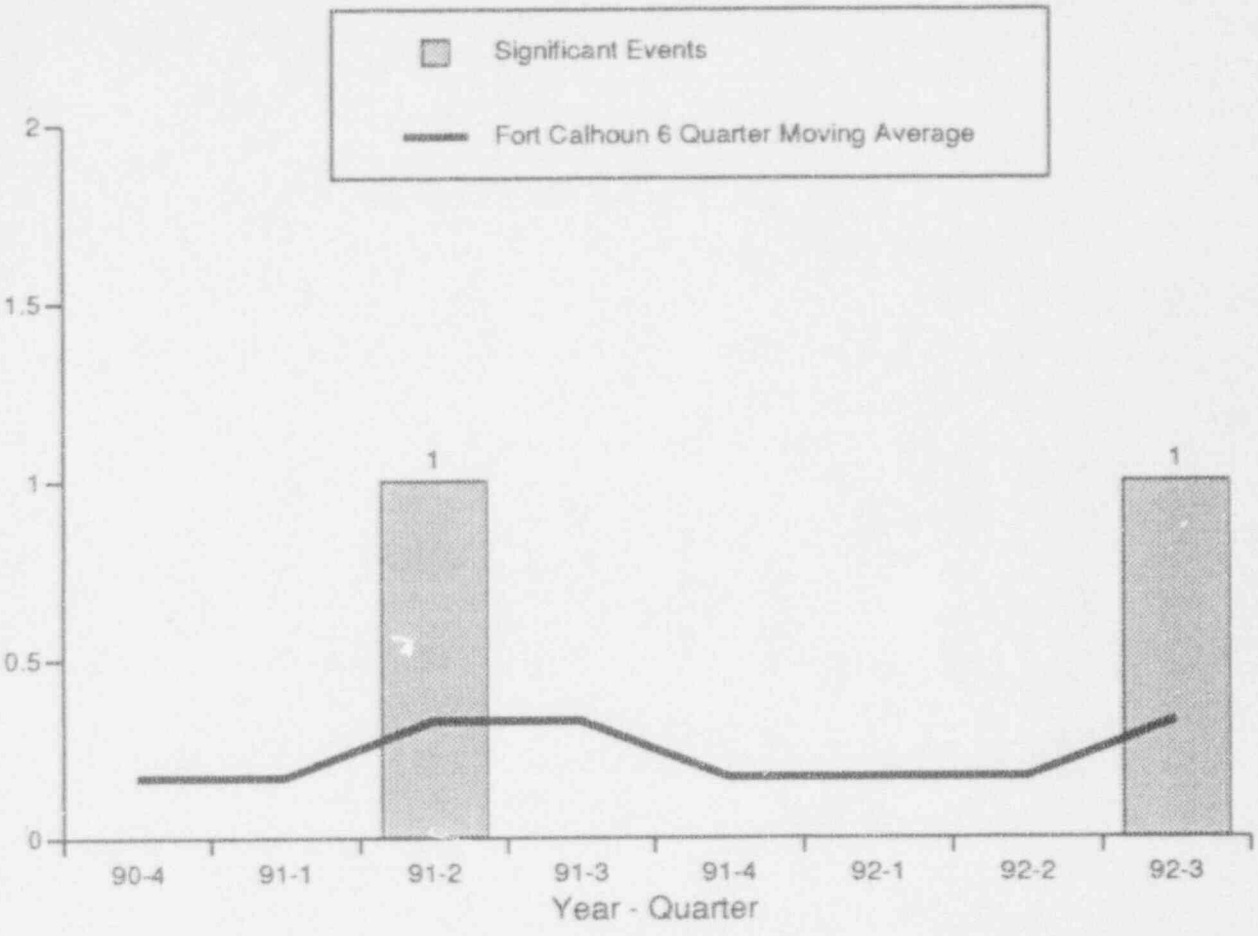
There were seven Radiological Controls violations issued during this reporting period in IER 92-32.

This indicator is one month behind the reporting month due to the time involved with collecting and processing data.

