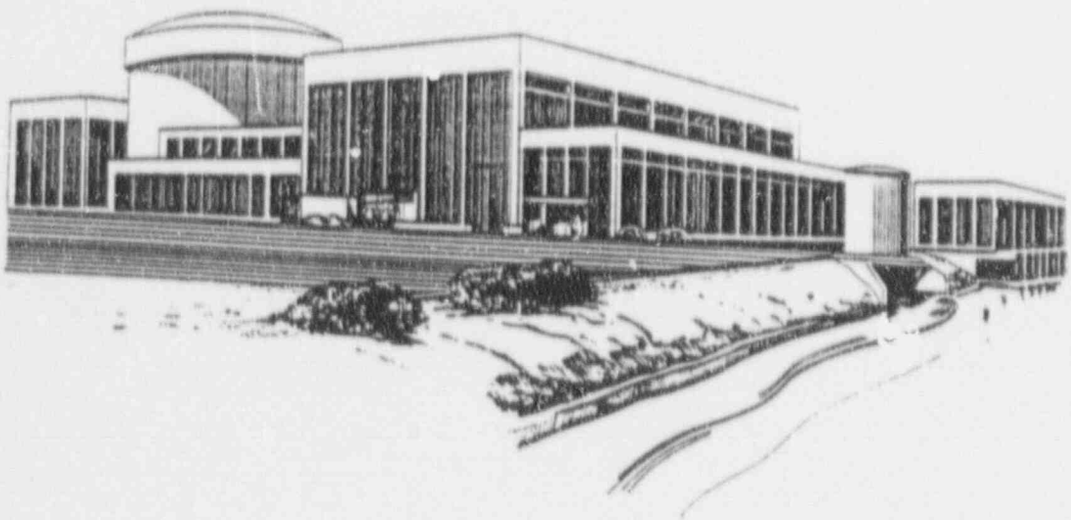
FORT CALHOUN STATION
PERFORMANCE INDICATORS

JUNE 1991



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 INDICATOR REPORT

Prepared By:
Production Engineering Division
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June 1991

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) Select data which most effectively monitors Fort Calhoun's performance in key areas.

2) Include established corporate goals and industry information for comparison.

3) Develop formal definitions for each performance parameter. This will 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 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 Blackout at Light Water Reactors", Revision 1, Appendix D, "EDG Reliability Program", dated April 6, 1990.

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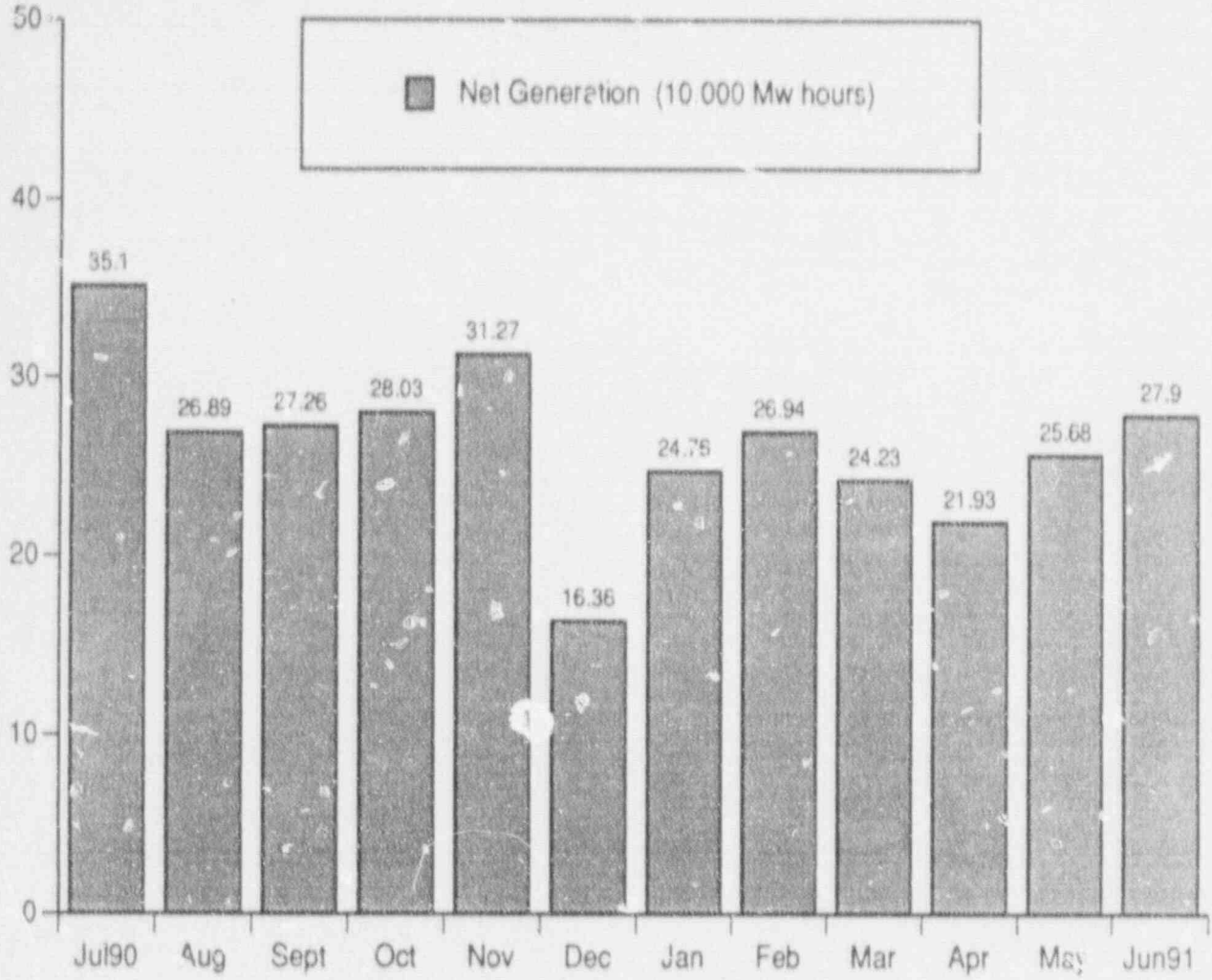


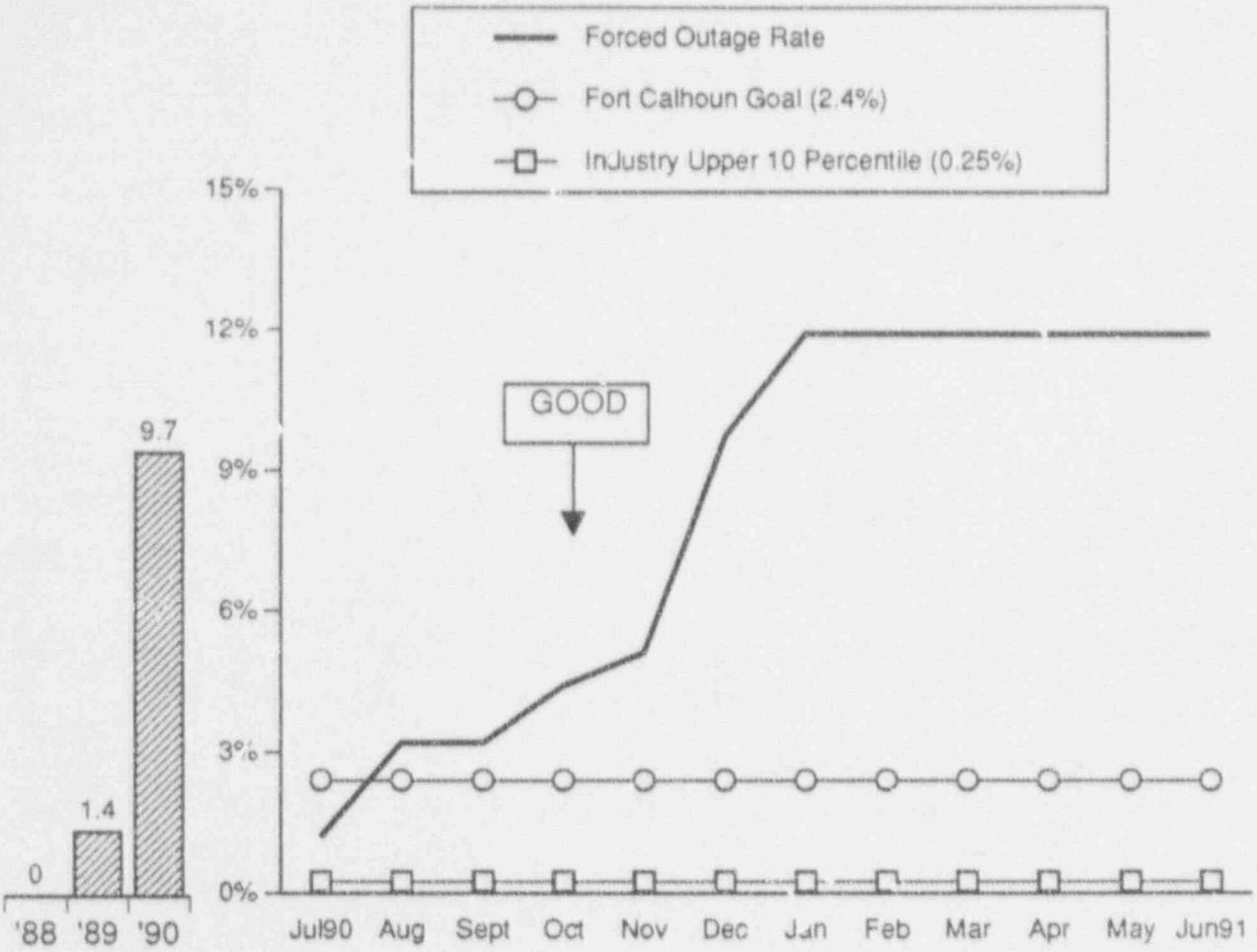
STATION NET GENERATION

This indicator shows the net generation of the Fort Calhoun Station for the reporting month.

During the month of June 1991, a net total of 279,013 MWH was generated by the Fort Calhoun Station. This low net generation reflects the fact that the Fort Calhoun Station was operated at planned reduced power for most of the month of June 1991.

Data Source: Station Generation Report

Adverse Trend: None



FORCED OUTAGE RATE

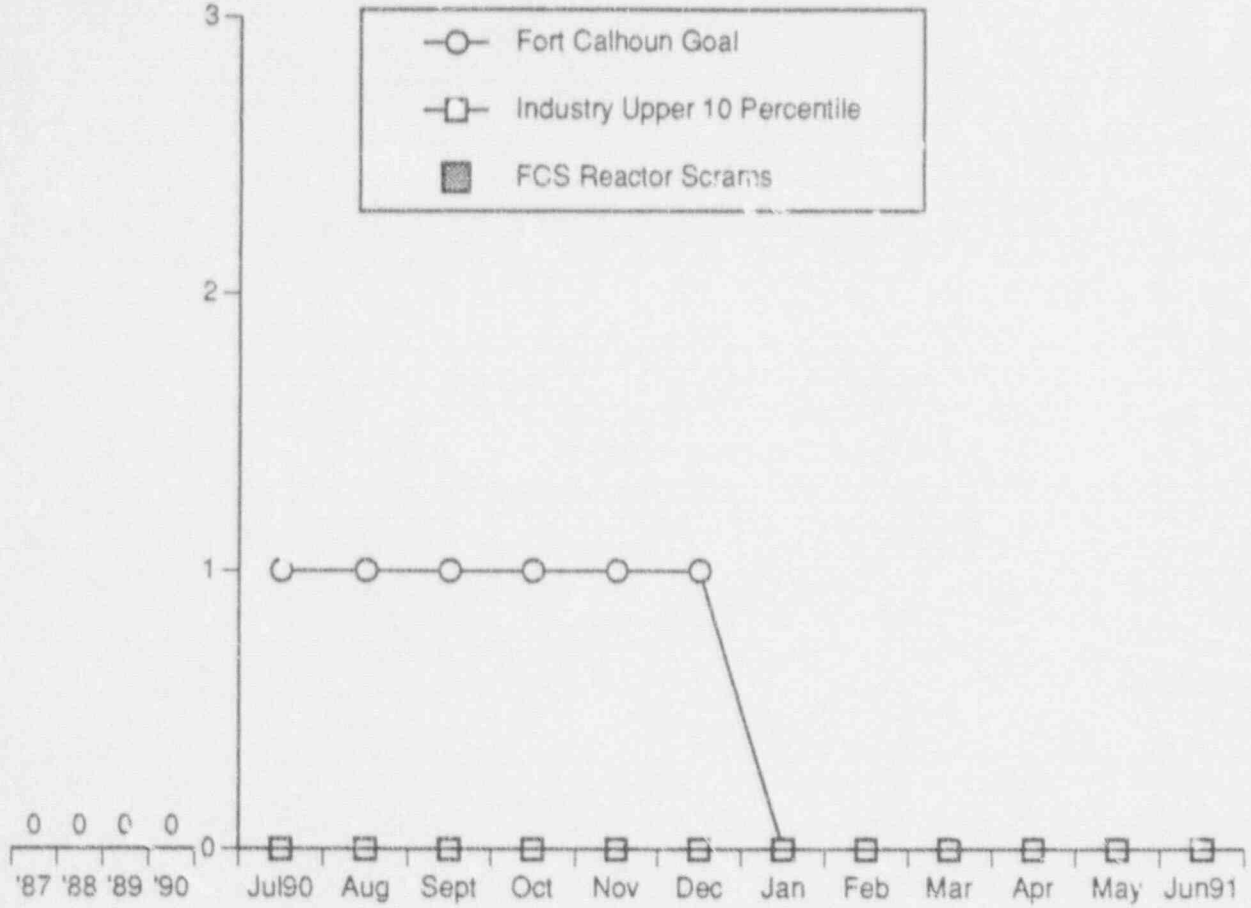
The forced outage rate was reported as 11.9% for the last twelve months.

To achieve the Fort Calhoun Station (FCS) forced outage rate goal of 2.4%, the plant cannot be forced off-line more than 19 hours for the remainder of 1991.

Note: If no forced outages occur, the 12 month average Forced Outage Rate will remain constant at 11.9% until August when it will decrease due to the August 1990 forced outage being deleted from the 12 month interval.

Data Source: NERC GAD Forms

Adverse Trend: None



UNPLANNED AUTOMATIC REACTOR SCRAMS WHILE CRITICAL

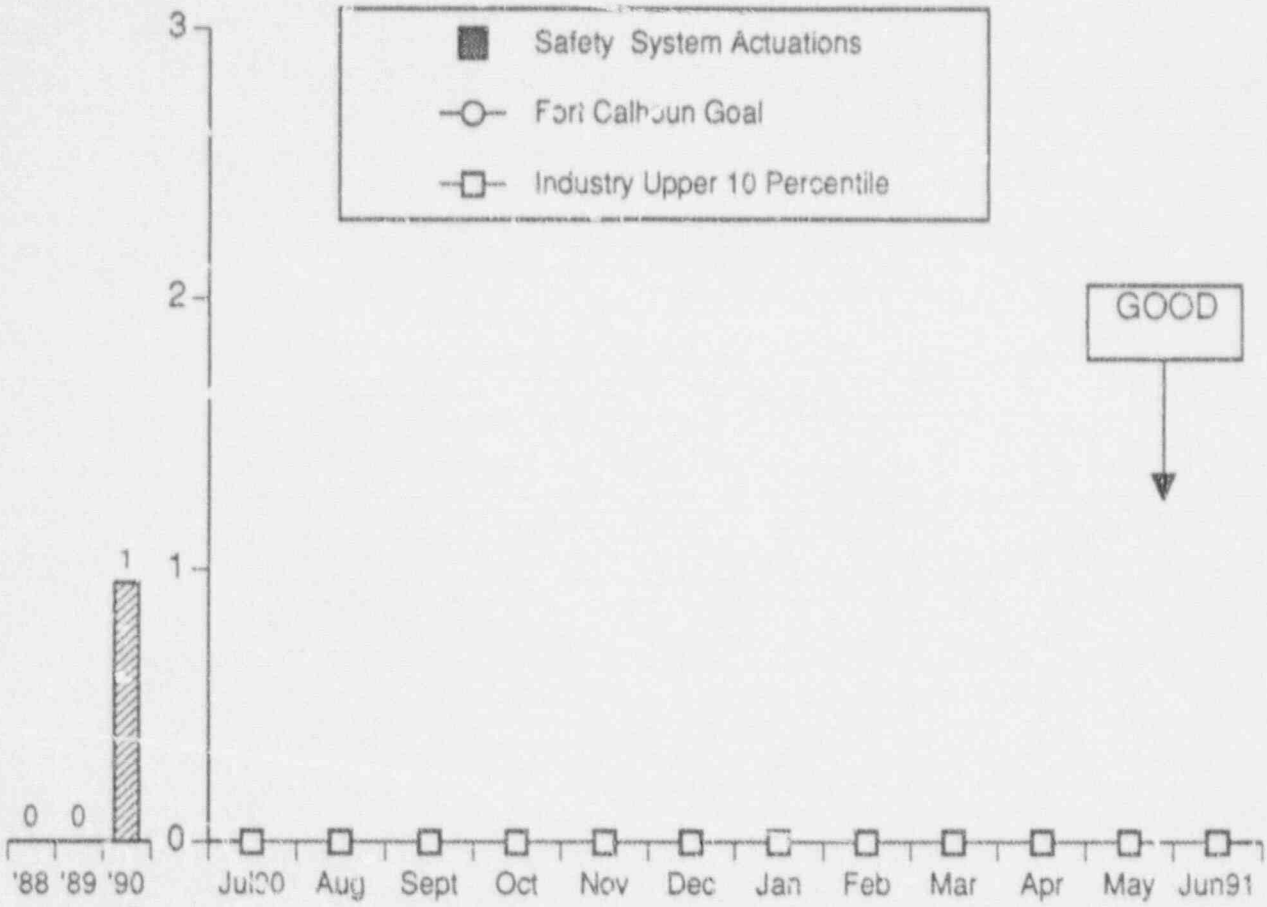
There were no unplanned automatic reactor scrams in June 1991. The last unplanned automatic reactor scram occurred on July 2, 1986.

The 1991 goal for unplanned automatic reactor scrams while critical has been set at zero.

The industry upper ten percentile value is zero scrams per unit on an annual basis. The Fort Calhoun Station is currently performing in the upper ten percentile of nuclear power plants in this area.

Data Source: Plant Licensee Event Reports (LER)

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

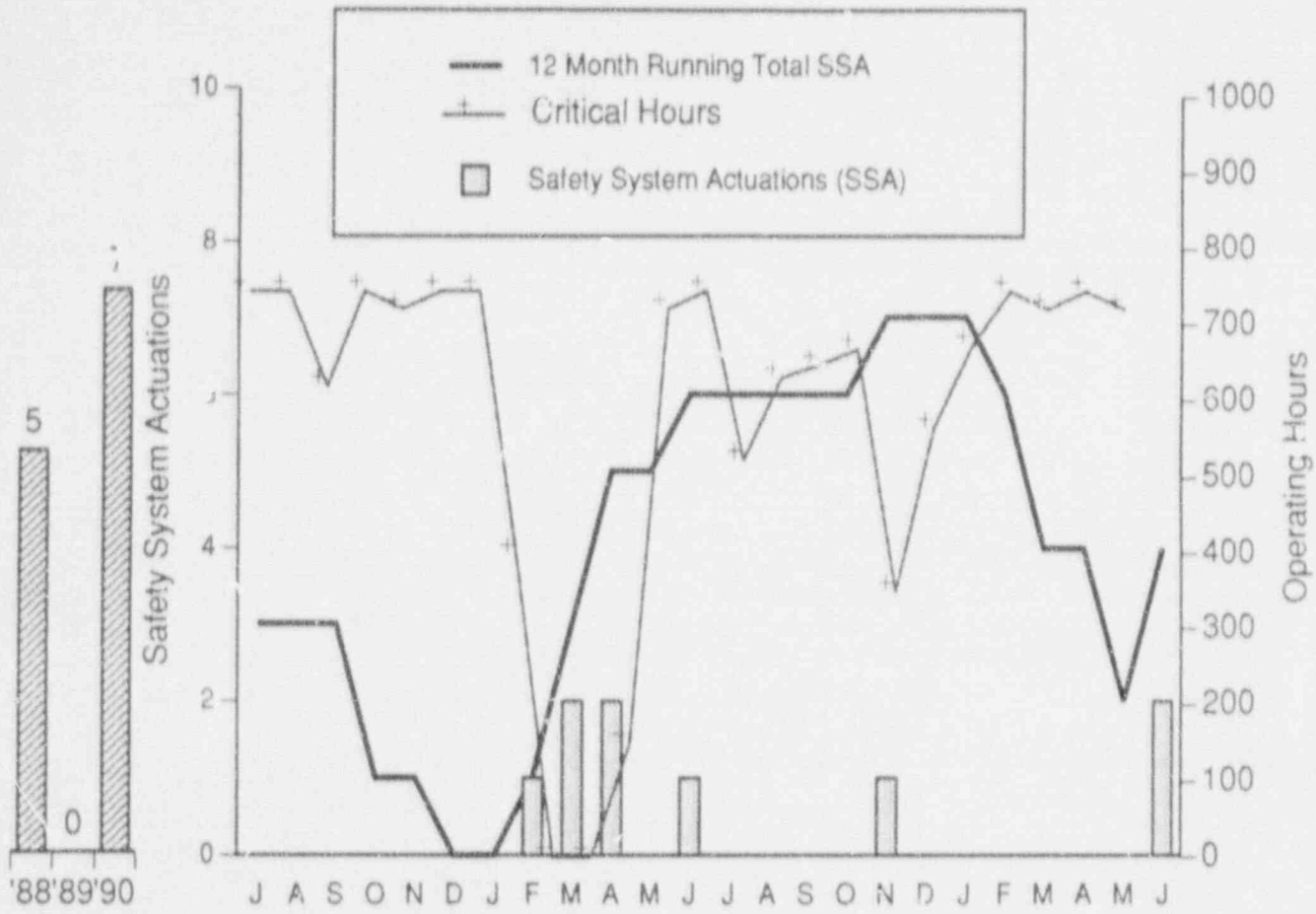
There were no unplanned safety system actuations during the month of June 1991.

The 1991 goal for the number of unplanned safety system actuations is zero.

The industry upper ten percentile value for the number of unplanned safety system actuations per year is zero. The Fort Calhoun Station is currently performing in the upper ten percentile of nuclear power plants for this indicator.

Data Source: Plant Licensee Event Reports (LER's)

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (NRC DEFINITION)

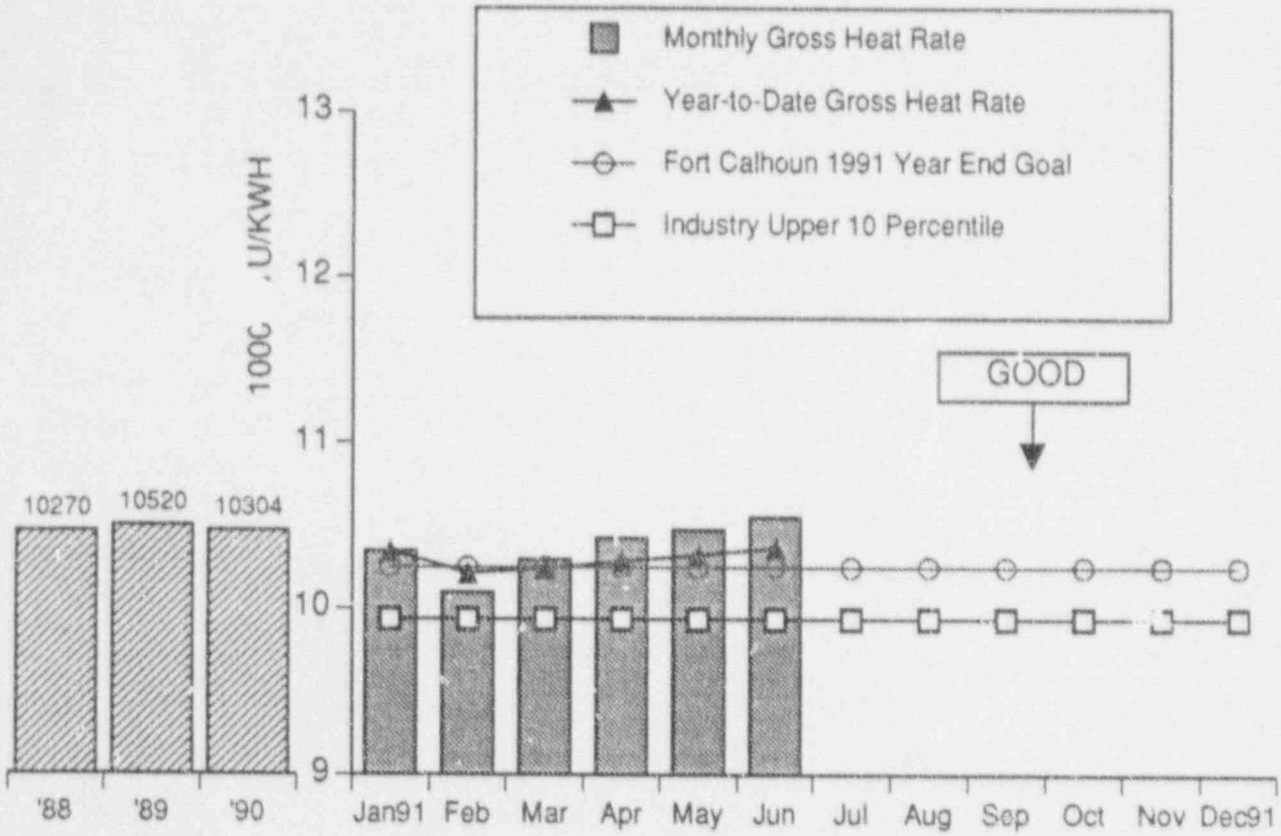
This indicator shows the number of unplanned safety system actuations (SSA's) which include the High and Low Pressure Safety Injection Systems, the Safety Injection Tanks, and the Emergency Diesel Generators. The NRC classification of SSA's includes actuations when major equipment is operated and when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

In June there were two anticipatory signal starts for DG-2. The first start occurred after a control relay was bumped causing a momentary loss of power to safety bus 1A4. DG-2 started a second time when a breaker trip occurred during DG-1 breaker synchronization. DG-2 was not required to provide power to the safety bus in either of these situations.

The majority of SSA's displayed above were related to 1990 Refueling Outage activities and are currently being reviewed under the Safety System Actuation Reduction Program. The goal of the Program is to reduce the number of SSA's at Fort Calhoun.

Data Source: Plant Licensee Event Reports (LER's)

Adverse Trend: None



GROSS HEAT RATE

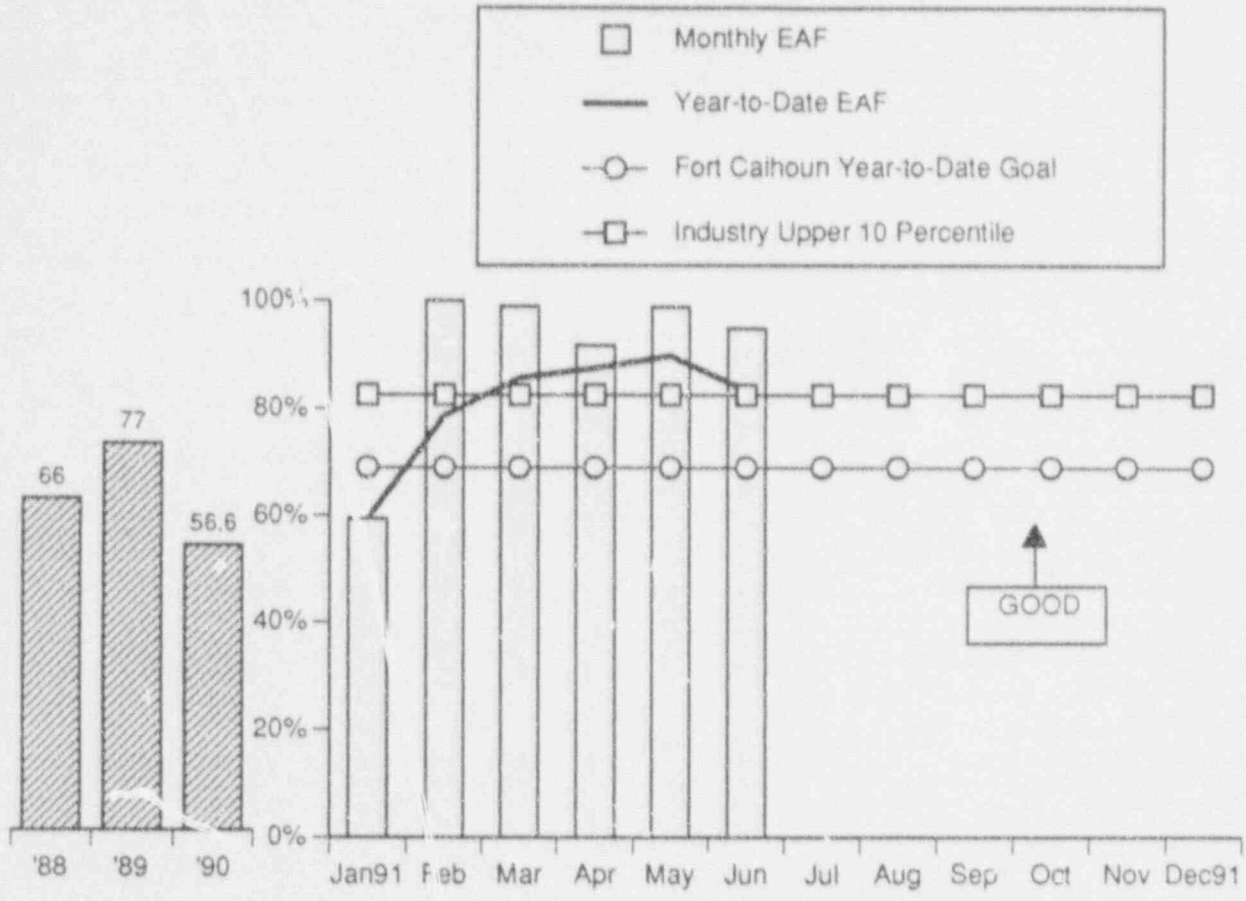
This indicator shows the Gross Heat Rate (GHR) for the reporting month, the previous 1991 months, the year-to-date value, and the year-end GHR for the previous 3 years. The Gross Heat Rate Indicator 1991 year-end goal has been changed. This goal was changed due to the rescheduling of the Cycle 13 Refueling Outage which resulted in a reduction in operating power to save fuel.

The gross heat rate for the Fort Calhoun Station was reported as 10,555 BTU/KWH during the month of June. Design gross heat rate for the station is 10,039 BTU/KWH. The year-to-date gross heat rate was reported as 10,366 BTU/KWH.

The year-end Fort Calhoun goal (10,250 BTU/KWH) is the theoretical best gross heat rate that can be achieved by the Fort Calhoun Station during 1991.
The gross heat rate industry upper ten percentile value is 9,935 BTU/KWH.

Data Source: Holthaus/Gray (Manager/Source)

Adverse Trends: The Gross Heat Rate has increased for the past four months due to the plant operating at planned reduced power and increased river water temperature. The Gross Heat Rate is expected to be lower in the future when the plant is operated at 100% power for an entire month.



EQUIVALENT AVAILABILITY FACTOR

This indicator shows the plant monthly Equivalent Availability Factor (EAF), year-to-date EAF for 1991, and the EAF for the previous 3 years.

The EAF was reported as 94.76% for the month of June. The EAF was not affected by the 70% power reduction during February, since the reduction was under management control and for reasons of economy (fuel savings).

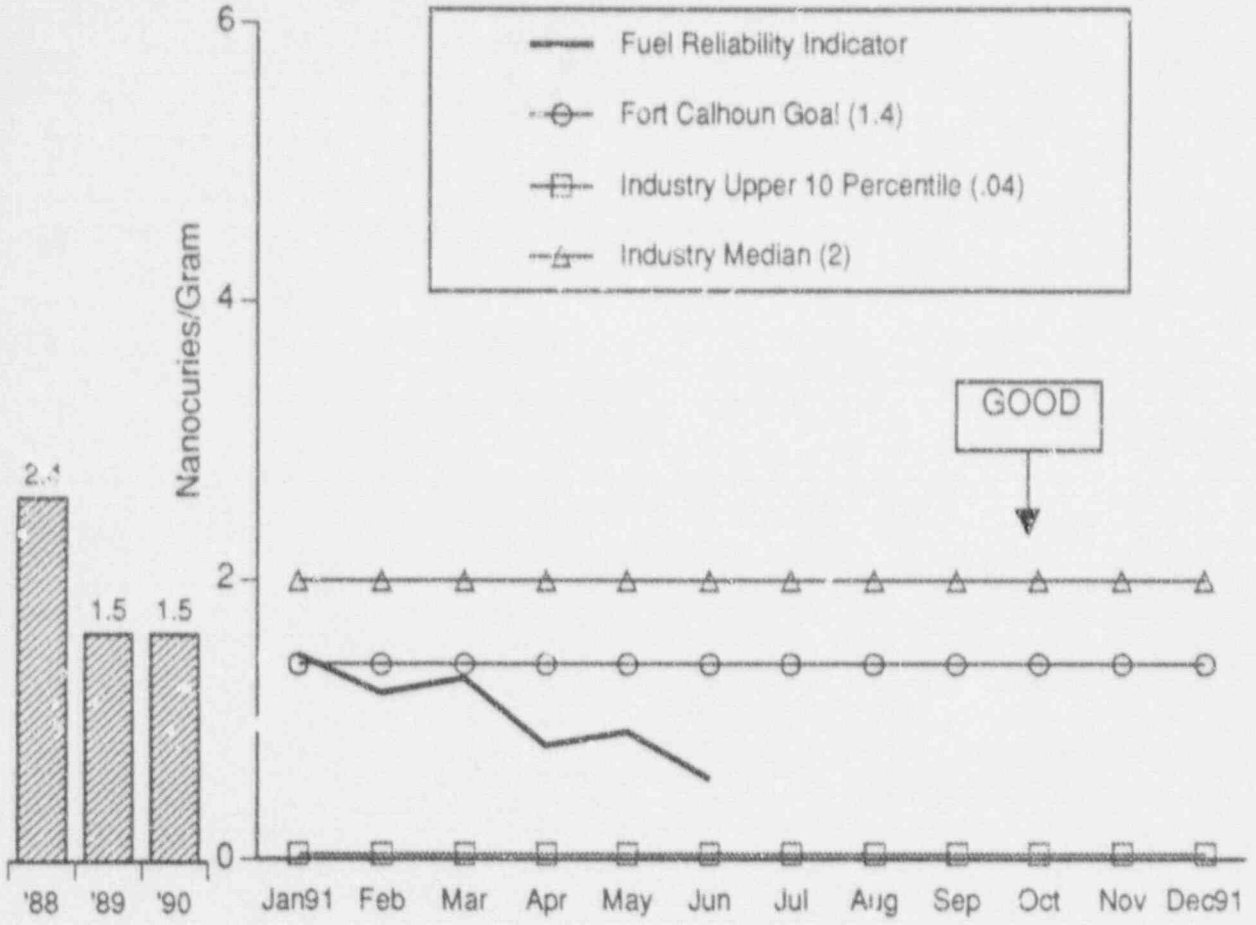
The year-to-date EAF was reported as 83.36%.

The EAF Fort Calhoun goal is 69% for 1991.

The EAF industry upper ten percentile value is 82.5%.

Data Source: Dietz/Parra (Manager Source)

Adverse Trends: None



FUEL RELIABILITY INDICATOR

The Fuel Reliability Indicator (FRI) was reported as .576 nanocuries/gram for the month of June. This INPO indicator uses an industry normalized letdown purification rate. The FRI value using the plant's actual letdown purification rate was reported as 1.00 nanocuries/gram.

The FRI was calculated for June 1 thru June 15 only because the plant was at a steady state for those days. The iodine concentrations were in transition the remainder of the month due to power changes.

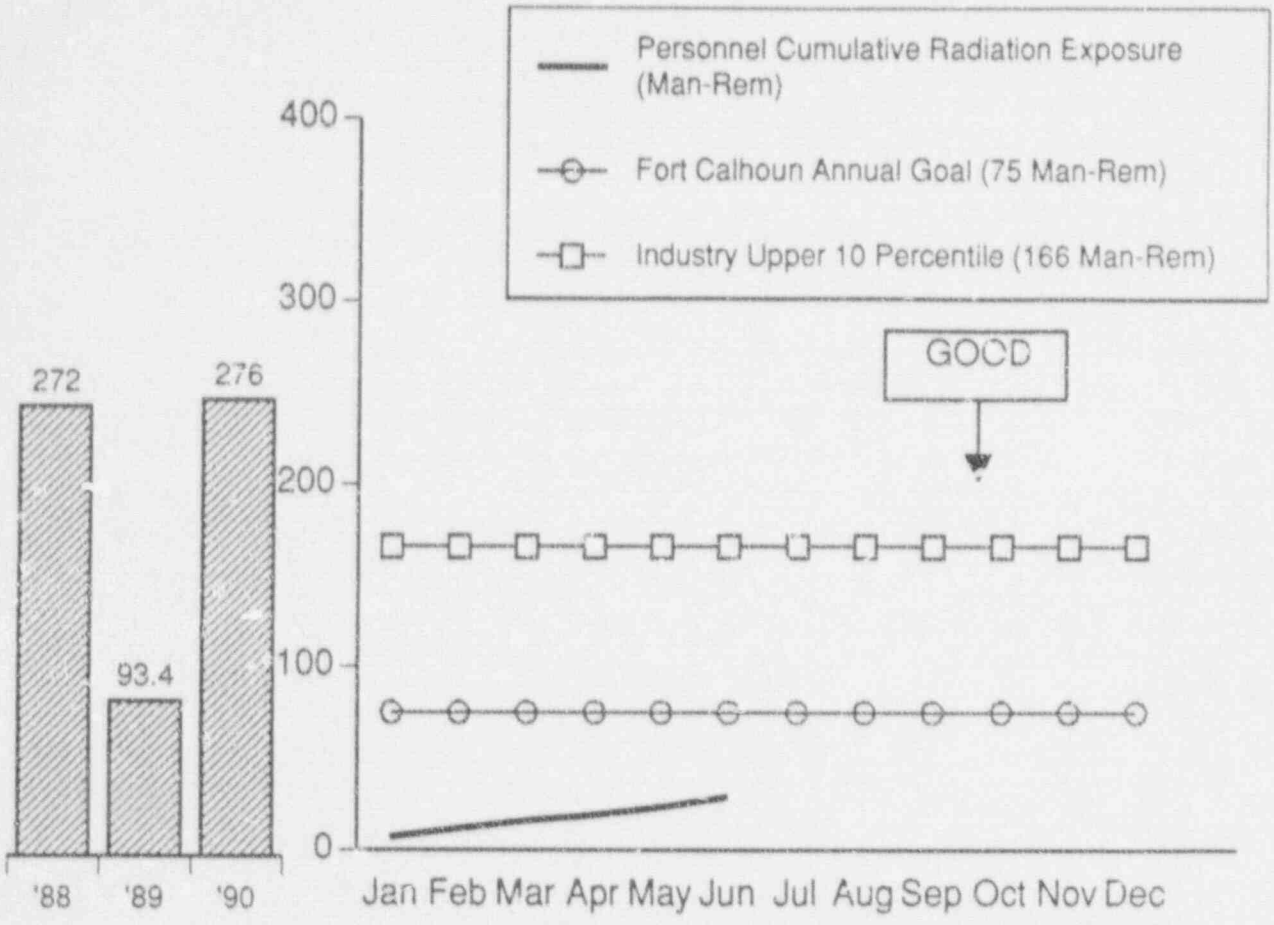
The Cycle 13 fuel performance continues without an observed fuel failure. The high FRI value is indicative of previous fuel failures. The last detected fuel failure was during Cycle 10.

The 1991 fuel reliability goal has been set at 1.4 nanocuries/gram.

The fuel reliability indicator industry upper ten percentile value is 0.04 nanocuries/gram.

Data Source: Holthaus/Guliani

Adverse Trend: None



PERSONNEL RADIATON EXPOSURE (CUMULATIVE)

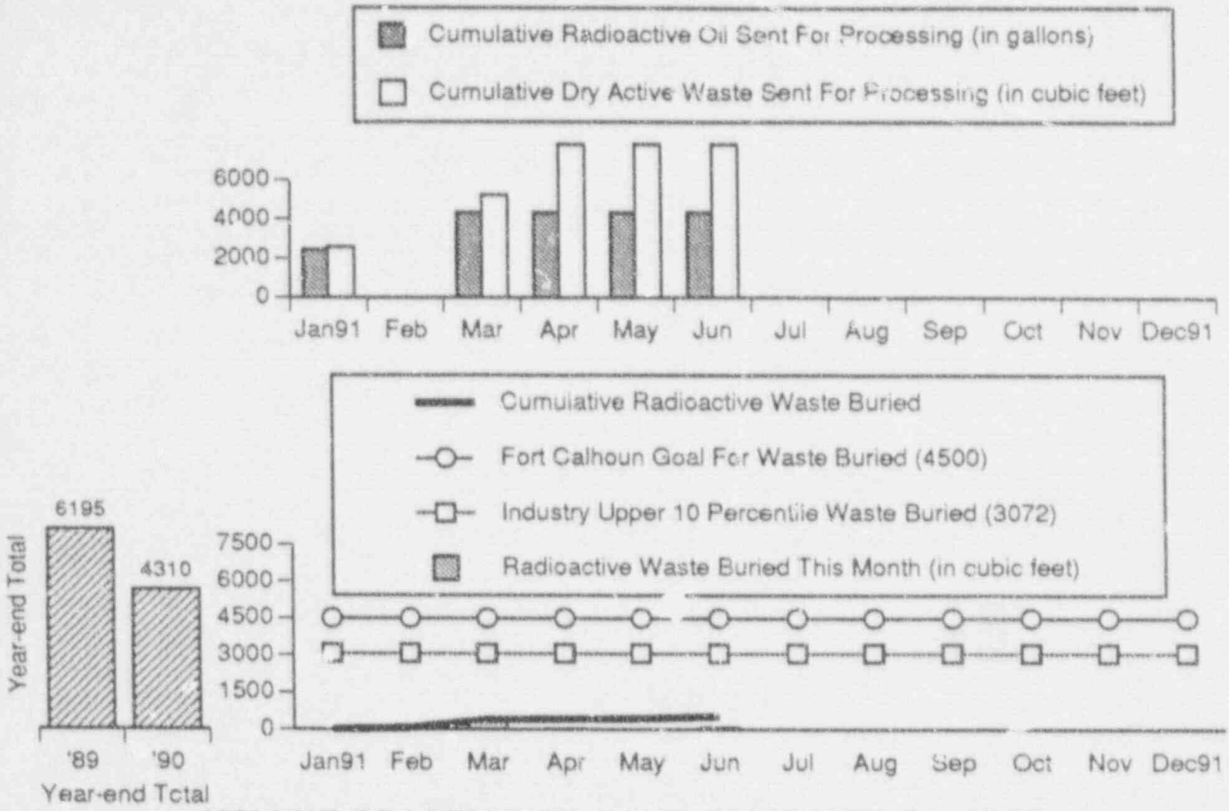
During June 1991, 5.7 man-rem was recorded by TLD's worn by personnel while working at the Fort Calhoun Station. The year-to-date exposure is 29.2 man-rem.

The Fort Calhoun goal for personnel radiation exposure (cumulative) during 1991 is 75 man-rem.

The personnel radiation exposure industry upper ten percentile is 166 man-rem per unit per year.

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None SEP 54



VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

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

The monthly and cumulative volumes of radioactive waste which were buried during the months of January, February, and March 1991 have been revised. These revisions are due to the delay involved in the shipping for processing, the processing, and the burying of radioactive waste.