Data Source: Short/Lippy (Manager/Source)

Accountability: Short

Adverse Trend: None



SIGNIFICANT EVENTS

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

The following significant events occurred between the fourth quarter of 1990 and the third quarter of 1992:

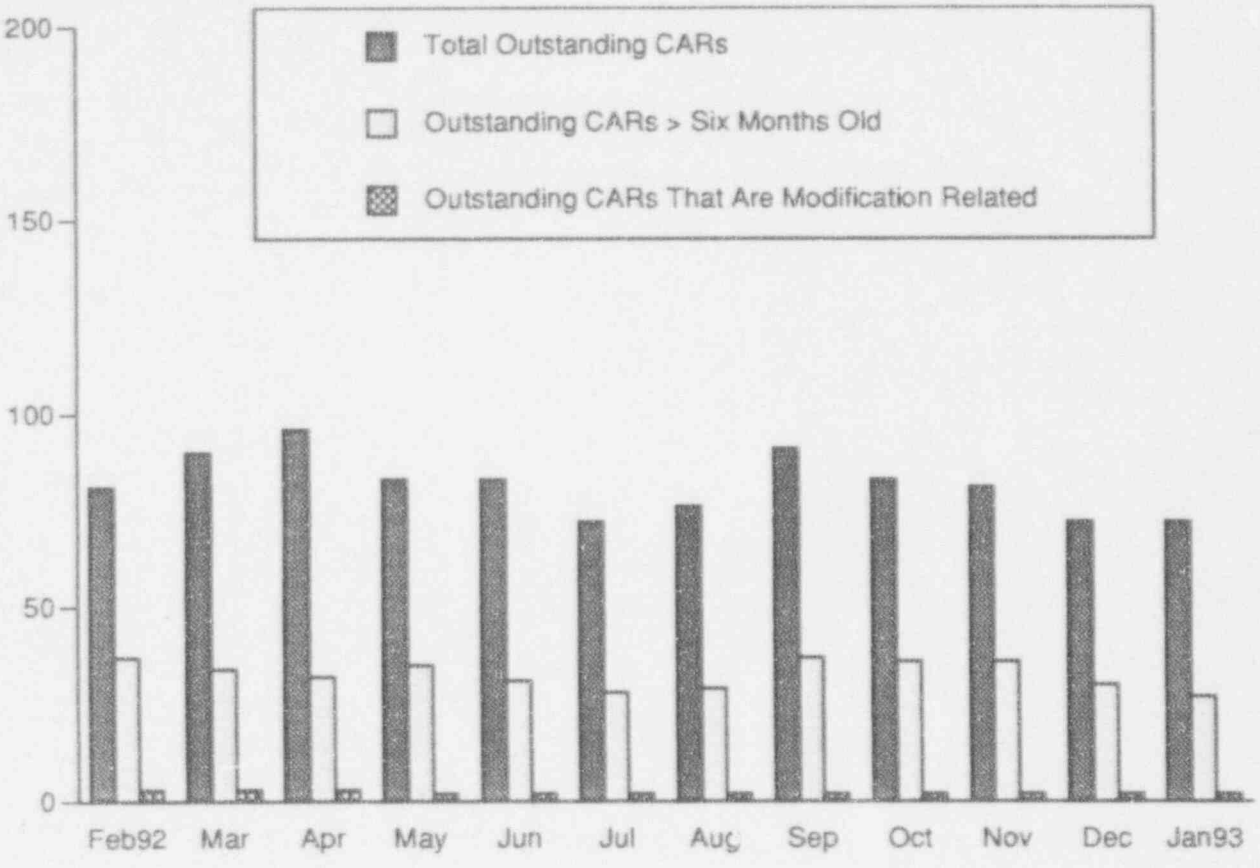
Second Quarter 1991: Safety related equipment was not adequately protected from a high energy line break.

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.

Data Source: Nuclear Regulatory Commission

Accountability: Chase

Adverse Trend: None



OUTSTANDING CORRECTIVE ACTION REPORTS

This indicator shows the total number of outstanding Corrective Action Reports (CARs), the number of outstanding CARs that are greater than six months old, and the number of outstanding CARs that are modification related.