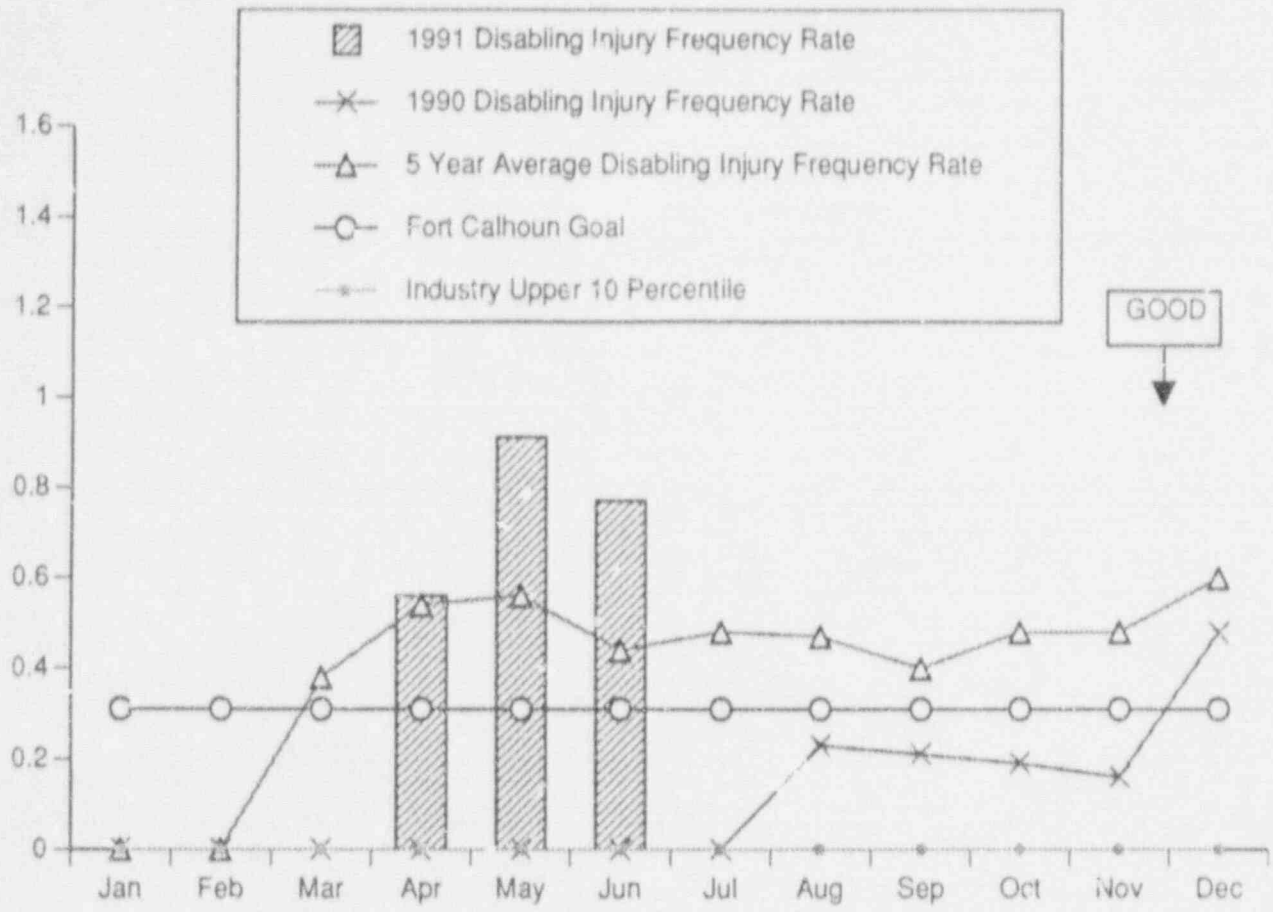
Cumulative volume of radioactive oil shipped off-site for processing (gallons)	4,330.0
Cumulative amount of solid radwasted shipped off-site for processing (cubic feet)	7,778.0
Volume of solid radioactive waste which was buried during the month (cubic feet)	80.6
Cumulative volume of solid radioactive waste buried (cubic feet)	517.6
Amount of solid radioactive waste in temporary storage (cubic feet)	0.0

The Fort Calhoun goal for the volume of solid radioactive waste which has been buried is 4,500 cubic feet.

The industry upper ten percentile value is 3,072 cubic feet per unit per year. The Fort Calhoun Station was in the upper ten percentile of nuclear plants for this indicator in 1986, 1987, and 1988.

Data Source: Patterson/Breuer (Manager/Source) SEP 54

Adverse Trend: None



DISABLING INJURY FREQUENCY RATE (LOST TIME ACCIDENT RATE)

This indicator shows the reporting month disabling injury/illness rate in column form. The 1990 disabling injury/illness frequency rate and the 5 year average of the corresponding monthly disabling injury/illness frequency rate are also shown.

There were no (0) lost time accidents reported at the Fort Calhoun Station in June. The total number of lost time accidents that have been reported during 1991 is two (2).

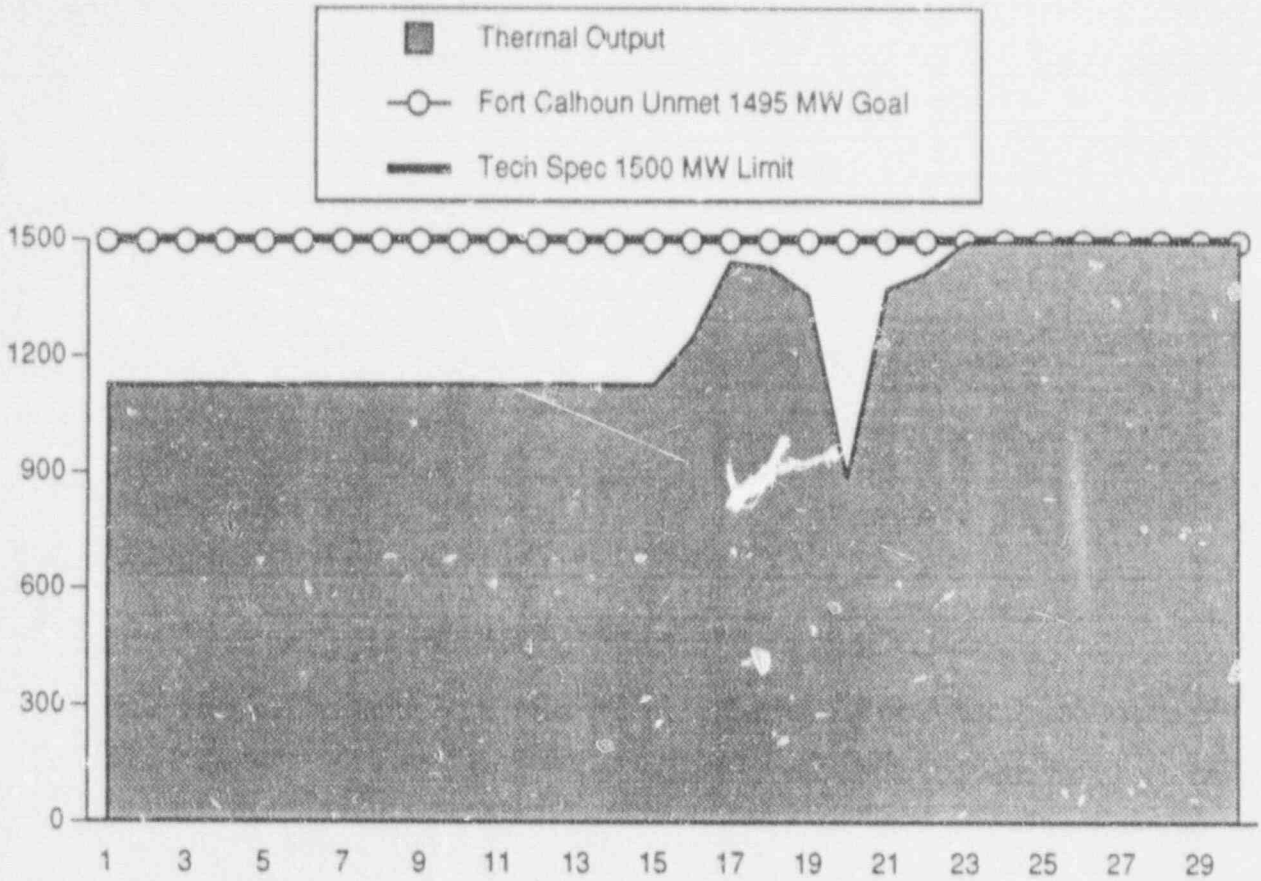
The 1991 disabling injury/illness frequency rate goal was set at 0.31%.

The industry upper ten percentile disabling injury/illness frequency rate is 0%.

Year	Year-End Rate
1988	1.6
1989	0.4
1990	0.5

Data Source: Sorenson/Skaggs (Manager/Source)

Adverse Trend: The high rate for lost time accident rate is due to histoplasmosis, a work related illness. SEP 25 & 26



DAILY THERMAL OUTPUT

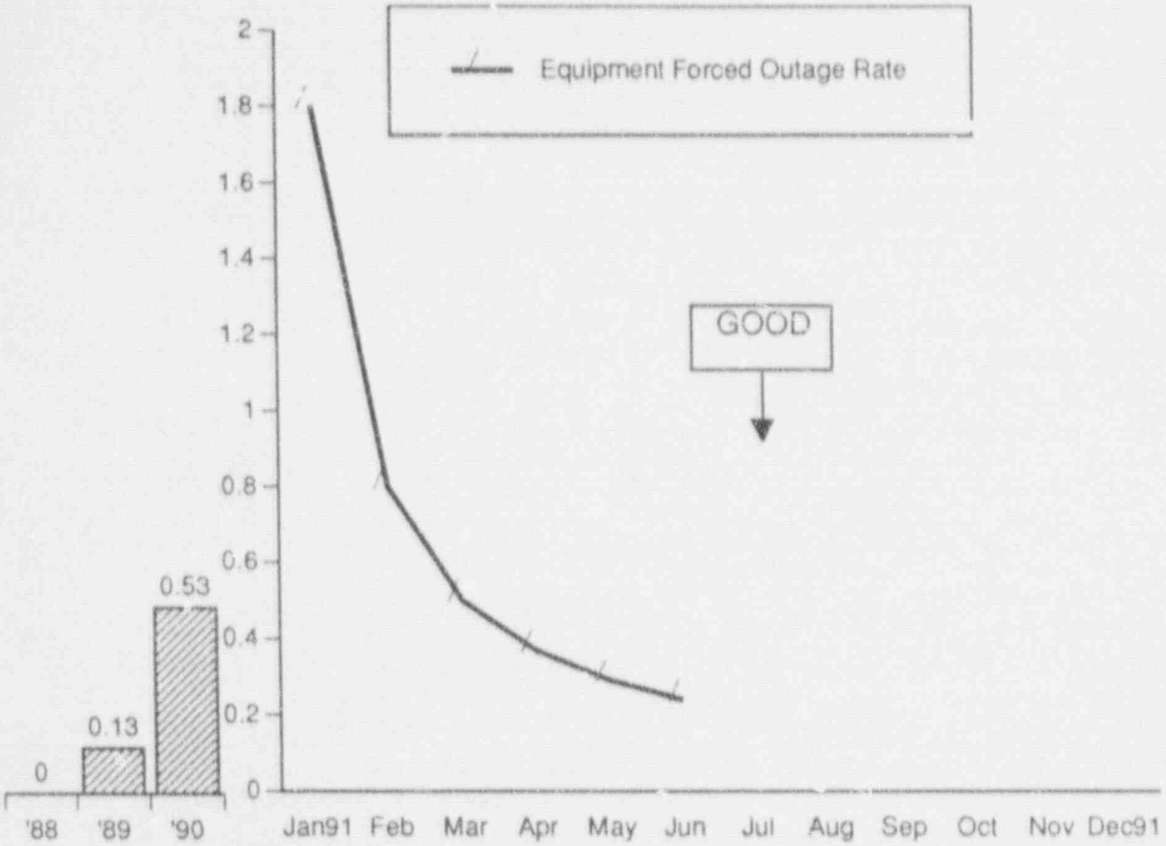
The above thermal output graph displays the daily operating power level during June 1991, the 1500 thermal megawatt average technical specification limit, and the 1495 thermal megawatt Fort Calhoun goal that was not met.

Plant power level was reduced to 70% in February for fuel conservation in support of the extension of power operations for Cycle 13. To meet peak electrical demand, the plant was brought to 100% power in the latter half of June.

Reduced power operations will be resumed in the fall.

Data Source: Holthaus/Gray (Manager/Source)

Adverse Trend: None



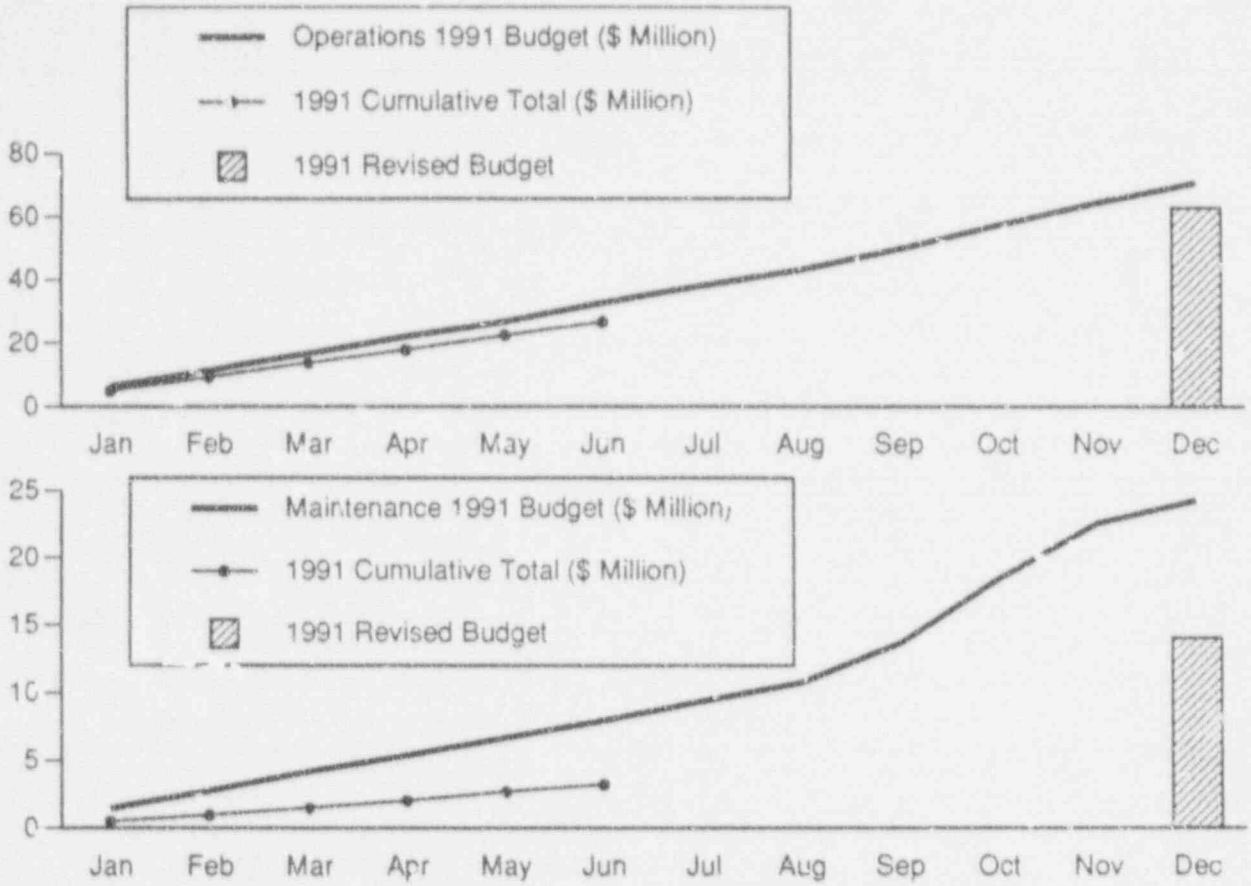
EQUIPMENT FORCED OUTAGES PER 1000 CRITICAL HOURS

There were no equipment forced outages reported during the month of June 1991.

The last equipment forced outage occurred in January 1991 and was due to the December CEDM housing leak which carried outage time into January.

Data Source: Plant Licensee Event Reports (LERs)

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.

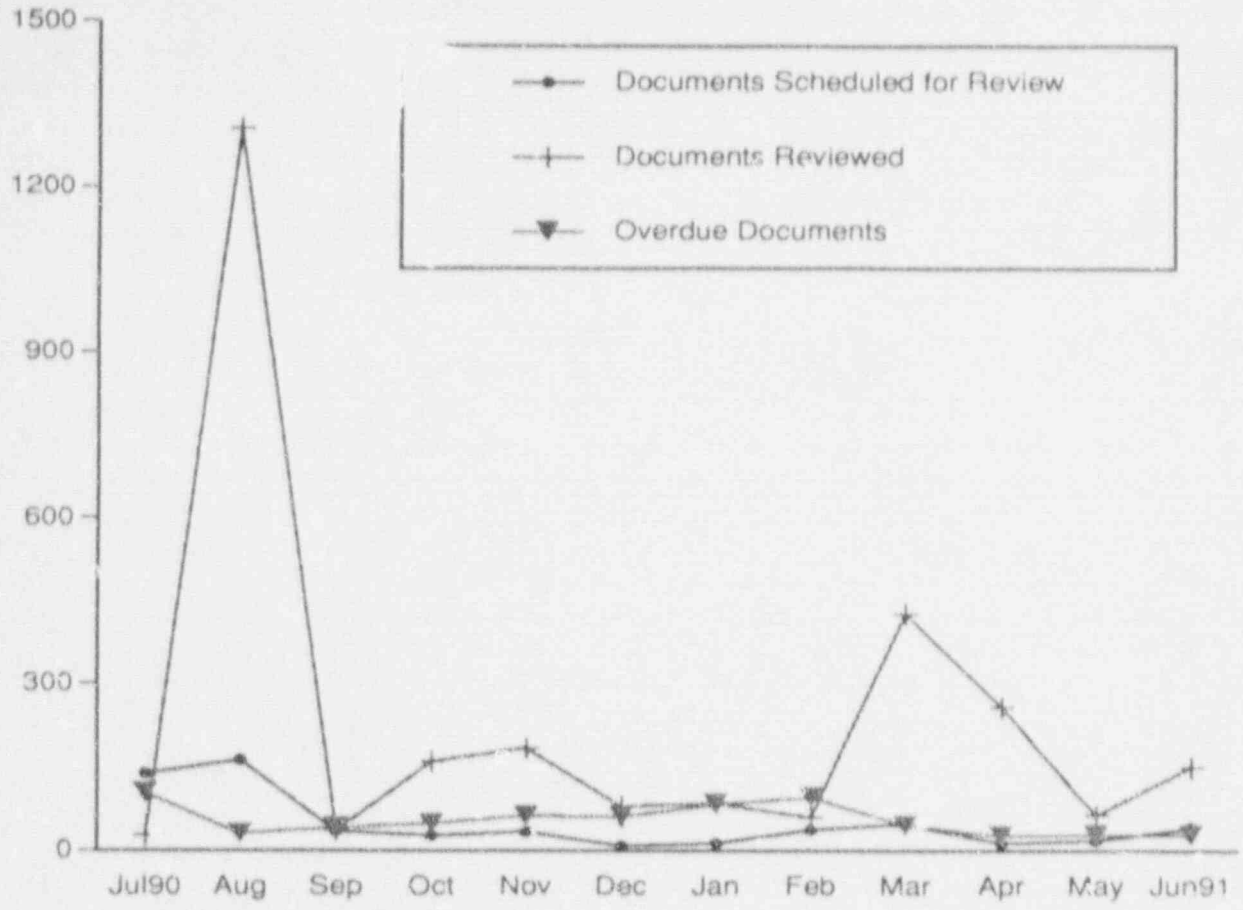
The December Bar Graph represents the revised year-end budget due to budget revisions primarily reflecting the refueling postponement for Cycle 13.

The budget year-to-date for Operations was 32.6 million dollars for June while the actual cumulative expenditures through June totaled 26.5 million dollars.

The budget year-to-date for Maintenance was 7.9 million dollars for June while the actual cumulative expenditures through June totaled 3.2 million dollars.

Data Source: Gleason/Parent (Manager/Source)

Adverse Trends: None



DOCUMENT REVIEW

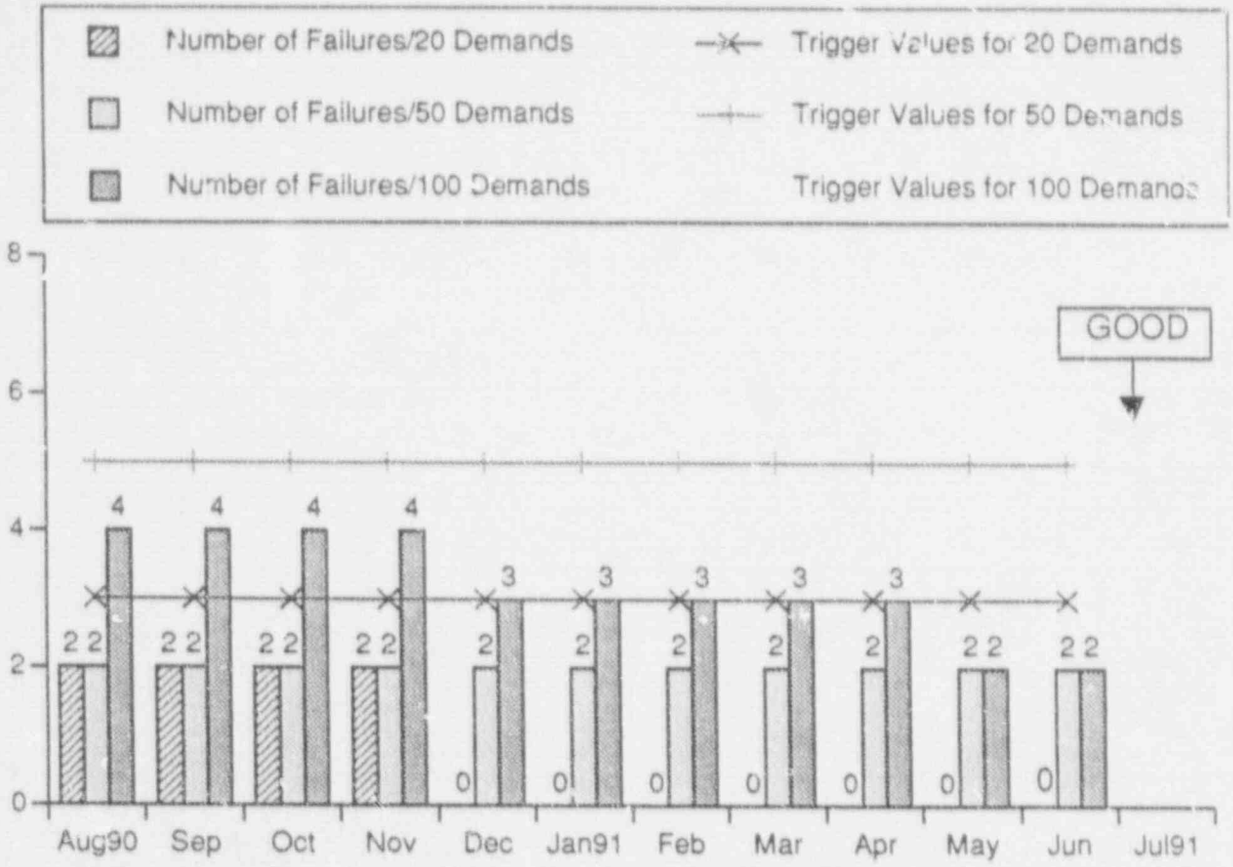
This indicator shows the number of completed, scheduled, and overdue (greater than 6 months past the scheduled due date) biennial reviews for the reporting month. These document reviews are performed in-house and include Spec Procedures, the Site Security Plan, Maintenance Procedures, Preventive Maintenance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

During June there were 149 document reviews completed while 40 document reviews were scheduled. At the end of June, there were 3 document reviews overdue.