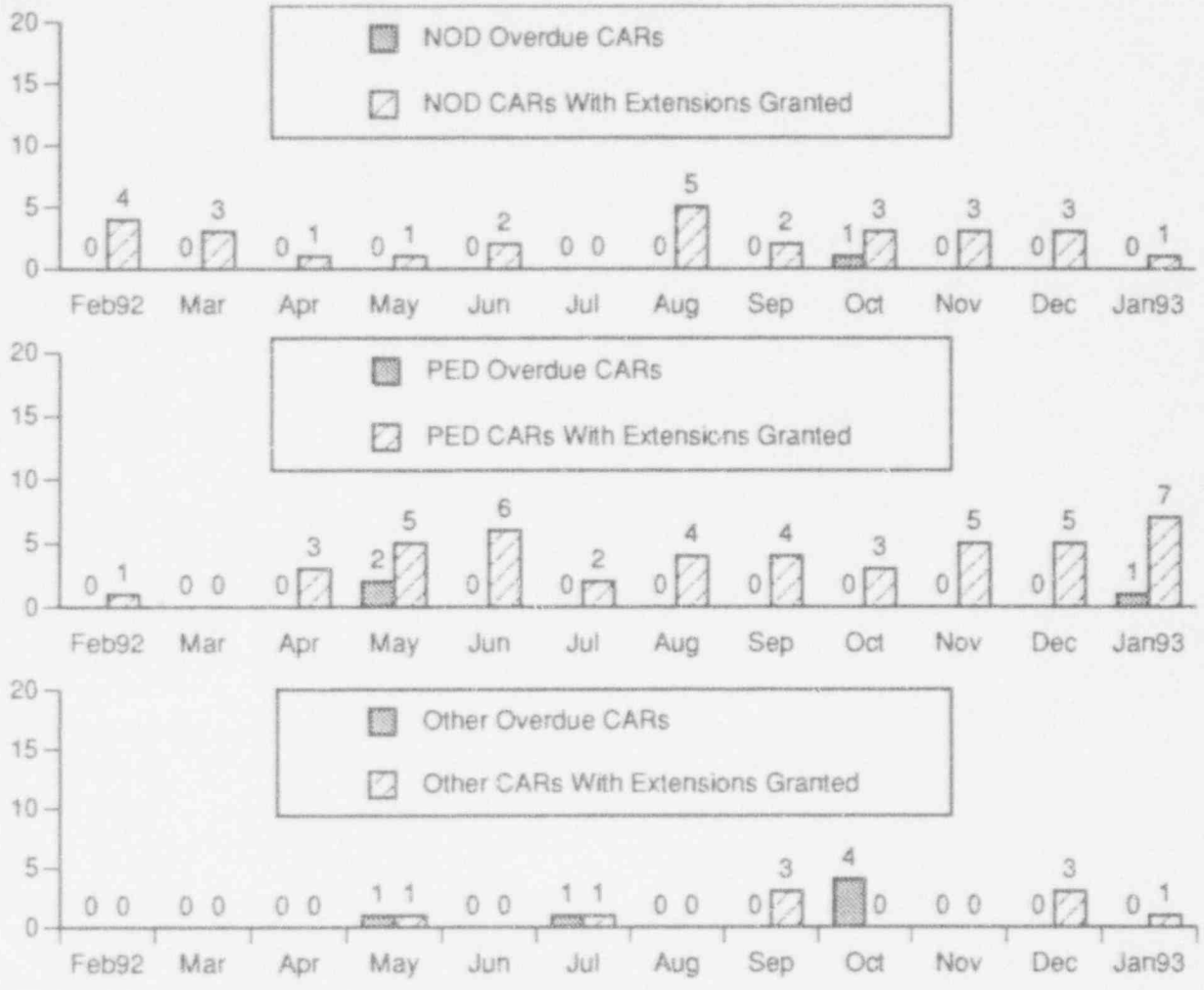
At the end of January 1993 there were 72 outstanding CARs, 27 CARs that were greater than 6 months old, and 2 CARs that were modification related.

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

Data Source: Orr/Gurtis (Manager/Source)

Accountability: Andrews/Gambhir/Gates

Adverse Trend: None



OVERDUE AND EXTENDED CORRECTIVE ACTION REPORTS

This indicator shows the number of overdue CARs and the number of CARs which received extensions broken down by organization.

Overdue CARs

Overdue CARs	November '92	December '92	January '93
NOD	0	0	0
PED	0	0	1
Others	0	0	0
Total	0	0	1

Extended CARs

Extended CARs	November '92	December '92	January '93
NOD	3	3	1
PED	5	5	7
Others	0	3	1
Total	8	11	9

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

1992 SALP Funct. Area	CARs	Signif. CARs	NRC Viola.	LERs
A) Plant Operations	18	0	0	7
B) Radiolog. Controls	11	0	13 (7)	1
C) Maint/Surveil.	123	1	4	13
D) Emergency Preparedness	8	1	1	0
E) Security	14	0	1	0
F) Engr/Tech Support	63	0	0	12
G) Safety Assess/ Qual. Verif.	35	1	1	0
H) Other	0	0	0	0
Total	272	3	20 (7)	33

Note: ( ) Indicates values for December 1992.

1993 SALP Funct. Area	CARs	Signif. CARs	NRC Viola. *	LERs
A) Plant Operations	0	0		2
B) Radiolog. Controls	0	0		0
C) Maint/Surveil.	8	0		0
D) Emergency Preparedness	0	0		0
E) Security	1	0		0
F) Engr/Tech Support	13	0		0
G) Safety Assess/ Qual. Verif.	3	0		0
H) Other	0	0		0
Total	25	0	*	2

Note: * Indicates NRC Violations data is unavailable for January 1993. This data is one month behind the reporting month due to the time required for processing.

CARs ISSUED vs. SIGNIFICANT CARs vs NRC VIOLATIONS ISSUED vs. LERs REPORTED

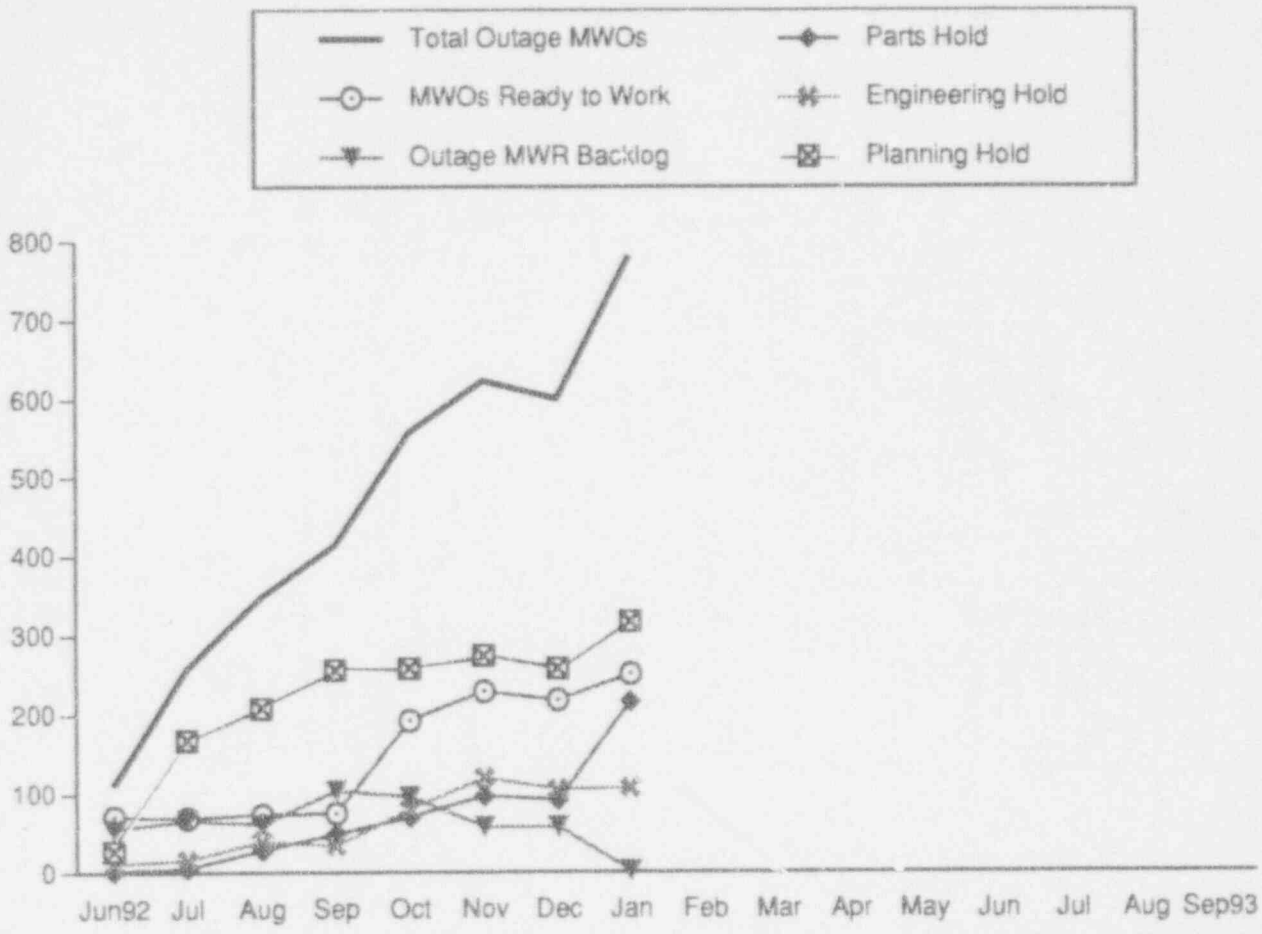
The above matrix shows the number of Corrective Action Reports (CARs) issued by the Nuclear Services Division (NSD) vs. the number of Significant CARs issued by NSD vs. the number of violations issued by the NRC for the Fort Calhoun Station in 1992 and 1993. Included in this table is the number of Licensee Event Reports (LERs) identified by the Station each year. The number of NRC violations reported is one month behind the reporting month due to the time involved in collecting and processing the violations.