During the month of June there were 72 new or renamed documents reviewed. These new or renamed documents will need to be reviewed again in 1993.

Data Source: Patterson/McKay (Manager/Source)

Adverse Trend: None SEP 46



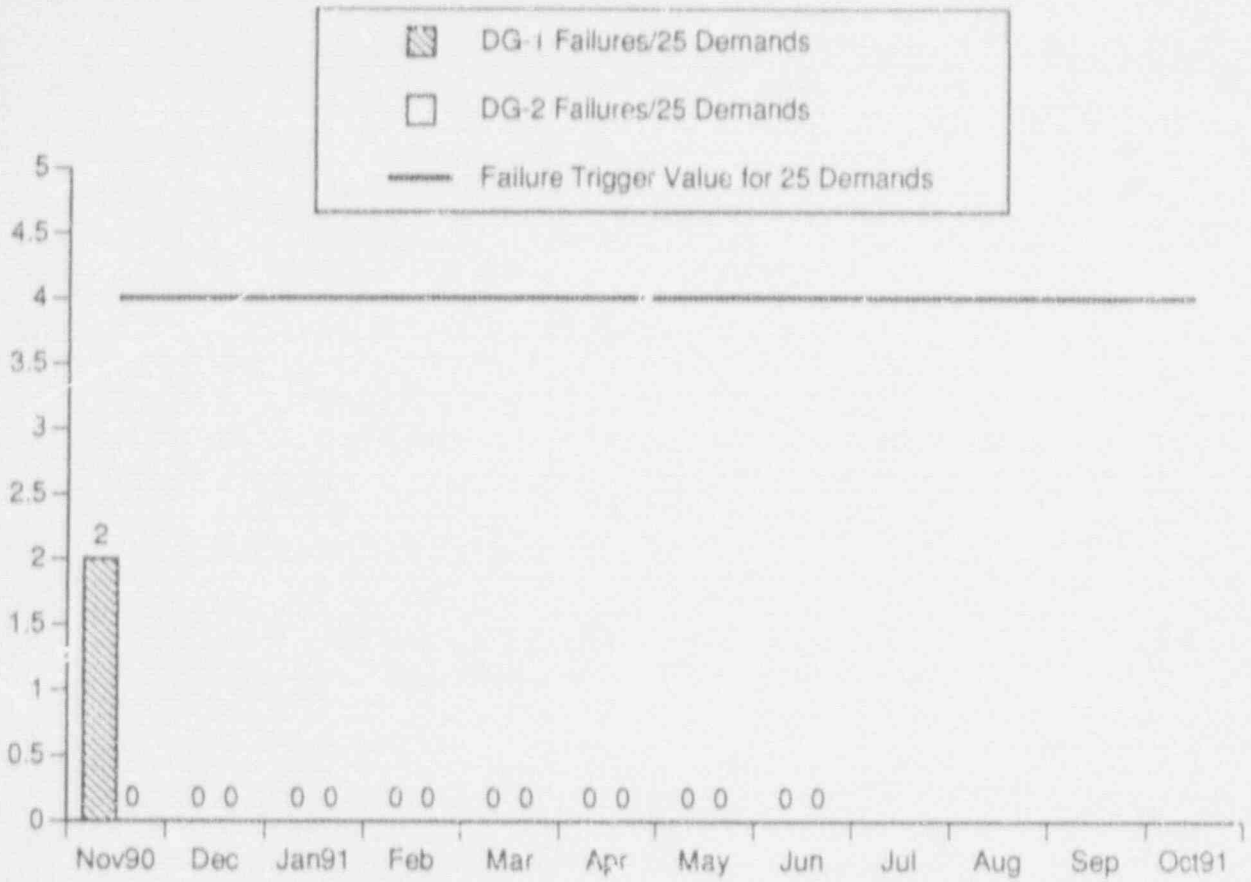
EMERGENCY DIESEL GENERATOR UNIT RELIABILITY

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. These trigger values are the Fort Calhoun 1991 goal.

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).

Data Source: Jaworski/Ronning (Manager/Source)

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 1991.

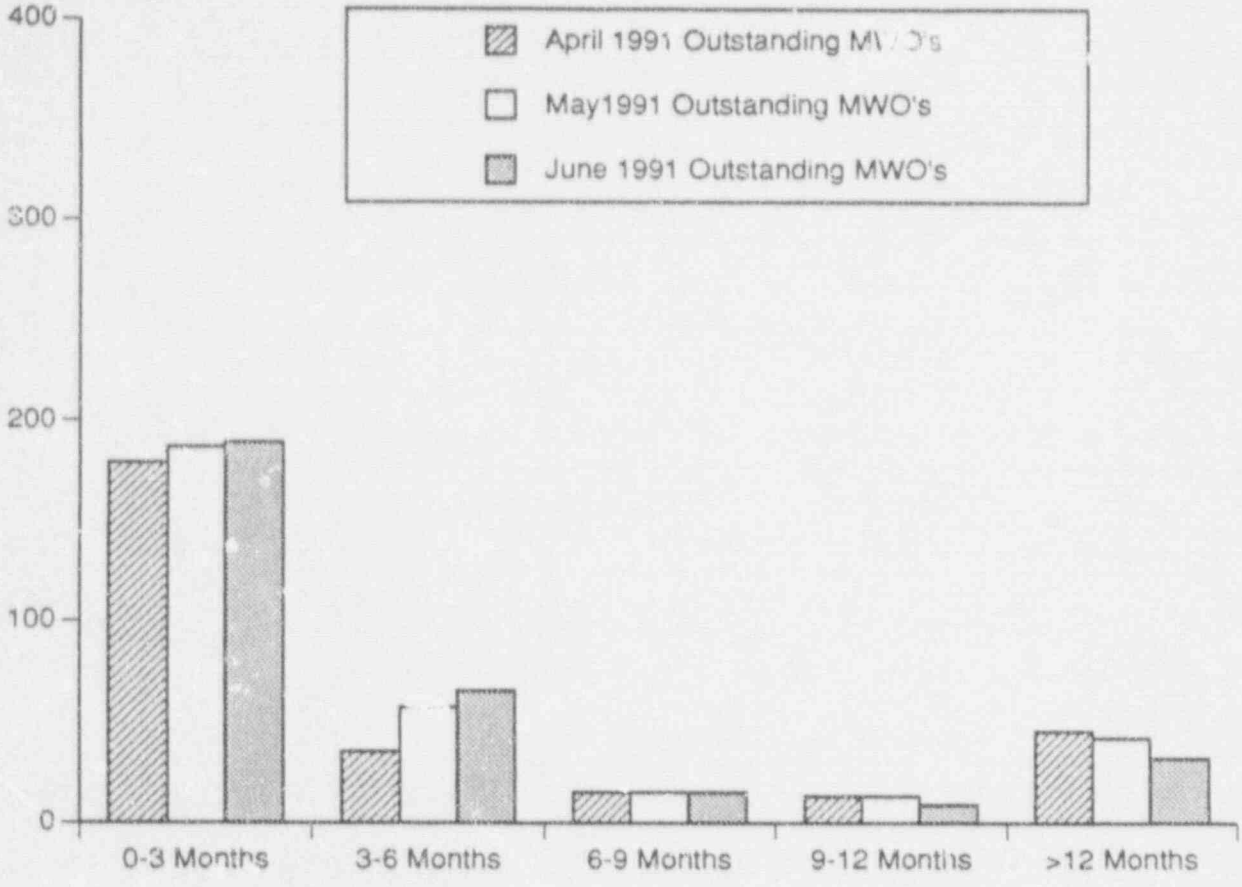
It must be emphasized that in accordance with NUMARC criteria, certain actions will take place in the event that any one emergency diesel generator experiences 4 or more failures within the last 25 demands on the unit. These actions are described in the Definition Section. A Standing Order has been drafted 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 not experienced any failures during the last 25 demands on the unit.

Data Source: Jaworski/Ronning (Manager/Source)

Adverse Trend: None

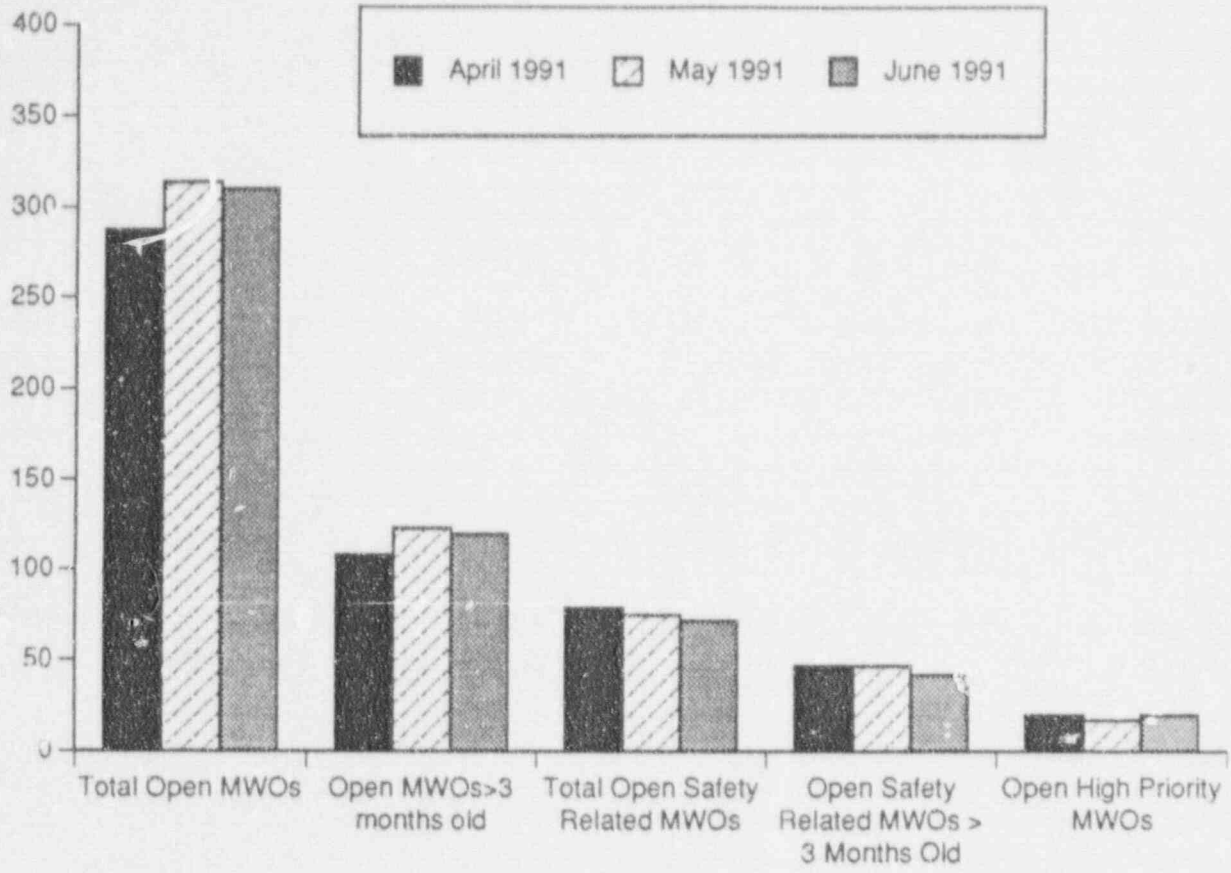


AGE OF OUTSTANDING MAINTENANCE WORK ORDERS (CORRECTIVE NON OUTAGE)

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

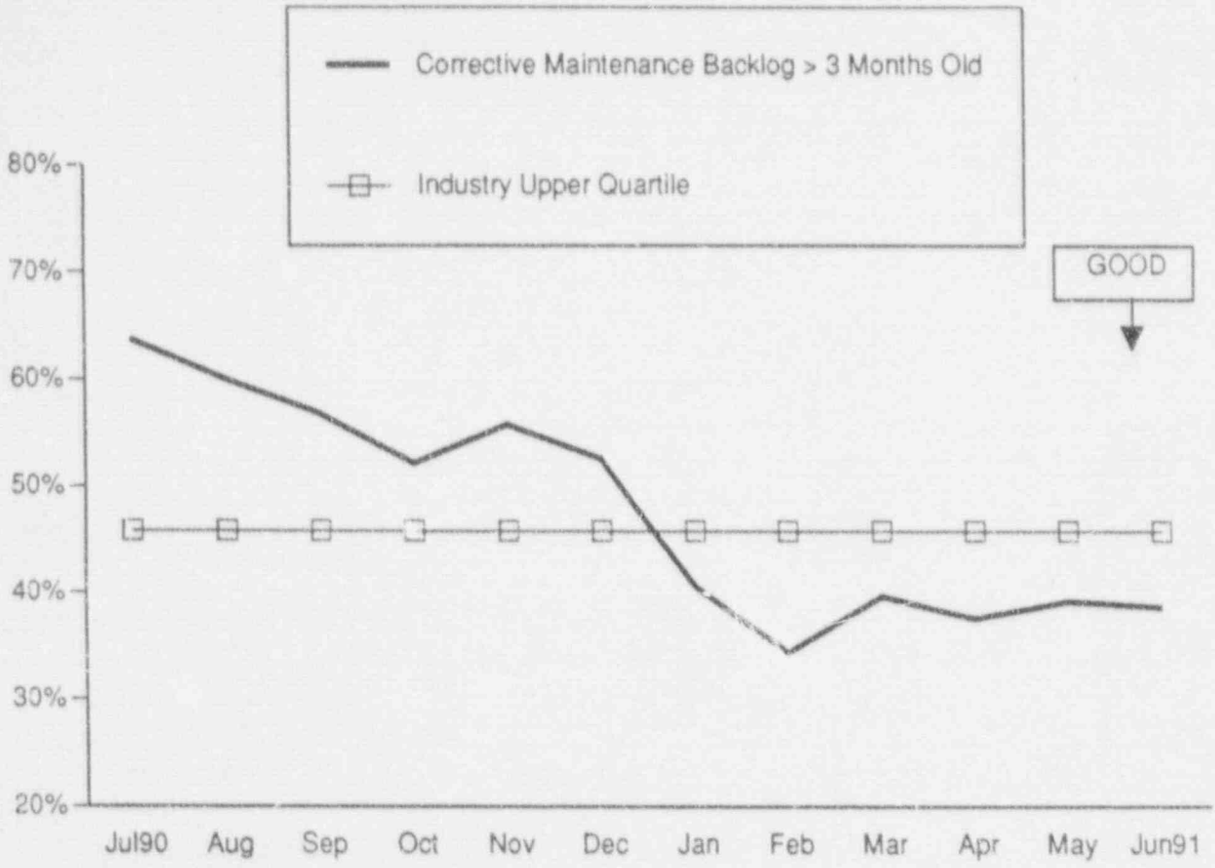


MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE)

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None SEP 36



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

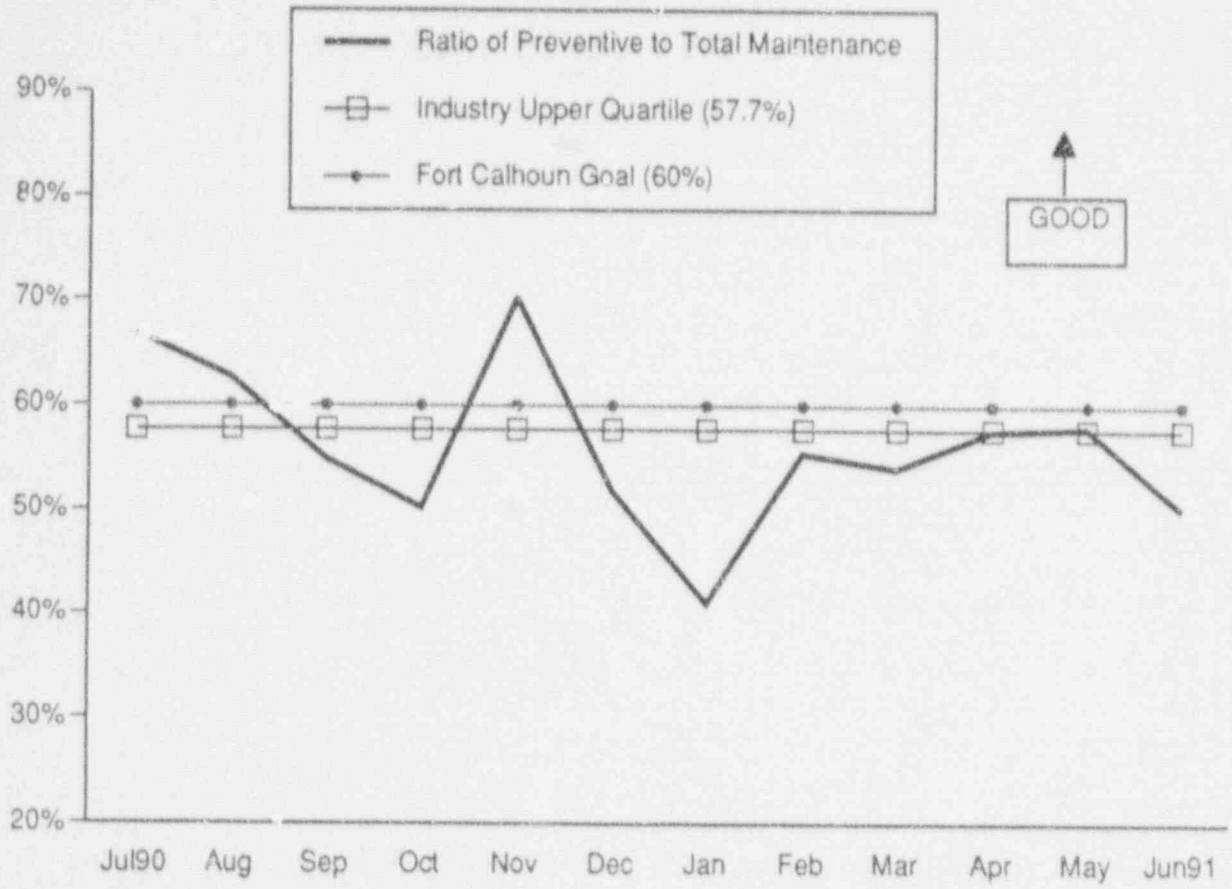
This indicator shows the percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of the reporting month.

The percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of June was reported as 38.7%.

The industry upper quartile value for corrective maintenance backlog greater than 3 months old is 45.8%. The Fort Calhoun Station is currently performing in the upper quartile of nuclear power plants in this area.

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None



RATIO OF PREVENTIVE TO TOTAL MAINTENANCE (NON-OUTAGE)

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

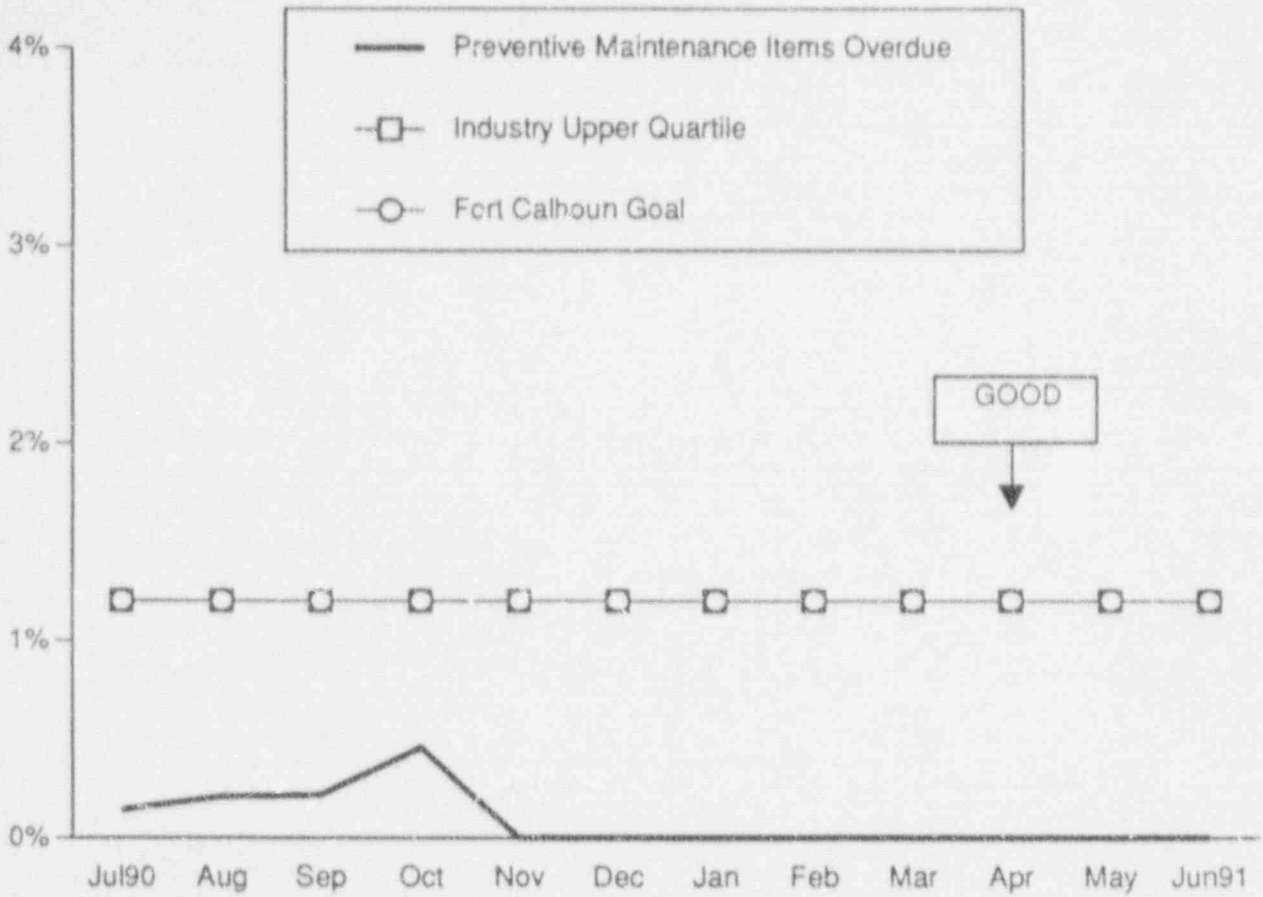
The ratio of preventive to total maintenance was 50.1% in June.

The Fort Calhoun goal is to have a ratio of preventive to total maintenance greater than 60%. The low values for the months of January through April 1991 are due to the low number of PM activities scheduled to be completed during these months.

The industry upper quartile value for the ratio of preventive to total maintenance is 57.7%.

Data Source: Patterson/Schmitz (Manager/Source)

Adverste Trend: None



PREVENTIVE MAINTENANCE ITEMS OVERDUE

The purpose of this indicator is to monitor progress in the administration and execution of preventive maintenance 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 June 1991, 957 PM items were completed. All PM's were completed within the allowable grace period.

The Fort Calhoun goal is to have less than 1.2% preventive maintenance items overdue. The industry upper quartile for preventive maintenance items overdue is 1.2%. The Fort Calhoun Station is currently performing in the industry upper quartile for this indicator.

Data Source: Patterson/Linden (Manager/Source)

Adverse Trend: None SEP 41

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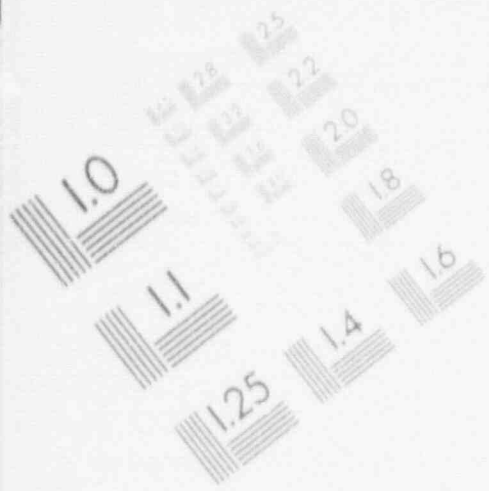
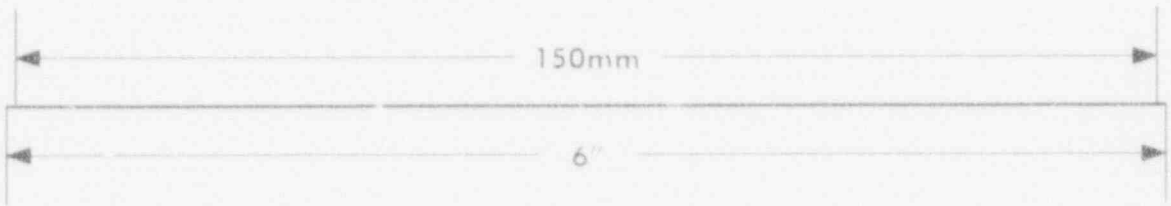
IMAGE EVALUATION TEST TARGET (MT-3)





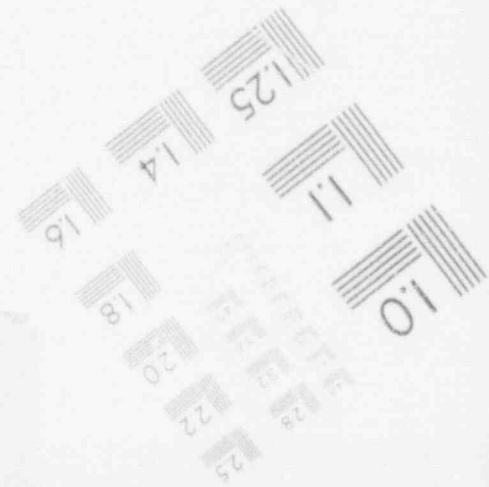


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IMAGE EVALUATION
TEST TARGET (MT-3)

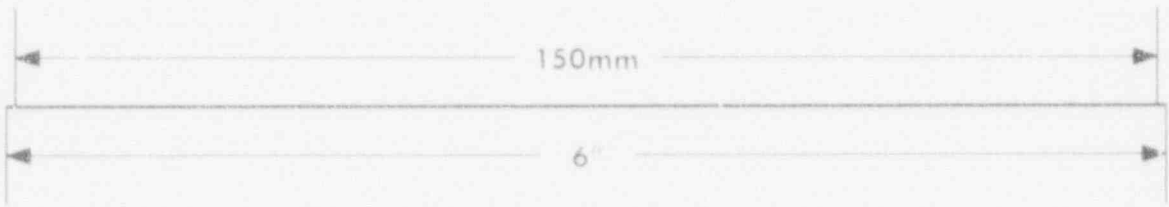

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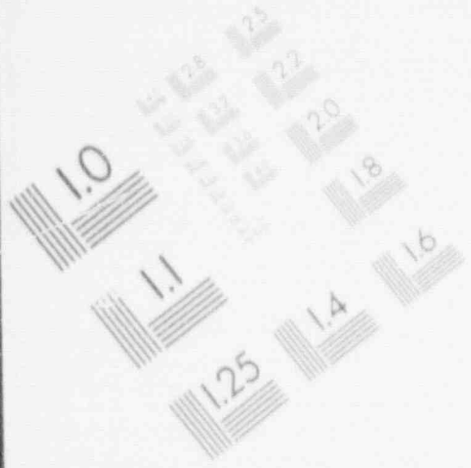
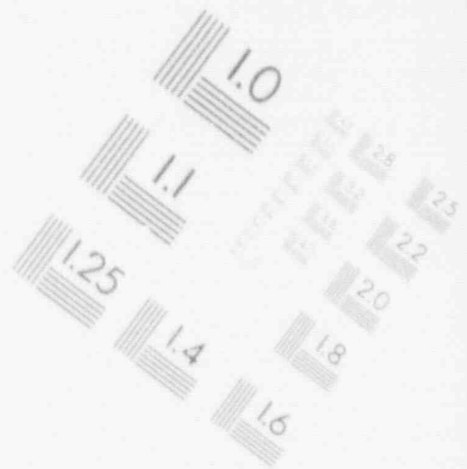
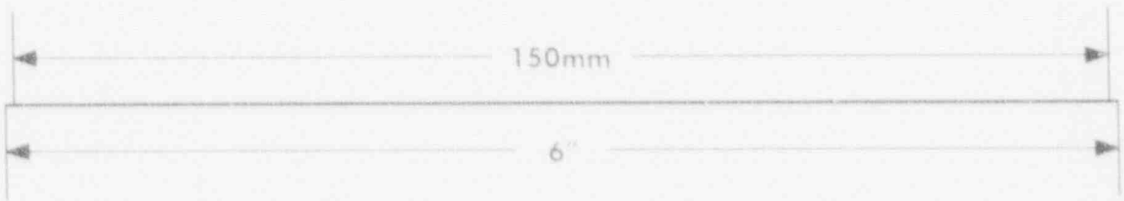
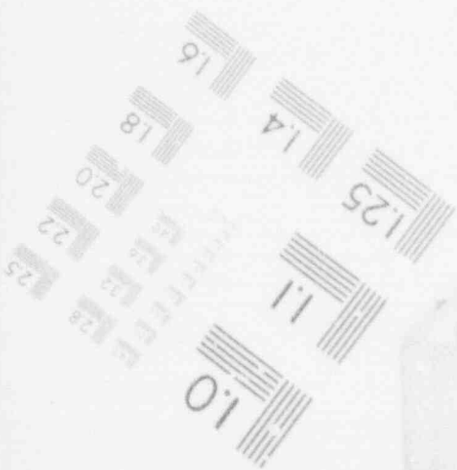
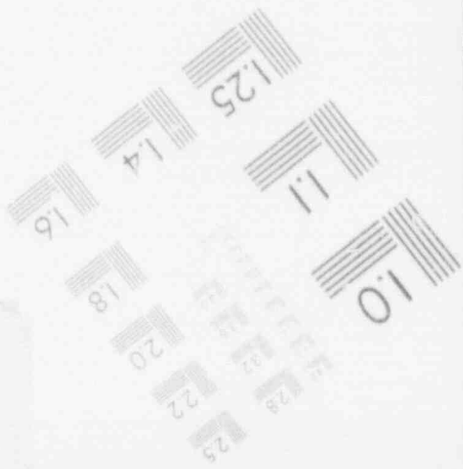
IMAGE EVALUATION
TEST TARGET (MT-3)





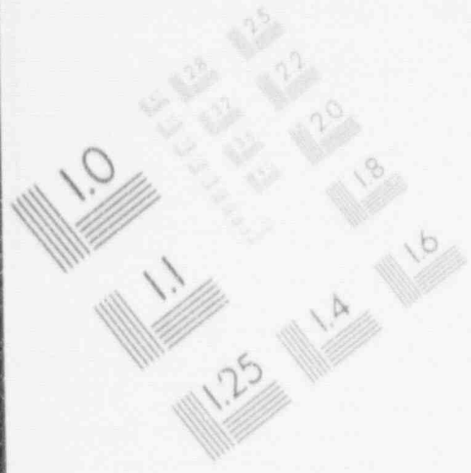


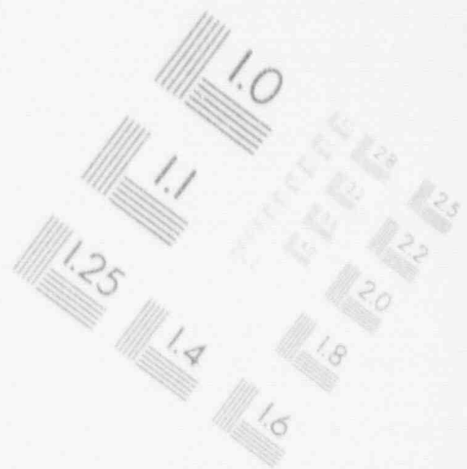


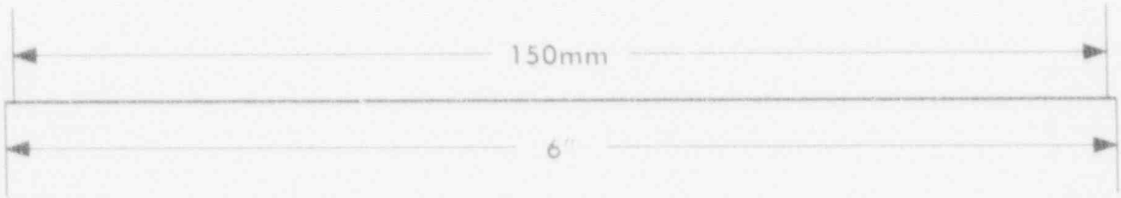


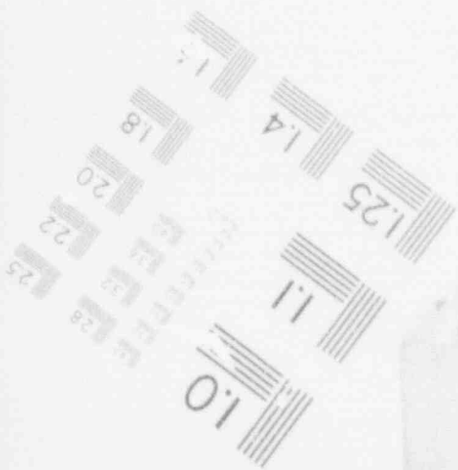
1

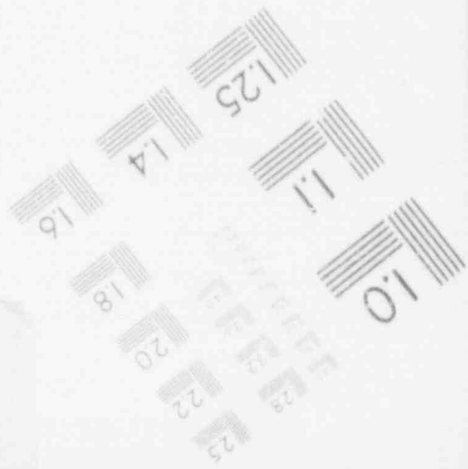
IMAGE EVALUATION
TEST TARGET (MT-3)

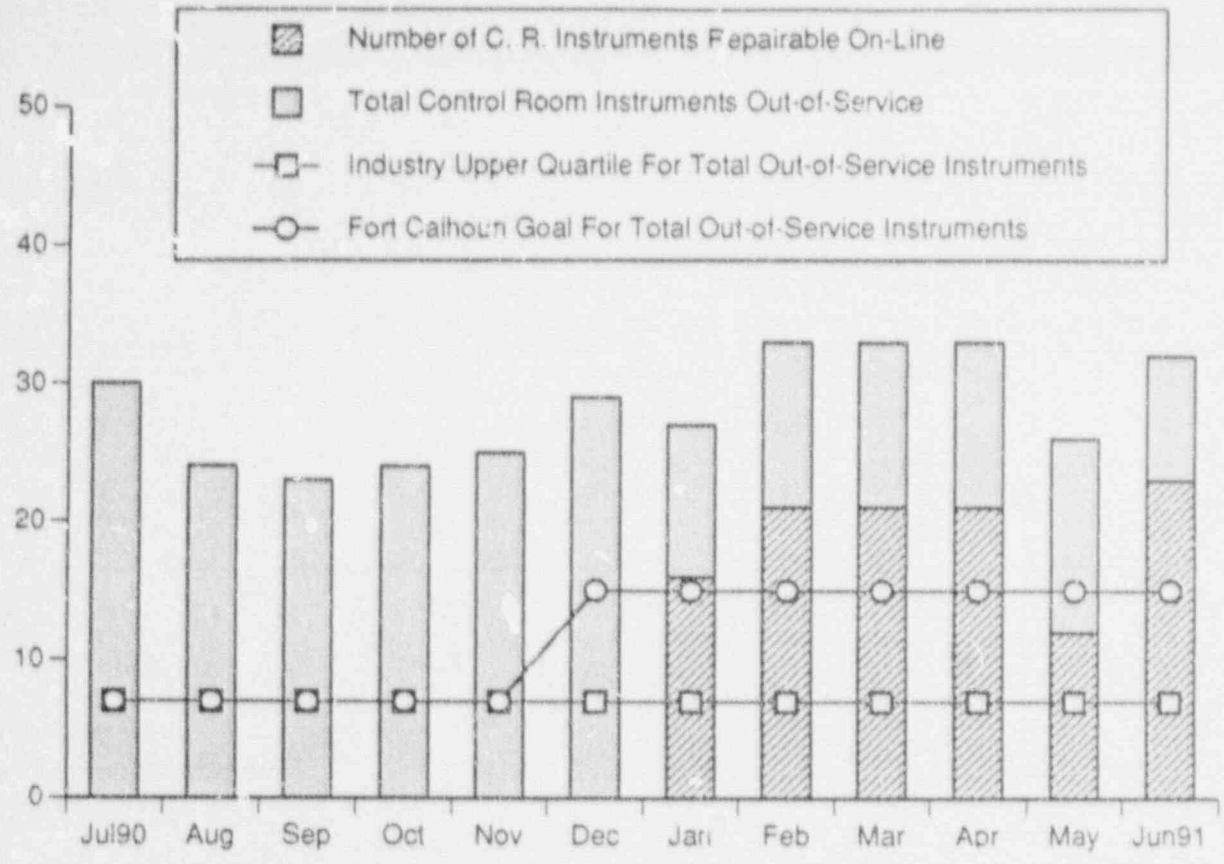












NUMBER OF OUT-OF-SERVICE CONTROL ROOM INSTRUMENTS

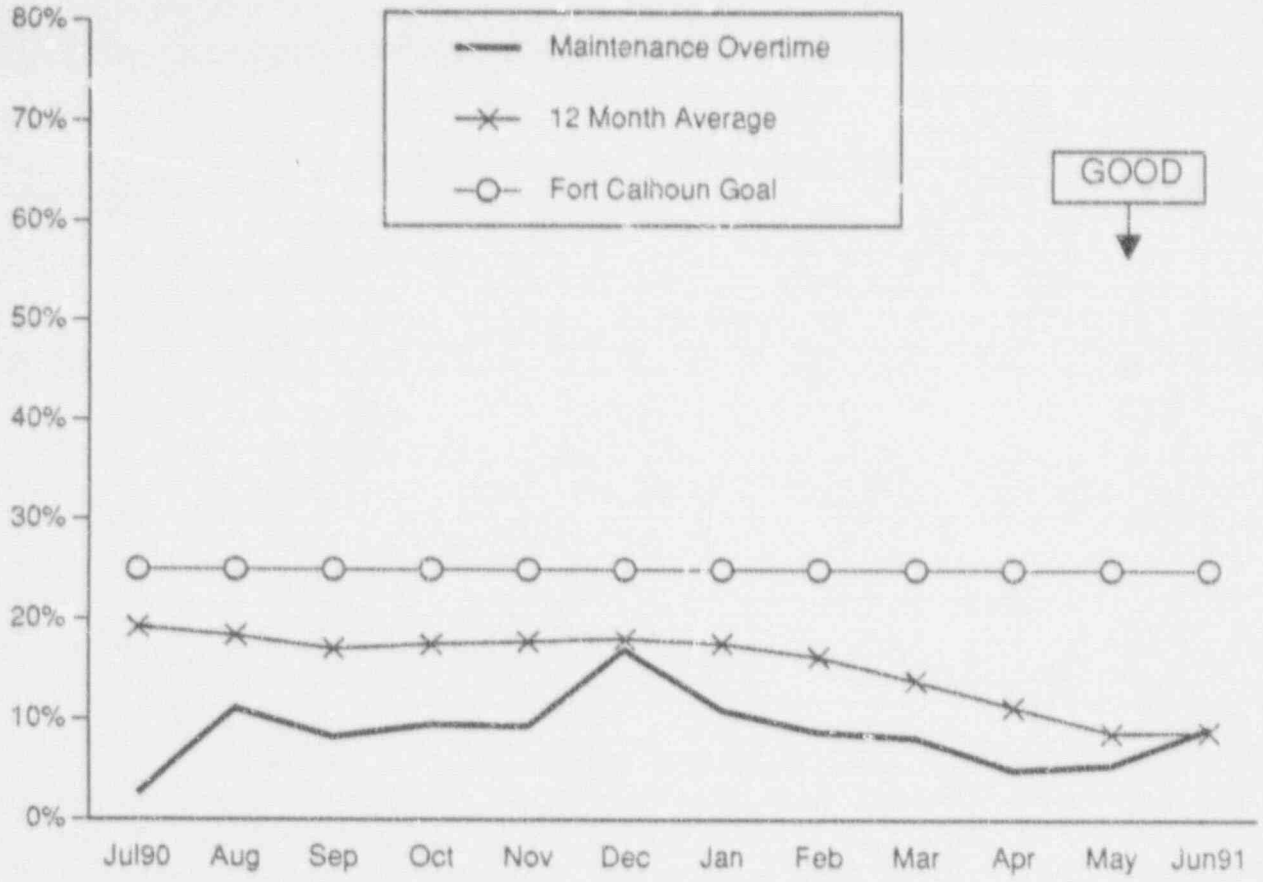
This indicator shows the number of out-of-service control room instruments, the number of instruments repairable during plant operations (on-line), the industry upper quartile for this indicator, and the Fort Calhoun goal.

There was a total of 32 out-of-service control room instruments at the end of June. A plant outage is required to repair 9 of these 32 control room instruments.

The Fort Calhoun goal is to have less than 15 out-of-service control room instruments. The industry upper quartile value for the number of out-of-service control room instruments is 7.