Data Source: Orr/Gurtis (Manager/Source)
Short/Lippy (Manager/Source)

Accountability: Andrews/Gambhir/Gates

Adverse Trend: None

SEP 15, 20, 21



MWO PLANNING STATUS (CYCLE 15 REFUELING OUTAGE)

This indicator shows the total number of Maintenance Work Orders (MWOs) that have been approved for inclusion in the Cycle 15 Refueling Outage and the number of MWOs 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) will also be shown that have been identified for the Cycle 15 Refueling Outage and have not yet been converted to MWOs.

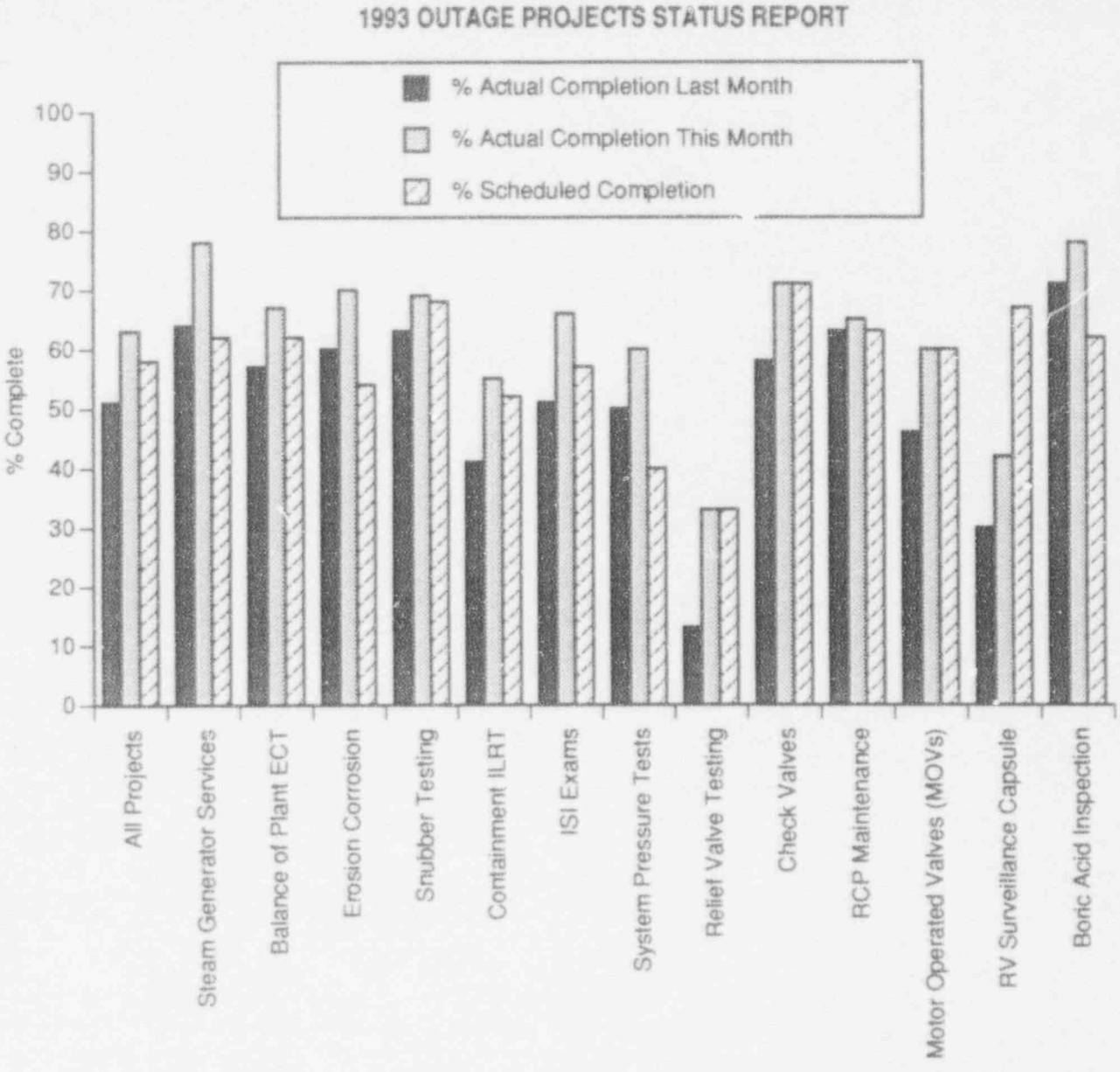
Approximately 2,176 Maintenance Work Orders were completed during the Cycle 14 Refueling Outage.

Data Source: Chase/Johansen (Manager/Source)

Accountability: Chase/Johansen

Adverse Trend: None

SEP 31



OVERALL PROJECT STATUS (CYCLE 15 REFUELING OUTAGE)

This indicator shows the status of the projects which are in the scope of the Cycle 15 Refueling Outage. There are currently 13 approved outage projects.

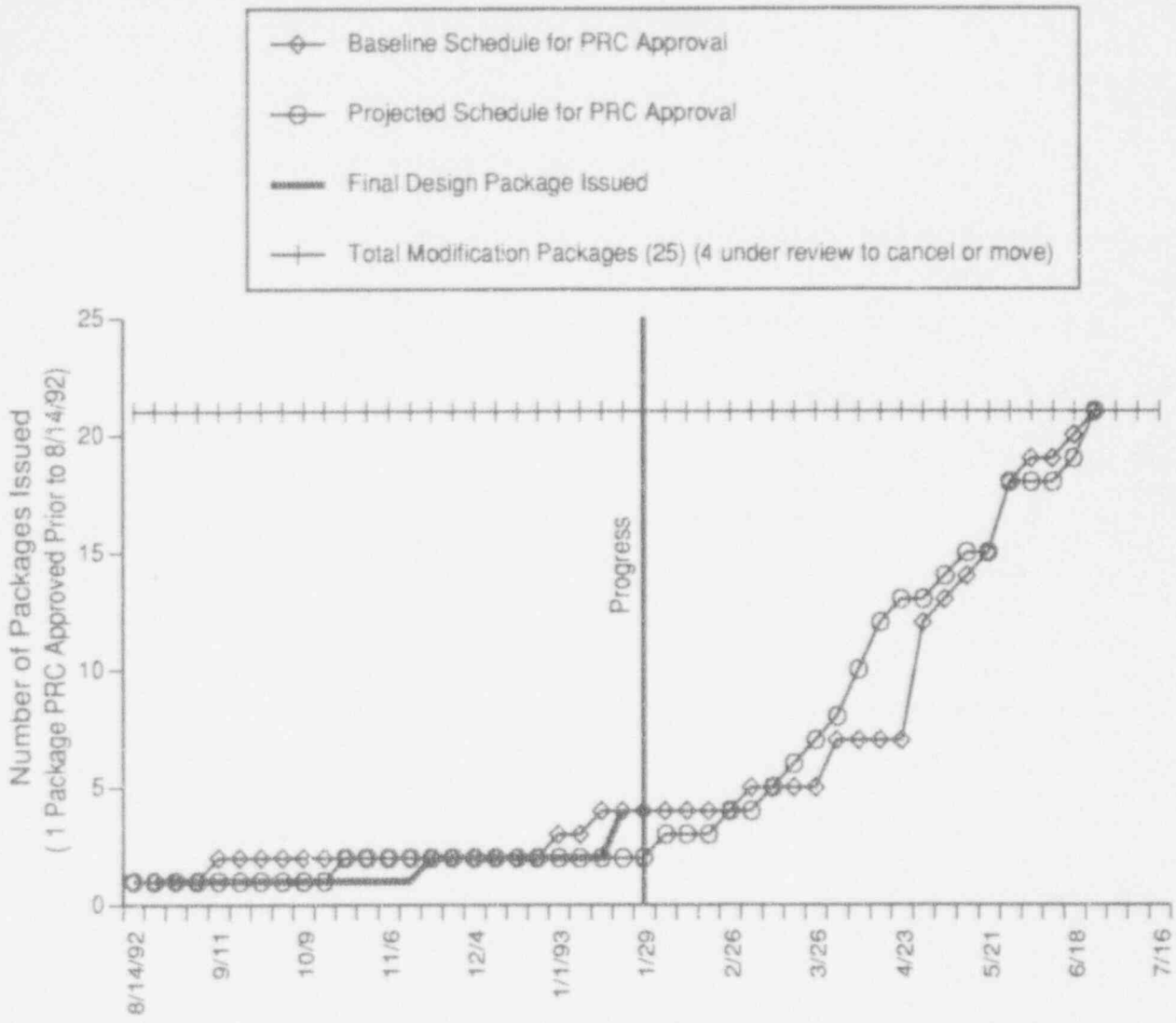
Additional data points will be added to this indicator as information becomes available.