Data Source: Patterson/Adams (Manager/Source)

Adverse Trend: None



MAINTENANCE OVERTIME

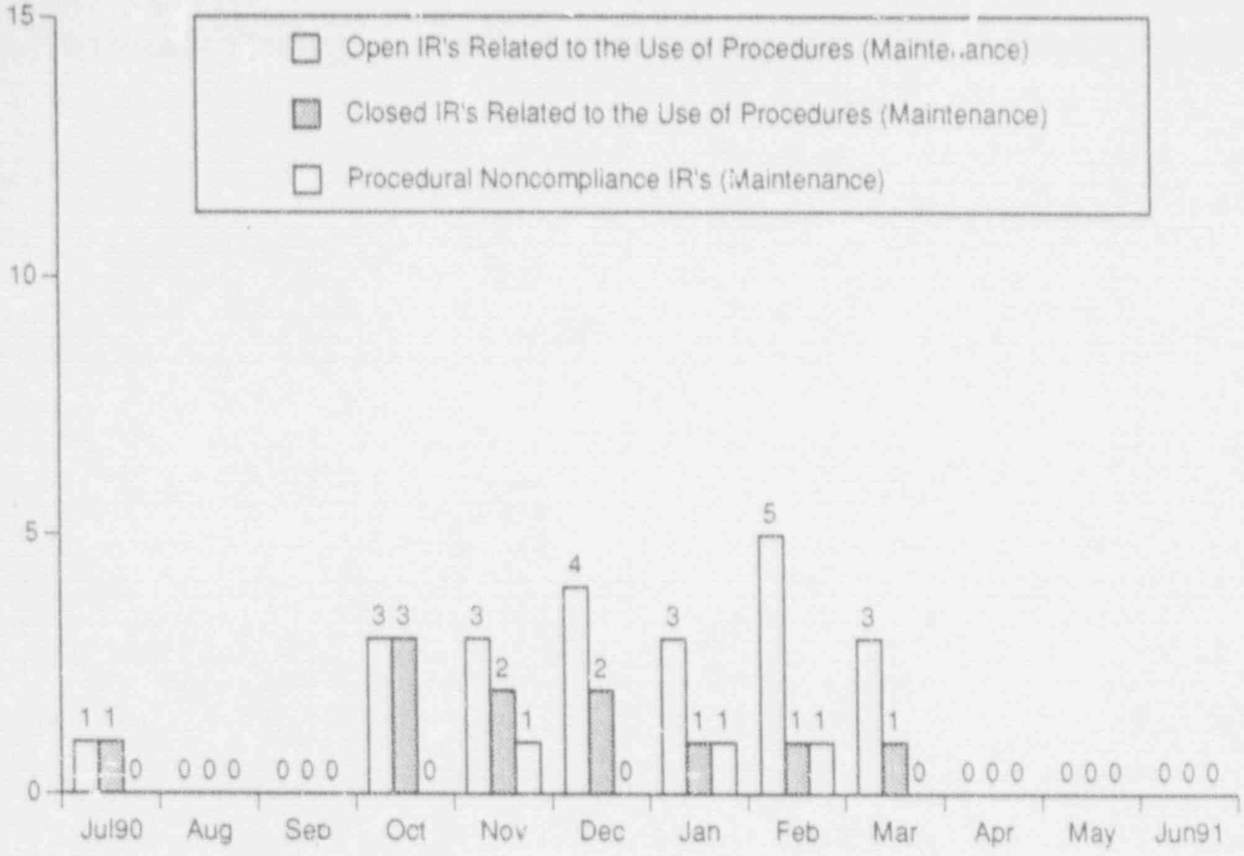
The Maintenance Overtime Indicator monitors the ability to perform the desired maintenance activities with the allotted resources. Excessive overtime indicates insufficient resource allocation and can lead to errors due to fatigue.

The percent of overtime hours with respect to normal hours was reported as 9.2% during the month of June 1991. The 12 month average percentage of overtime hours with respect to normal hours was reported as 8.8%.

The Fort Calhoun goal for the percent of maintenance overtime hours worked has been set at 25% for non-outage months and 50% for outage months.

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None



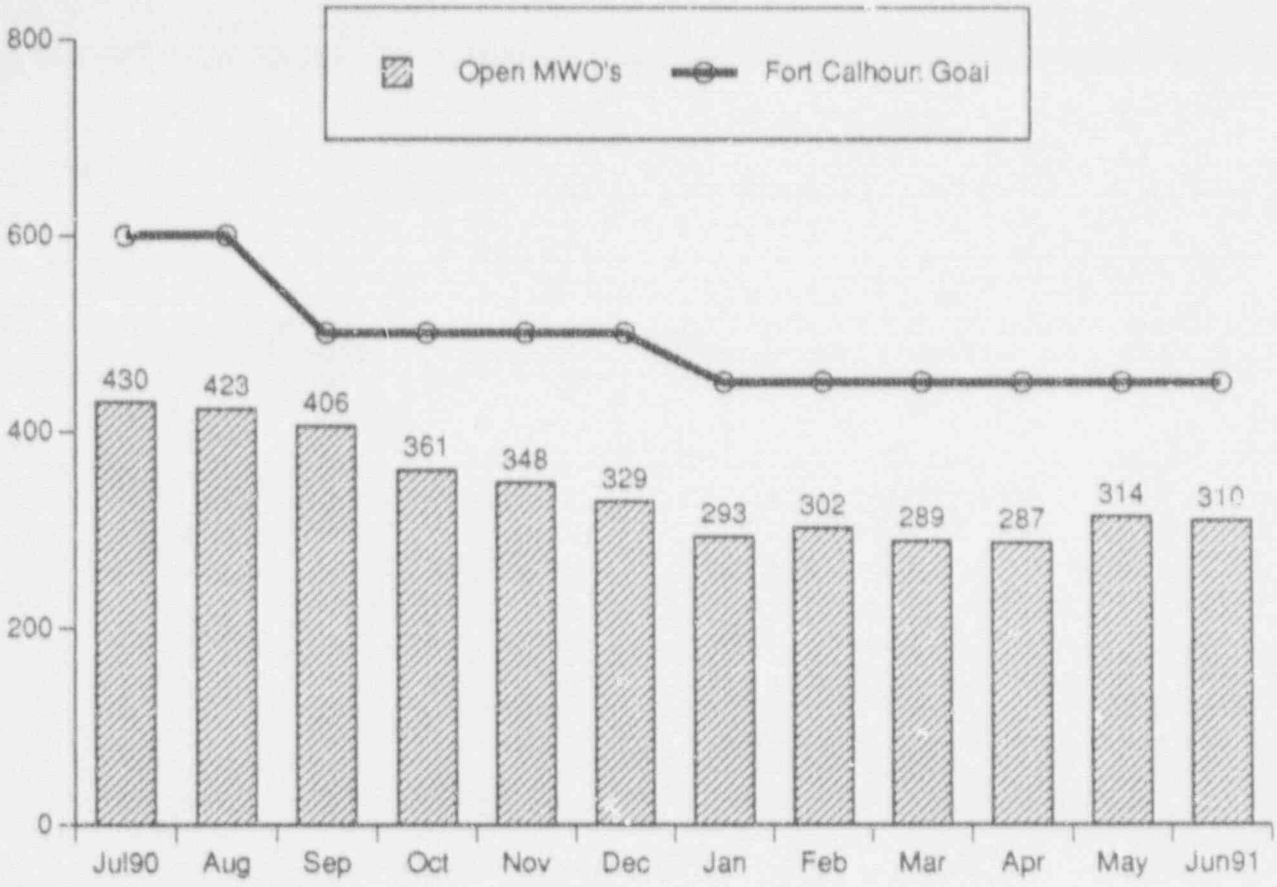
PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

This indicator shows the number of identified Maintenance Incidents Reports (IR's) that are related to the use of procedures, the number of closed IR's that are related to the use of procedures (includes IR's that were caused by procedural noncompliance), and the number of closed IR's that were caused by procedural noncompliance.

Data Source: Patterson/McKay (Manager/Source)

Adverse Trend: None

SEP 15 & 44



MAINTENANCE WORK ORDER BACKLOG (CORRECTIVE NON-OUTAGE MAINTENANCE)

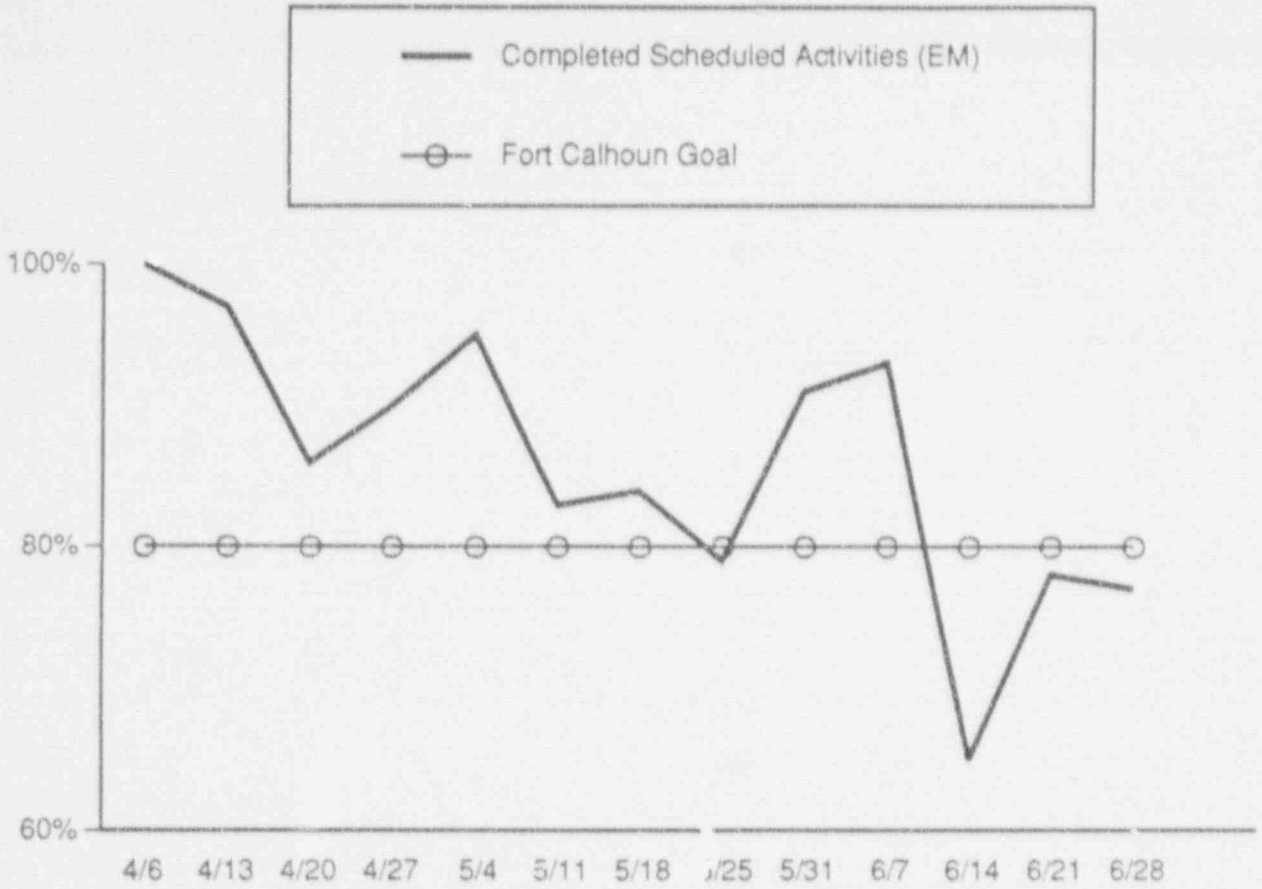
This indicator shows the number of corrective non-outage Maintenance Work Orders (MWOs) that were open at the end of the reporting month.

The goal for this indicator is to have less than 450 corrective non-outage maintenance work orders remaining open.

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 36



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 MWR's, MWO's, ST's, PMO's, calibrations, and miscellaneous maintenance activities.

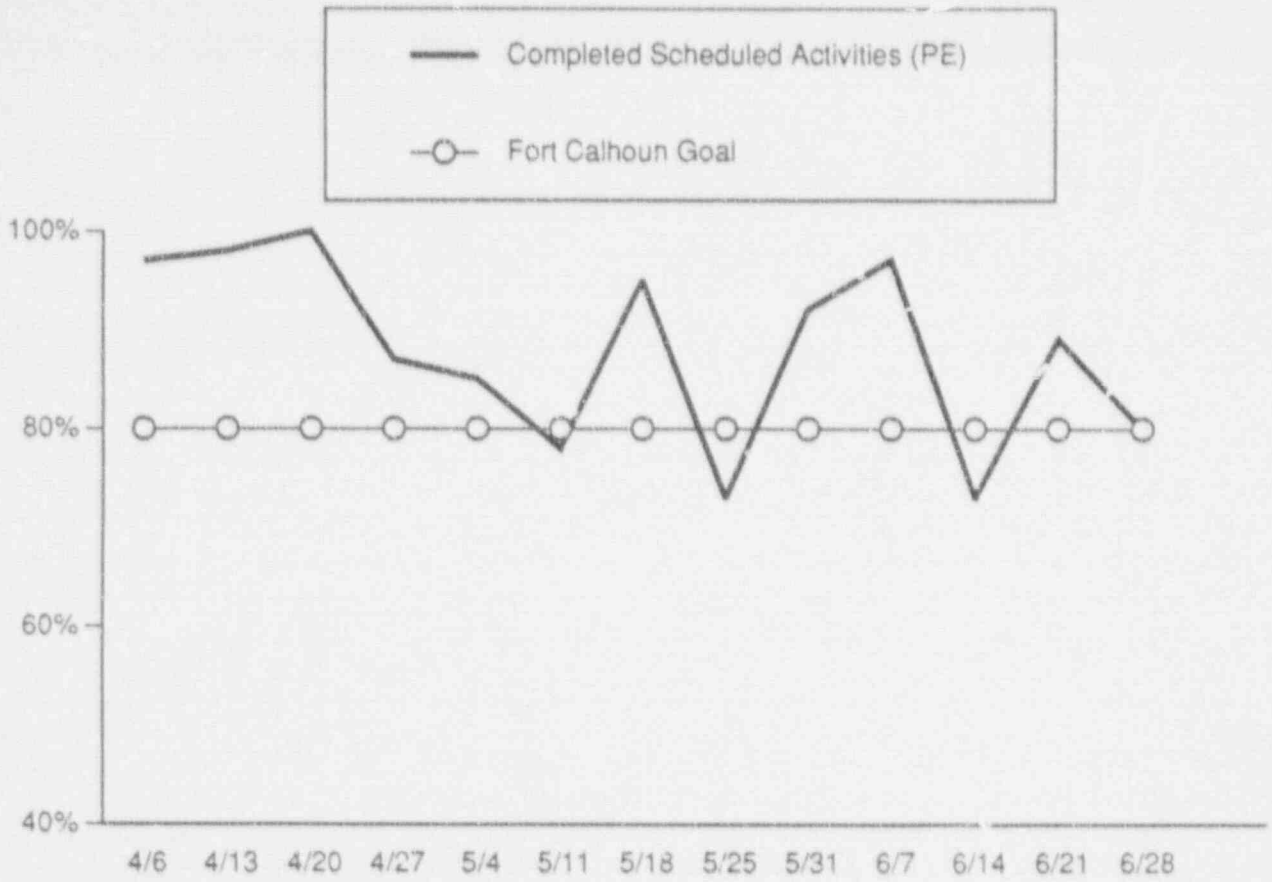
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	93%
Week 2	65%
Week 3	78%
Week 4	77%

Data Source: Patterson/Schmitz (Manager/Source)

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 MWR's, MWO's, ST's, PMO's, calibrations, and miscellaneous maintenance activities.

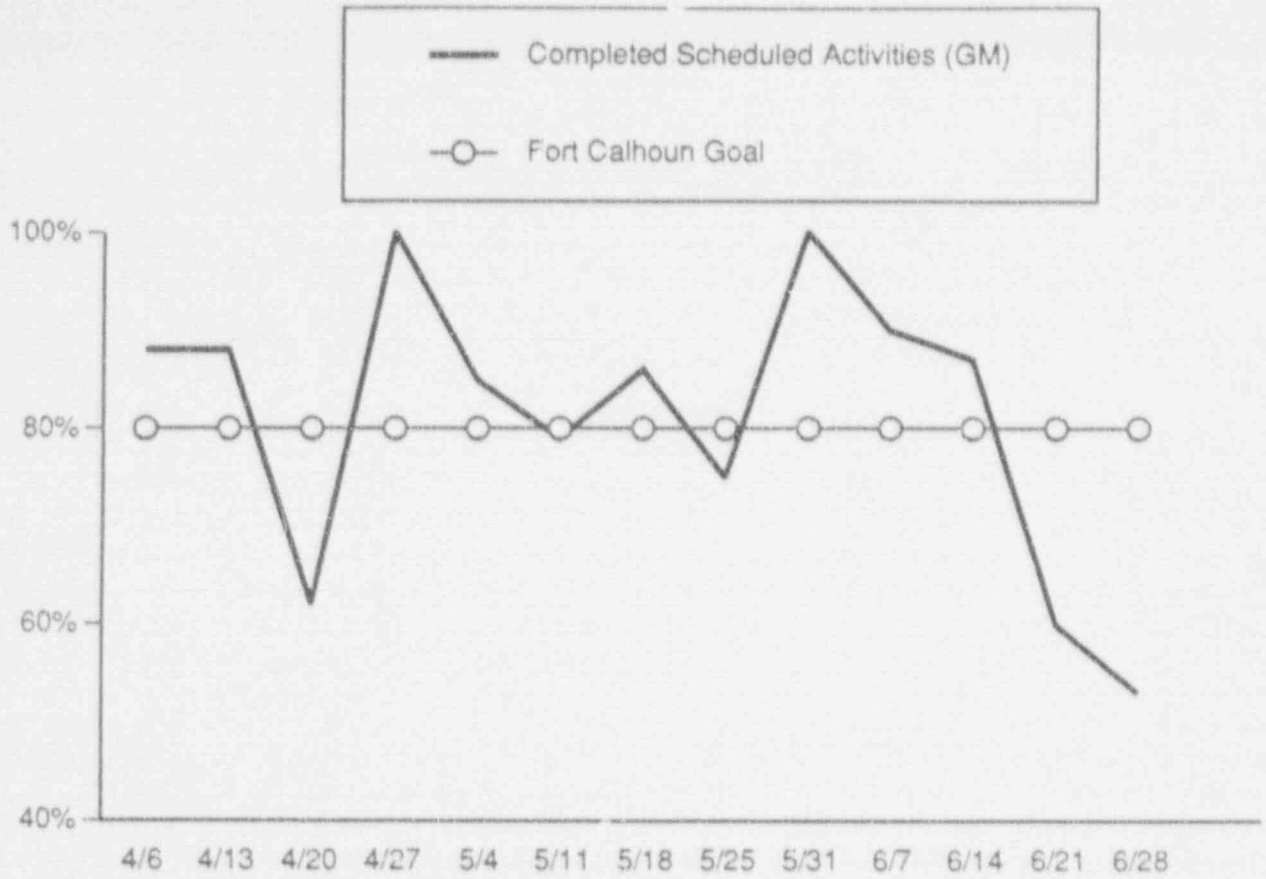
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	97%
Week 2	73%
Week 3	89%
Week 4	80%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (GENERAL MAINTENANCE)

This indicator shows the percent of the number of completed maintenance activites as compared to the number of scheduled maintenance activites concerning General Maintenance. Maintenance activities include MWR's, MWO's, ST's, PMO's, calibrations, and miscellaneous maintenance activities.

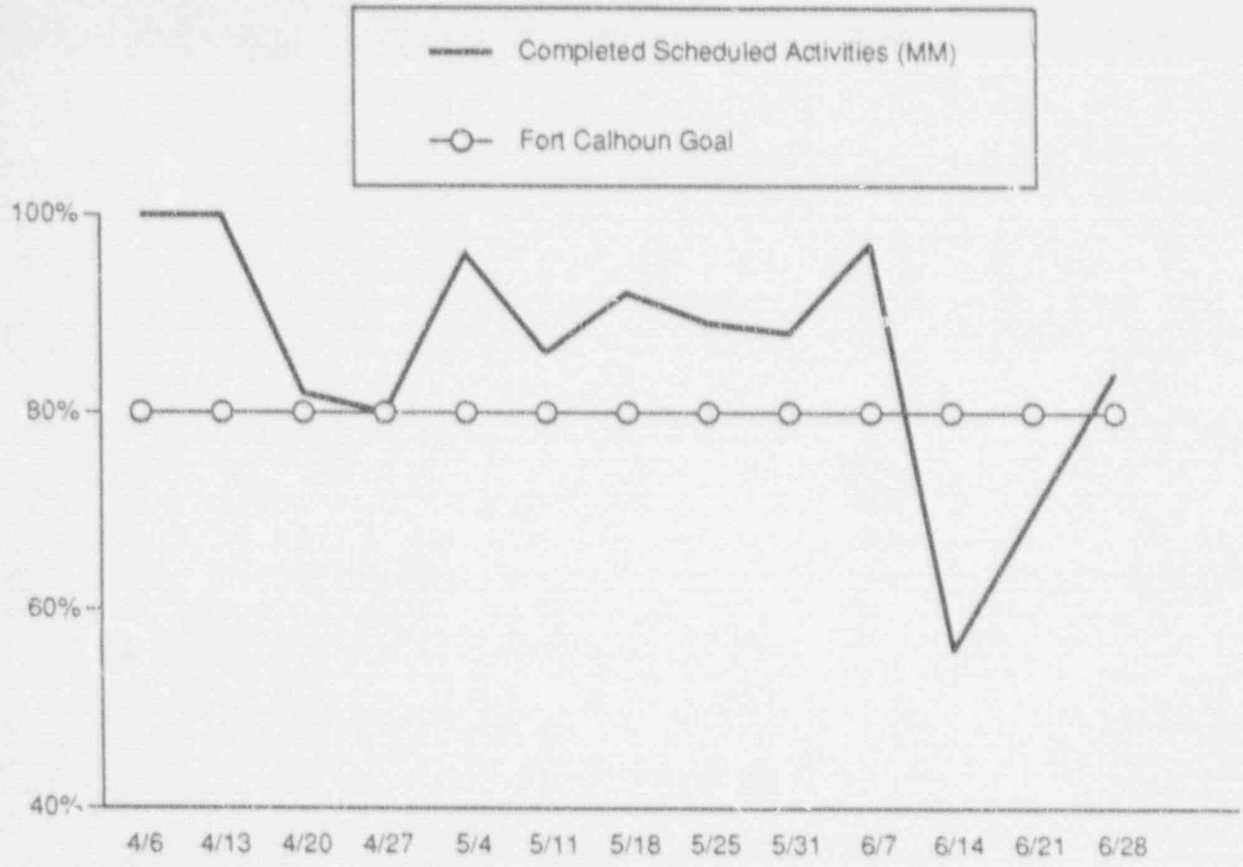
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	90%
Week 2	87%
Week 3	60%
Week 4	53%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (MECHANICAL MAINTENANCE)

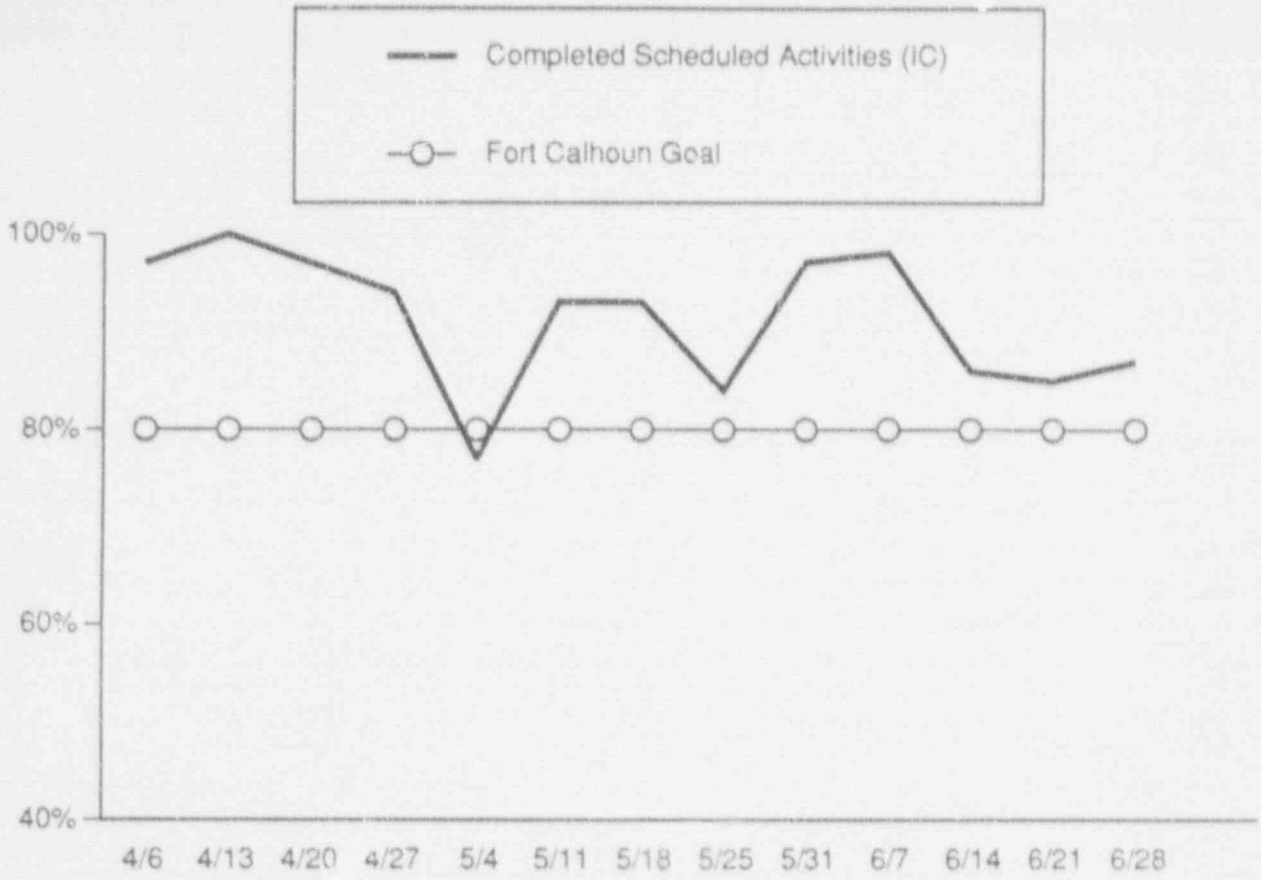
This indicator shows the pecent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning Mechanical Maintenance. Maintenance activities include MWR's, MWO's, ST's, PMO's, calibrations, and miscellaneous maintenance activites.

The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	97%
Week 2	56%
Week 3	70%
Week 4	84%

Data Source: Patterson/Schmitz (Manager/Source)
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 MWR's, MWO's, ST's, PMO's, calibrations, and miscellaneous maintenance activities.

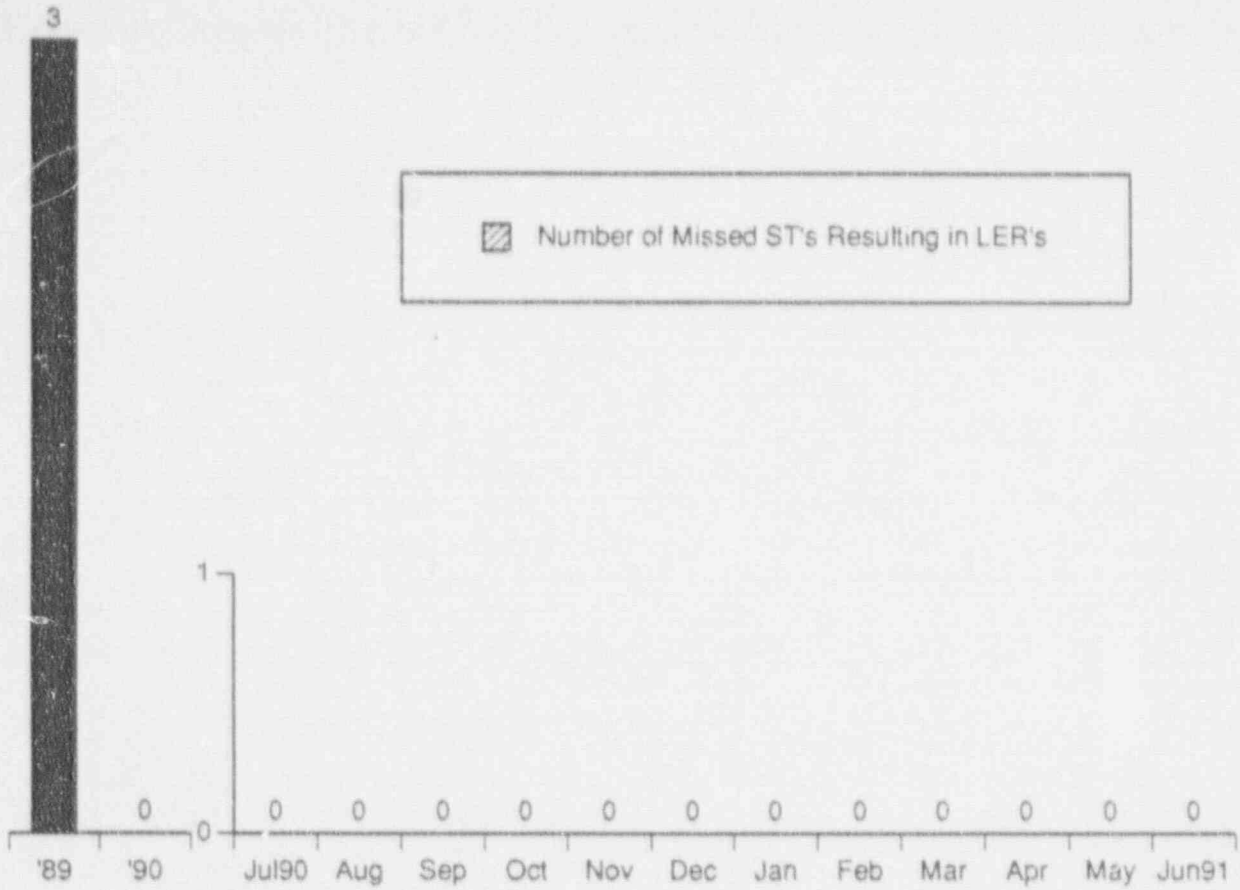
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	98%
Week 2	86%
Week 3	85%
Week 4	87%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



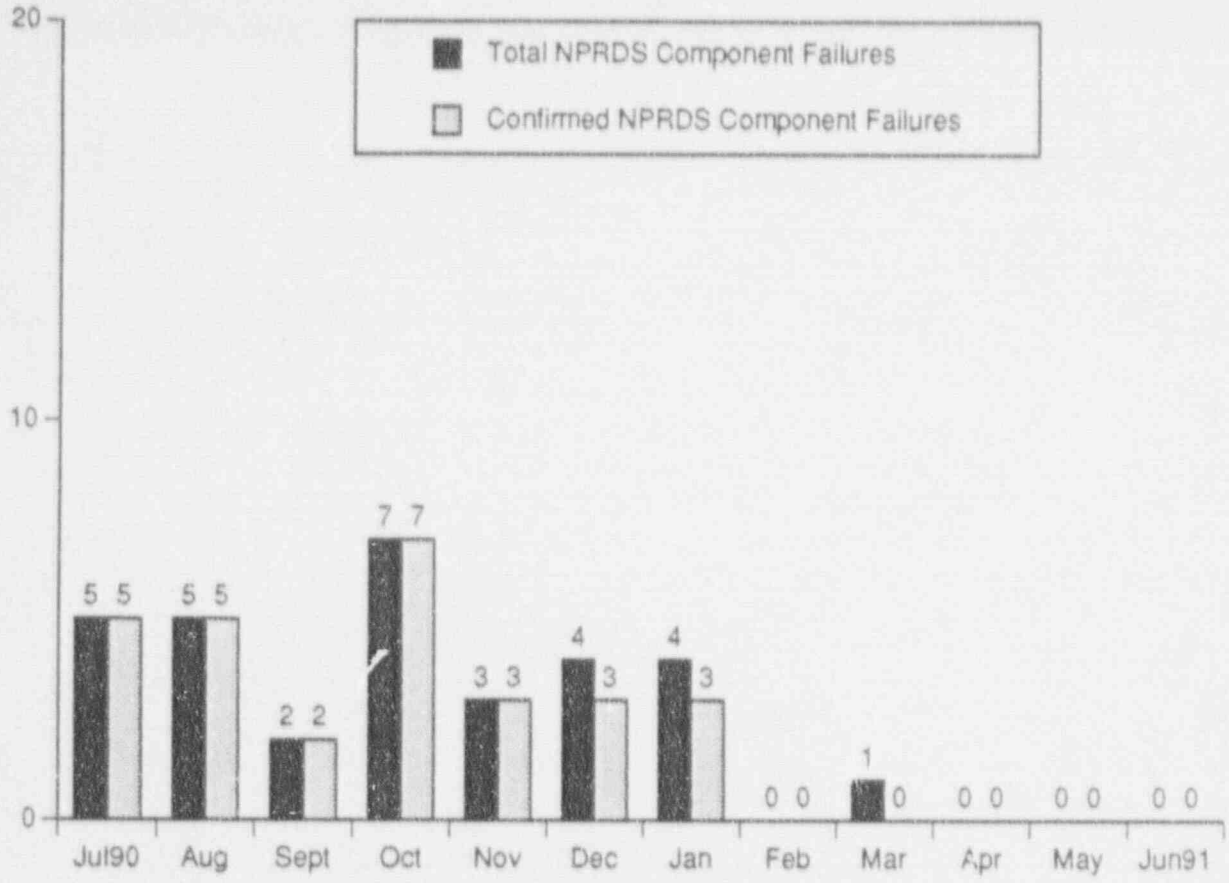
NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS

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

During the month of June 1991, there were no missed ST's that resulted in LER's.

Data Source: Plant Licensee Event Reports (LER's)

Adverse Trend: None SEP 60 & 61



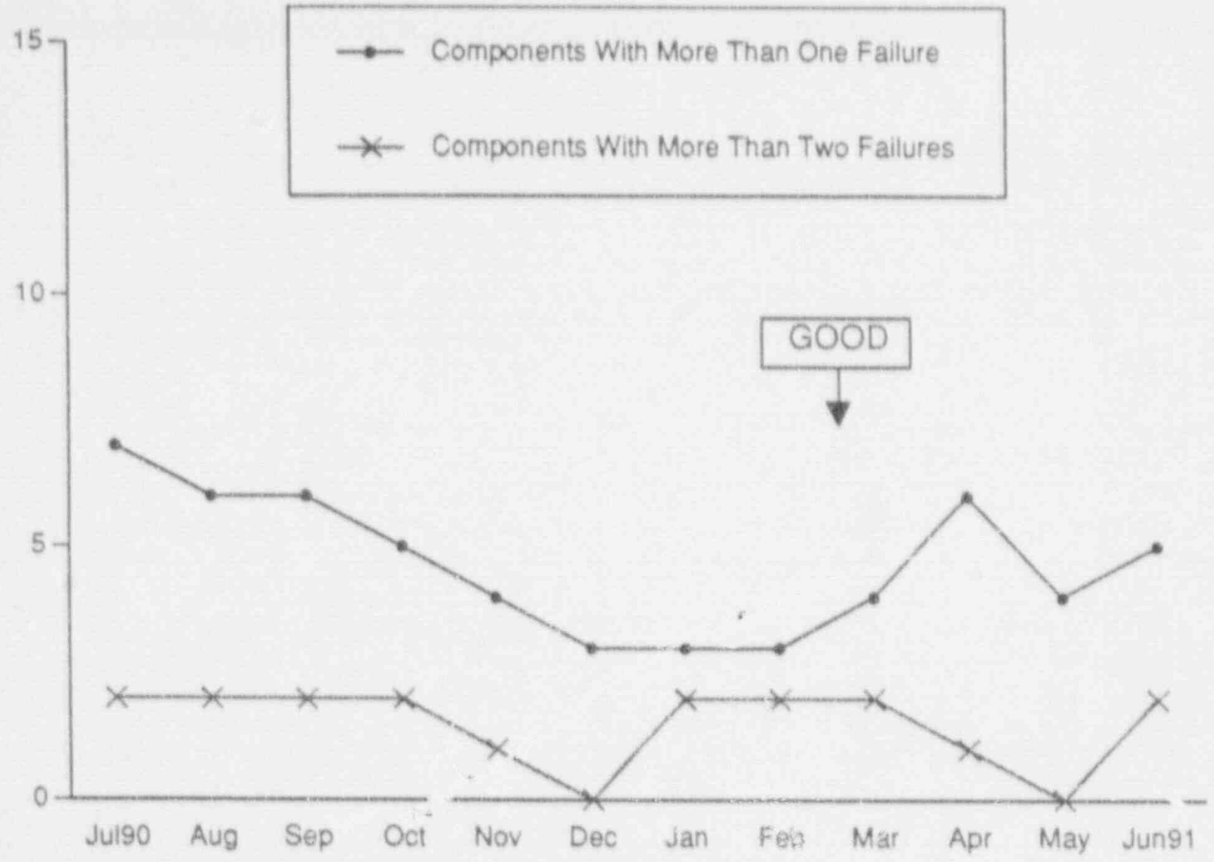
NUMBER OF NUCLEAR PLANT RELIABILITY DATA SYSTEMS (NPRDS) REPORTABLE FAILURES

This indicator shows the total number of NPRDS component failures and the number of confirmed NPRDS component failures. The total number of NPRDS component failures is based upon the number of failure reports sent to INPO. The number of confirmed NPRDS component failures is based upon the number of failure reports that have been accepted by INPO. The difference between these two figures is the number of failure reports still under review by INPO.

During June 1991, there were no (0) confirmed NPRDS component failures.

Data Source: Jaworski/Dowdy (Manager/Source)

Adverse Trend: None



MAINTENANCE EFFECTIVENESS

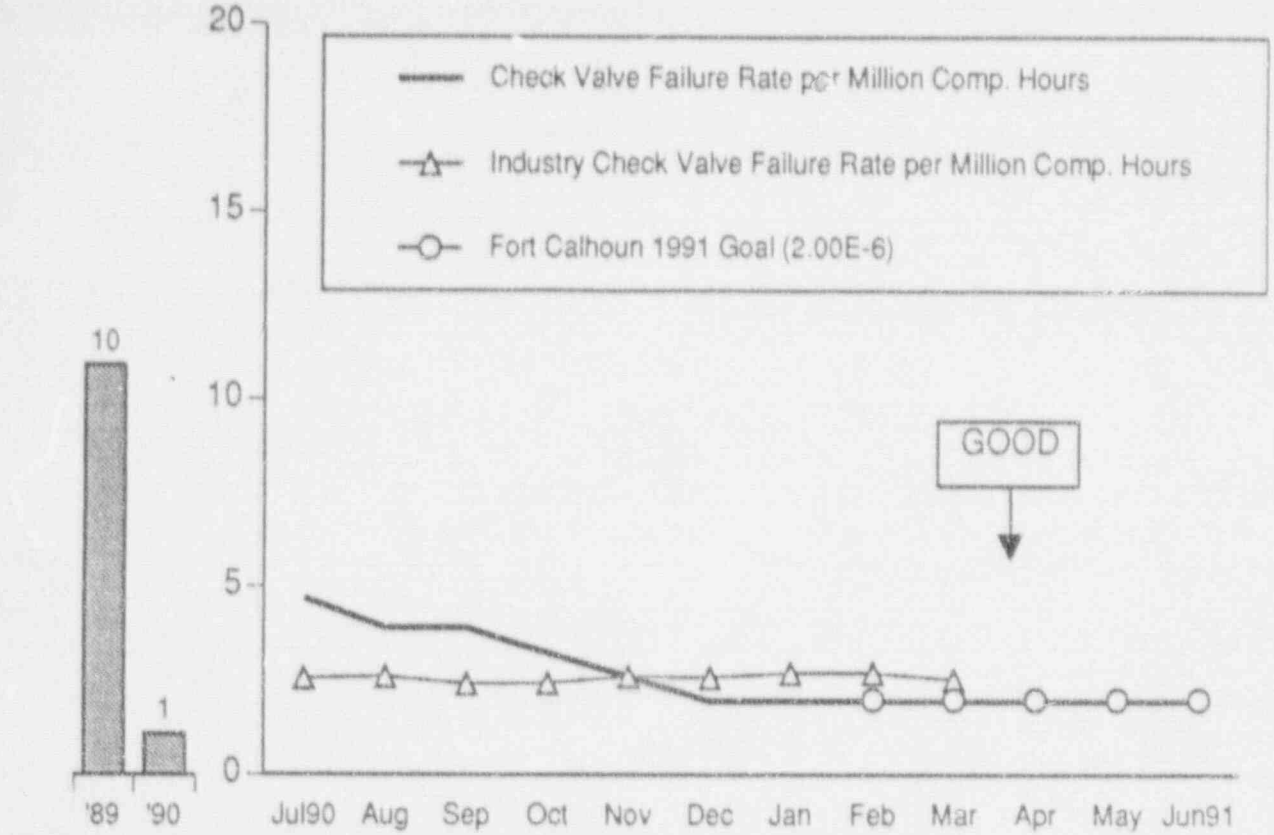
The Maintenance Effectiveness Indicator was developed following guidelines set forth by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data (NRC/AEOD). The NRC/AEOD is currently developing and verifying a maintenance effectiveness indicator using the Nuclear Plant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

This indicator shows the number of NPRDS components with more than one failure during the last twelve months and the number of NPRDS components with more than two failures during the last twelve months. The number of NPRDS components with more than two failures in a twelve-month period should indicate the effectiveness of plant maintenance.

During the last 12 reporting months there were 5 NPRDS components with more than 1 failure. Two (2) of the 5 components had more than two failures. The tag numbers of these components were CH-1A and CH-1B.

Data Source: Jaworski/Dowdy (Manager/Source)

Adverse Trend: None



CHECK VALVE FAILURE RATE

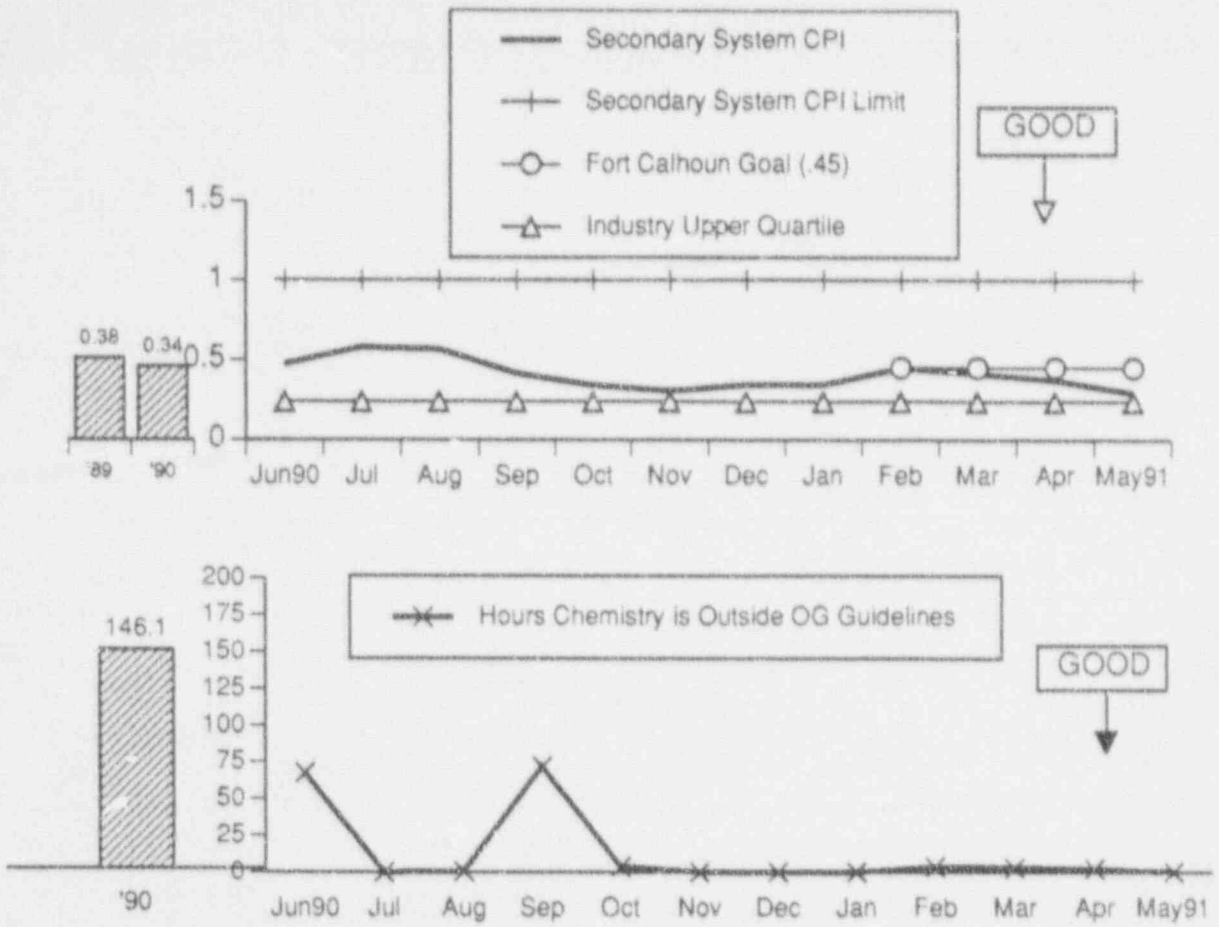
This indicator shows the Fort Calhoun check valve failure rate, the Fort Calhoun goal and the industry check valve failure rate. This rate is based upon failures during the previous 18 months. The check valve failures at Fort Calhoun Station, for the previous two years, are shown on the left.