The goal for this indicator is to have all projects 100% complete (ready to work) by July 16, 1993. The "% Scheduled Completion" category in the graph represents the percentage of the project that should be complete as of the end of January 1993.

Data Source: Chase/Clemens (Manager/Source)

Accountability: Jaworski/Boughter

Adverse Trend: None SEP 31



PROGRESS OF CYCLE 15 OUTAGE MODIFICATION PLANNING
(FROZEN SCOPE OF 25 MODIFICATIONS)

This indicator shows the status of modifications approved for installation during the Cycle 15 Refueling Outage. The data is represented with respect to the baseline schedule (established 6/19/92) and the current schedule. This information is taken from the Modification Variance Report produced by the Design Engineering Nuclear group.

The goal for this indicator is to have all modification packages PRC approved by June 30, 1993.

Additional data points will be added to this indicator as information becomes available.

Data Source: Phelps/Ronne (Manager/Source)
Accountability: Gambhir/Phelps
Adverse Trend: None SEP 31

PERFORMANCE INDICATOR DEFINITIONS

AGE OF OUTSTANDING MAINTENANCE WORK ORDERS
This indicator tracks the total number of outstanding corrective non-outage Maintenance Work Orders at the Fort Calhoun Station versus their age in months.

AMOUNT OF WORK ON HOLD AWAITING PARTS
This indicator is defined as the percentage of open, non-outage, maintenance work orders that are on hold awaiting parts, to the total number of open, non-outage, maintenance work orders.

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.

CARs ISSUED vs. SIGNIFICANT CARs vs. NRC VIOLATIONS vs. LERs REPORTED
Provides a comparison of CARs issued, NRC violations, and LERs reported. This indicator tracks performance for SEP #15, 20, & 21.

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.

COMPARISON OF VIOLATIONS AMONG REGION IV PLANTS
Provides data on violations per 1,000 inspection hours for Region IV nuclear power plants.

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.

CORRECTIVE MAINTENANCE BACKLOG GREATER THAN 3 MONTHS OLD
The percentage of total outstanding corrective maintenance items, not requiring an outage, that are greater than three months old at the end of the period reported.

CUMULATIVE VIOLATIONS & NON-CITED VIOLATIONS (12 MONTH RUNNING TOTAL)
The cumulative number of violations and Non-Cited Violations for the last 12 months.

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.

DIESEL GENERATOR UNAVAILABILITY
This indicator provides monthly data on the number of hours of diesel generator planned and unplanned unavailability.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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.

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.

EXPEDITED PURCHASES
The percentage of expedited purchases occurring during the reporting month compared to the total number of purchase orders generated.

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.

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).

INVENTORY ACCURACY
The percentage of line items that are counted each month by the warehouse which need count adjustments.

INVOICE BREAKDOWN
The number of invoices that are on hold due to shelf life, CQE, and miscellaneous reasons.

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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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.

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 EFFECTIVENESS
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.

MAINTENANCE WORK ORDER BREAKDOWN
This indicator is a breakdown of corrective non-outage maintenance work orders by several categories that remain open at the end of the reporting month. This indicator tracks maintenance performance for SEP #36.

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

MATERIAL REQUEST PLANNING
The percent of material requests (MRs) for issues with their request date the same as their need date compared to the total number of MRs.

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
Control room equipment that cannot perform its design function is considered as deficient. Control room equipment that has had a Maintenance Work Order (MWO) written for it and has not been repaired by the end of the reporting period is considered deficient and will be counted. The duration of the deficient condition is not considered.

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 NPRDS MULTIPLE FAILURES
The number of NPRDS reportable failures over the preceding eighteen months sorted by component manufacturer and model number.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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.

OPERATIONS AND MAINTENANCE BUDGET
The year- to- date budget compared to the actual expenditures for Operations and Maintenance departments.

OUTSTANDING CORRECTIVE ACTION REPORTS
This indicator displays the total number of outstanding Corrective Action Reports (CARs), the number of CARs that are older than six months and the number of modification related CARs.

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 Modfication 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 (CYCLE 15 REFUELING OUTAGE)
This indicator shows the status of the projects which are in the scope of the Cycle 15 Refueling Outage.

OVERDUE AND EXTENDED CORRECTIVE ACTION REPORTS
The number of overdue Corrective Action Reports (CARs) and the number of CARs which received extensions broken down by organization for the last 6 months.

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 each maintenance craft. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and other miscellaneous activities. These indicators track Maintenance performance for SEP #33.

PERSONNEL TURNOVER RATE
The ratio of the number of turnovers to average employment. A turnover is a vacancy created by voluntary resignation from the company. Retirement, death, termination, transfers within the company, and part-time employees are not considered in turnover.

PLANNED CAPABILITY LOSS FACTOR
The ratio of the planned 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.

PREVENTIVE MAINTENANCE ITEMS OVERDUE
This indicator is defined as 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.

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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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 CYCLE 15 OUTAGE MODIFICATION PLANNING (FROZEN SCOPE OF 24 MODIFICATIONS)
This indicator shows the status of modifications approved for completion during the Cycle 15 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
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. 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.

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.

SECURITY NON-SYSTEM FAILURES
The following components are the types of loggable/reportable non-system failures represented in this indicator. Incidents in this category include security badges, access control and authorization, security force error, and unsecured doors.
1) Security Badges - Incidents associated with improper use and handling of security badges. Incidents include security badges that are lost, taken out of the protected area, out of control on-site, or inadvertently destroyed or broken.
2) Access Control and Authorization - Administrative and procedural errors associated with the use of the card-access system such as tailgating, incorrect security badge issued, and improper escort procedures. This also includes incidents that were caused by incorrect access authorization information entered into the security system computer.
3) Security Force Error - Events caused by members of the security force that are found to be inattentive to their duties or who neglected to properly perform assigned functions (e.g., required search procedure or patrol).
4) Unsecured Doors - Doors which are found to be unsecured with no compensatory officer posted or where the individual causing the alarm did not remain at the alarmed door until a security officer responded. Events where an unsecured door is caused by air pressure are included in this category unless there is an indication that an adjustment was made to the door.
This indicator tracks security performance for SEP #58.

SECURITY SYSTEM FAILURES
The following components are the types of loggable/reportable SECURITY SYSTEM FAILURES represented in this indicator. Incidents in this category include alarm system failures, CCTV failures, security computer failures, search equipment failures, and door hardware failures. These system failures are further categorized as follows:
1) Alarm System Failure - Detection system incidents involving false/nuisance alarms and mechanical failures.
2) Alarm System Environs - Degradations to detection system performance as a result of environmental conditions (i.e., rain, snow, frost).
3) CCTV Failures - Mechanical failures to all CCTV hardware components.
4) CCTV Environs - Degradations to CCTV performance as a result of environmental conditions (i.e., rain, snow, frost, fog, sunspots, shade).
5) Security Computer Failures - Failure of the multiplexer, central processing unit, and other computer hardware and software. This category does not include software problems caused by operator error in using the software.
6) Search Equipment Failures - Failures of x-ray, metal, or explosive detectors and other equipment used to search for contraband. This also includes incidents where the search equipment is found to be defective or did not function properly during testing.
7) Door Hardware Failure - Failure of the door alarm and other door hardware such as latches, electric strikes, doorknobs, locks, etc.
8) 1992 versus 1993 System Failures - Statistics from 1992 will be compared on a monthly basis with 1993 loggable/reportable system failures. This indicator tracks security performance for SEP #58.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

SIGNIFICANT EVENTS
Significant events are those events identified by NRC staff 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.

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

SPARE PARTS ISSUED
The dollar value of the spare parts issued 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.

STOCKOUT RATE
The total number of Pick Tickets that were generated during the reporting month and the total number of Pick Tickets that were generated during the reporting month when the amount of parts requested is equal to or less than the minimum stocking level and parts are not available.

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.

TOTAL HOURS OF STUDENT TRAINING
The total number of student hours of training for Operations, Maintenance, Chemistry/Radiation Protection, Technical Support, General Employee Training, and Other Training conducted for FCS.

TOTAL INSTRUCTION HOURS
The total number and department breakdown of training instruction hours administered by the Training Center.

TOTAL SKIN AND CLOTHING CONTAMINATIONS
Reportable skin and clothing contaminations above background levels greater than 5000 dpm/100 cm squared. This indicator trends personnel performance for SEP #15 & 54.

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 solid dry radioactive waste which has been shipped off-site for processing. Low-level solid radioactive waste consists of dry active waste, sludges, resins, and evaporator bottoms generated as a result of nuclear power plant operation and maintenance. Dry radioactive waste includes contaminated rags, cleaning materials, disposable protective clothing, plastic coritainers, 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.

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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 - 06/06/87	*	*
Cycle 11	06/06/87 - 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 -09/18/93	(Planned Dates)	
14th Refueling	09/18/93 - 11/13/93	*	*
Cycle 15	11/13/93 - 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 (304,468,800 KWH)	October 1987
Most Productive Fuel Cycle (5,451,069 MWH)(Cycle 13)	May 29, 1990-Feb. 1,1992