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 March 1991, the Fort Calhoun Station reported an actual check valve failure rate of 6.52E-7 while the industry reported an actual failure rate of 2.54E-6. At the end of June, the Fort Calhoun Station reported a calculated check valve failure rate of 1.96E-6. The Fort Calhoun goal for this indicator is a failure rate of 2.00E-6.

Data Source: Jaworski/Dowdy (Manager/Source)

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 total hours of 13 parameters exceeding the Owners Group (OG) guidelines during power operation.

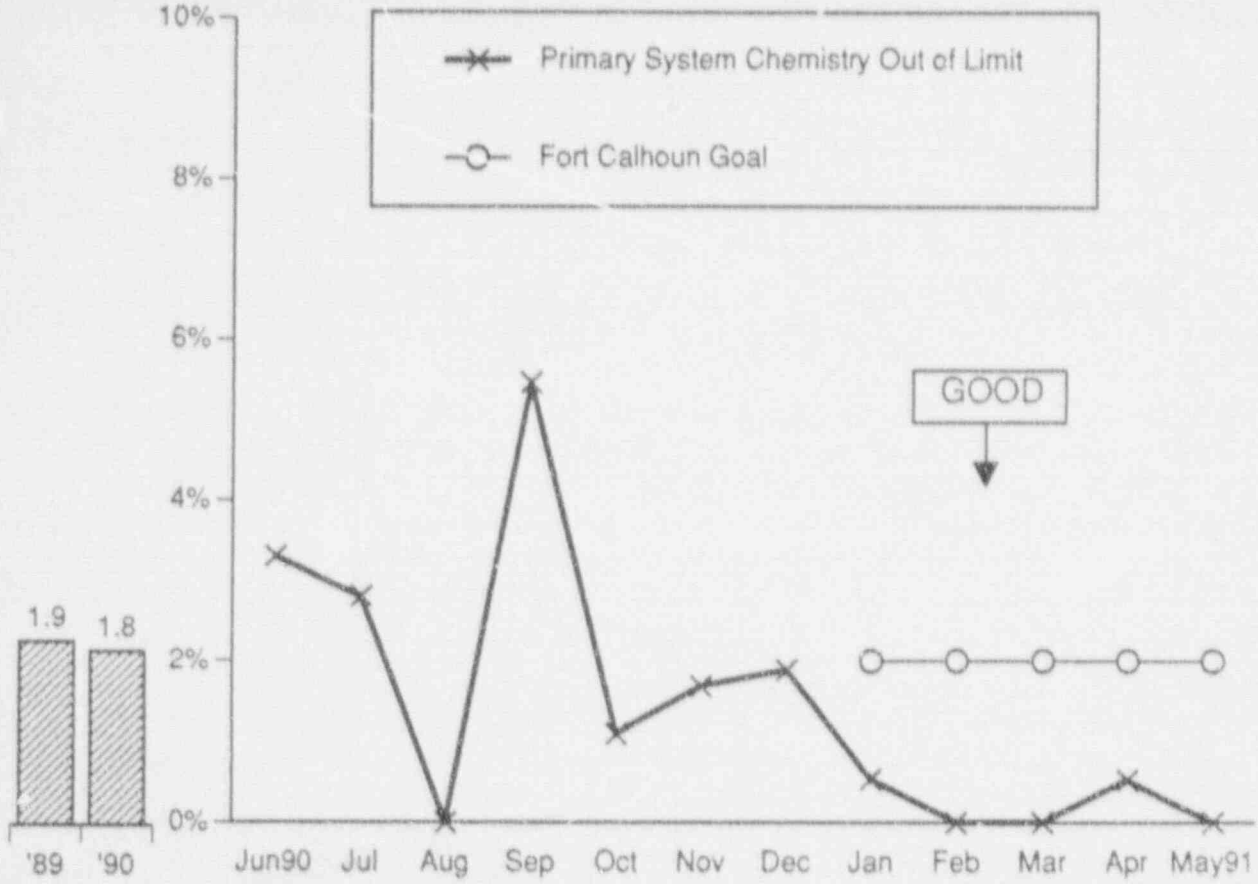
The Fort Calhoun goal for the CPI is 0.45. The CPI was reported as 0.291 for the month of May. The industry upper quartile value for this indicator was 0.16 for August 1989 through Dec. 1989. The CPI industry value then changed to 0.24 for 1990.

The number of hours outside the OG guidelines was reported as 0 hours for the reporting month.

The above two chemistry indicators are one month behind the reporting period due to the time needed for data collection and evaluation of the station chemistry data.

Data source: Franco/Glantz (Manager/Source)

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. 100% equates to all six parameters being out of limit for the month. This Indicator is one month behind the reporting month.

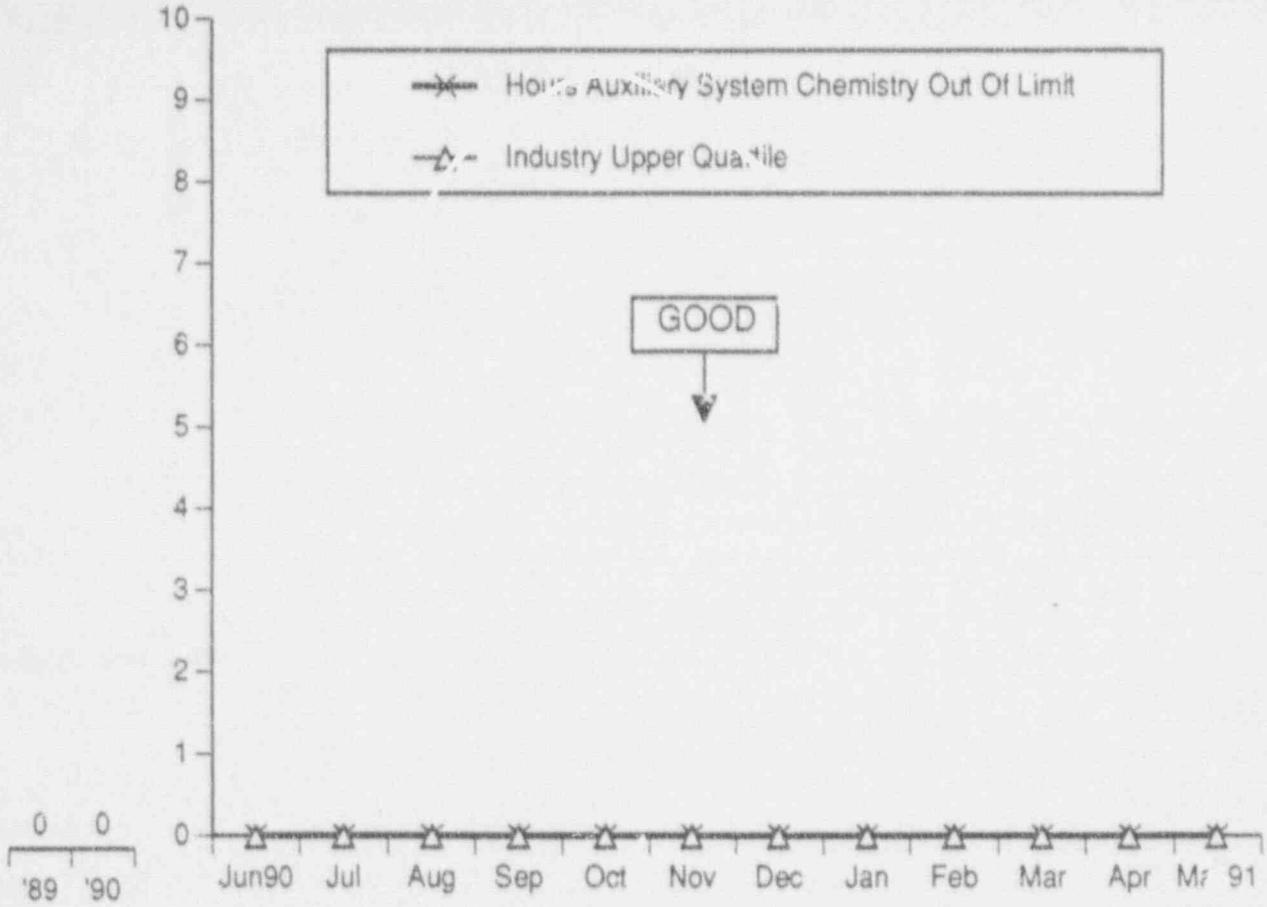
The Fort Calhoun goal for this indicator is 2%.

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

The high percentage of hours out of limit for the primary system during June and July was due to startup after the 1990 Refueling Outage and various power fluctuations which occurred during June and July. A plant shutdown and startup in September and a plant outage in November/December resulted in a higher percentage of hours out of limit.

Data Source: Franco/Glantz (Manager/Source)

Adverse Trend: None



AUXILIARY SYSTEM (CCW) CHEMISTRY HOURS OUTSIDE STATION LIMITS

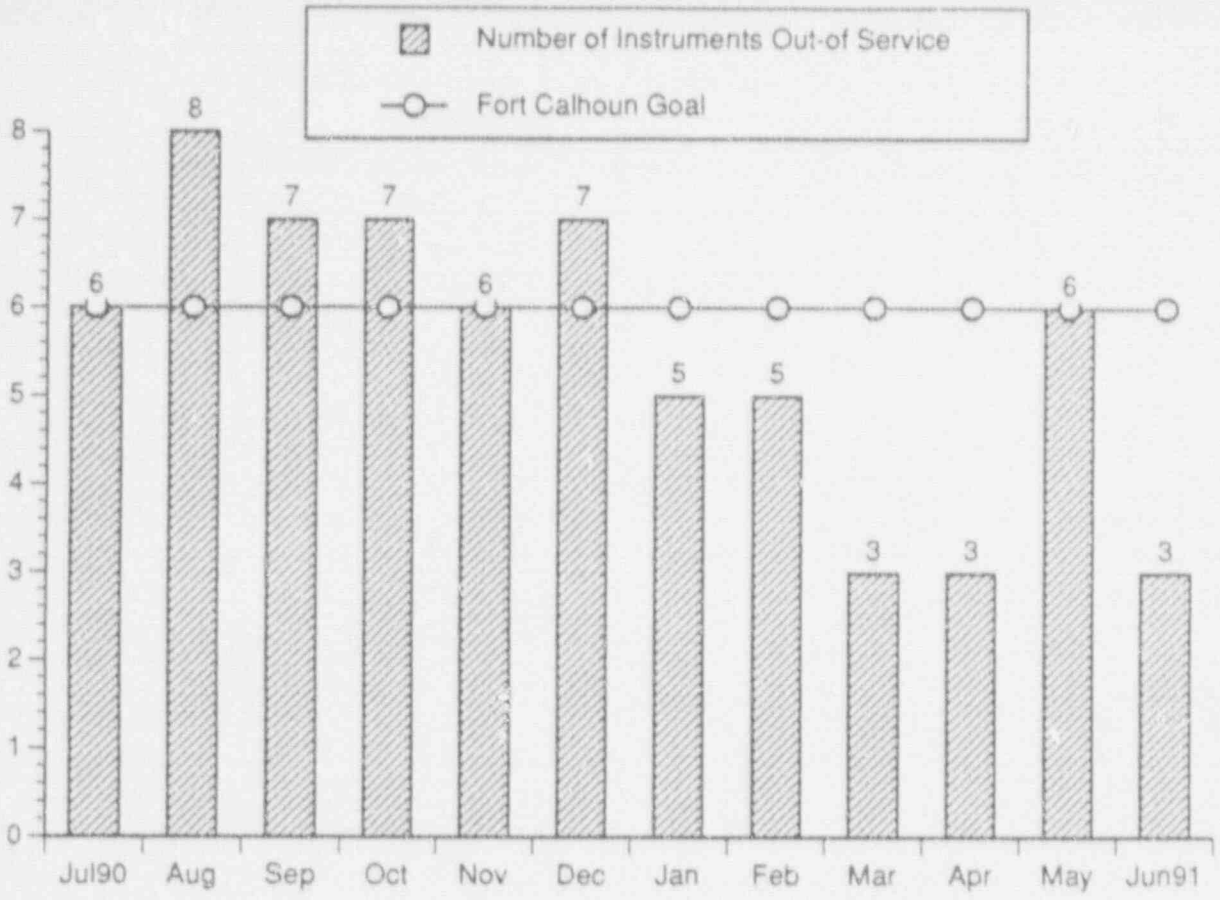
The Auxiliary System Chemistry Hours Outside Station Limits indicator tracks the monthly hours that the Component Cooling Water (CCW) system is outside the station chemistry limit. The above chemistry indicator is one month behind the reporting period due to the time needed for data collection and evaluation of the chemistry data for the station.

The auxiliary system chemistry hours outside station limits was reported as 0 for the month of May.

The industry upper quartile value for auxiliary systems chemistry hours outside station limits is 2.6 hours. The Fort Calhoun Station is currently performing in the upper quartile of all nuclear power plants for this indicator.

Data Source: Franco/Glantz (Manager/Source)

Adverse Trend: None



IN-LINE CHEMISTRY INSTRUMENTS OUT-OF-SERVICE

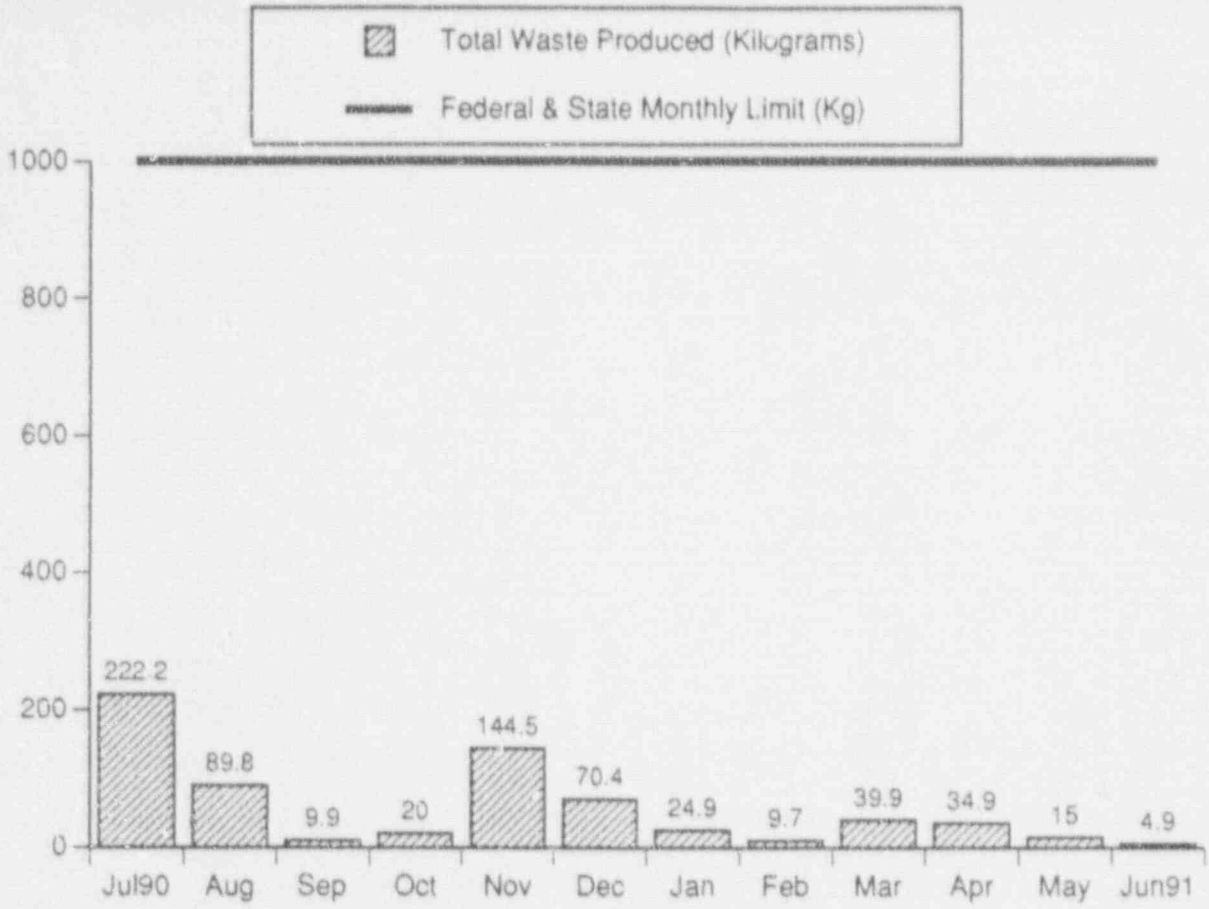
This indicator shows the total number of in-line chemistry system instruments that are out-of-service at the end of the reporting month. The chemistry systems involved in this indicator include the Secondary System and the Post Accident Sampling System (PASS).

At the end of June there was a total of 3 in-line chemistry instruments that were out-of-service. Of these 3 instruments, 1 was from the Secondary System and 2 were from PASS.

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

Data Source: Patterson/Renaud (Manager/Source)

Adverse Trend: None



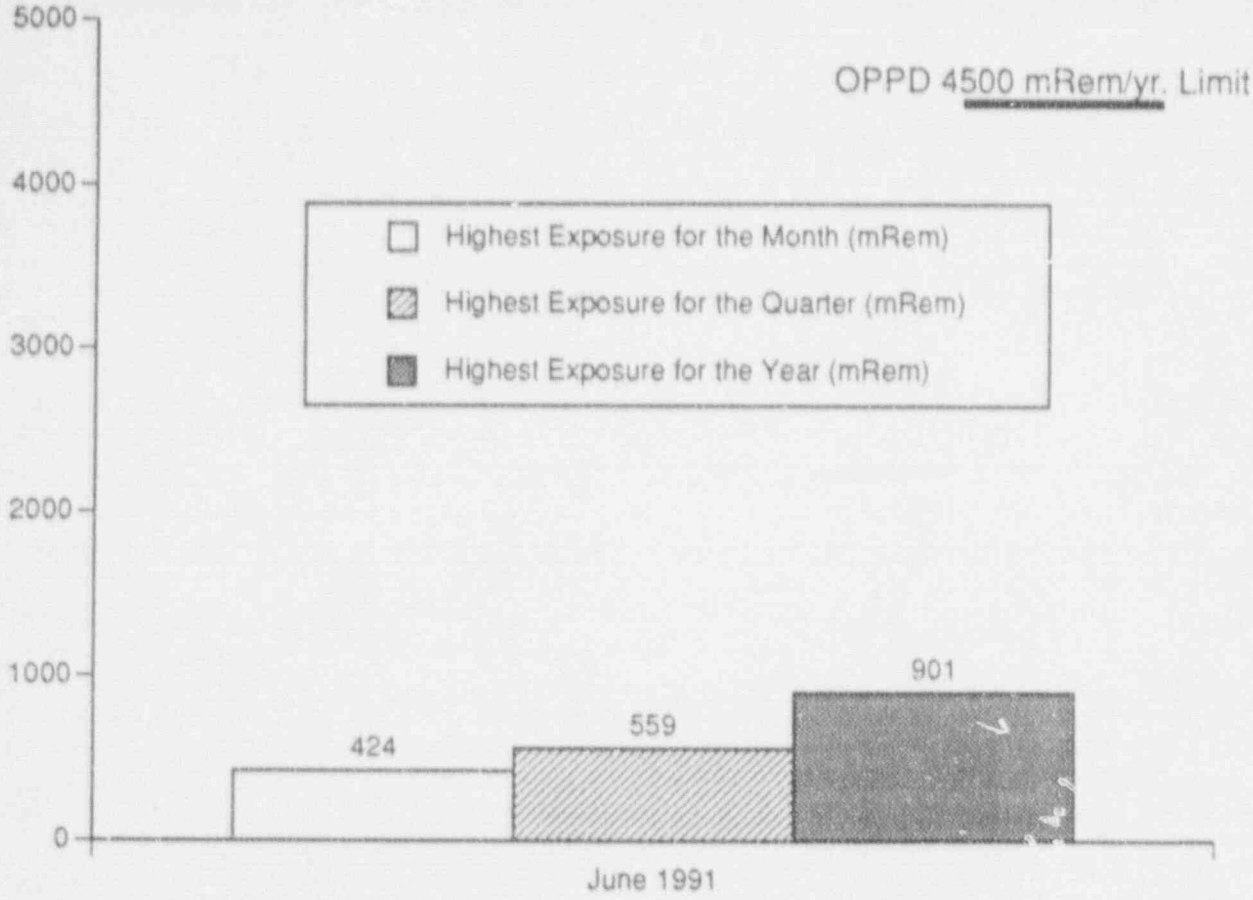
HAZARDOUS WASTE PRODUCED

This indicator shows the total amount of hazardous waste produced by Fort Calhoun each month. This hazardous waste consists of non-halogenated hazardous waste, halogenated hazardous waste, and other hazardous waste produced.

During the month of June, 0.0 kilograms of non-halogenated hazardous waste was produced, 4.9 kilograms of halogenated hazardous waste was produced, and 0.0 kilograms of other hazardous waste was produced.

Date Source: Patterson/Henning (Manager/Source)

Adverse Trend: None



MAXIMUM INDIVIDUAL RADIATION EXPOSURE

During June 1991, an individual accumulated 424 mRem which was the highest individual exposure for the month.

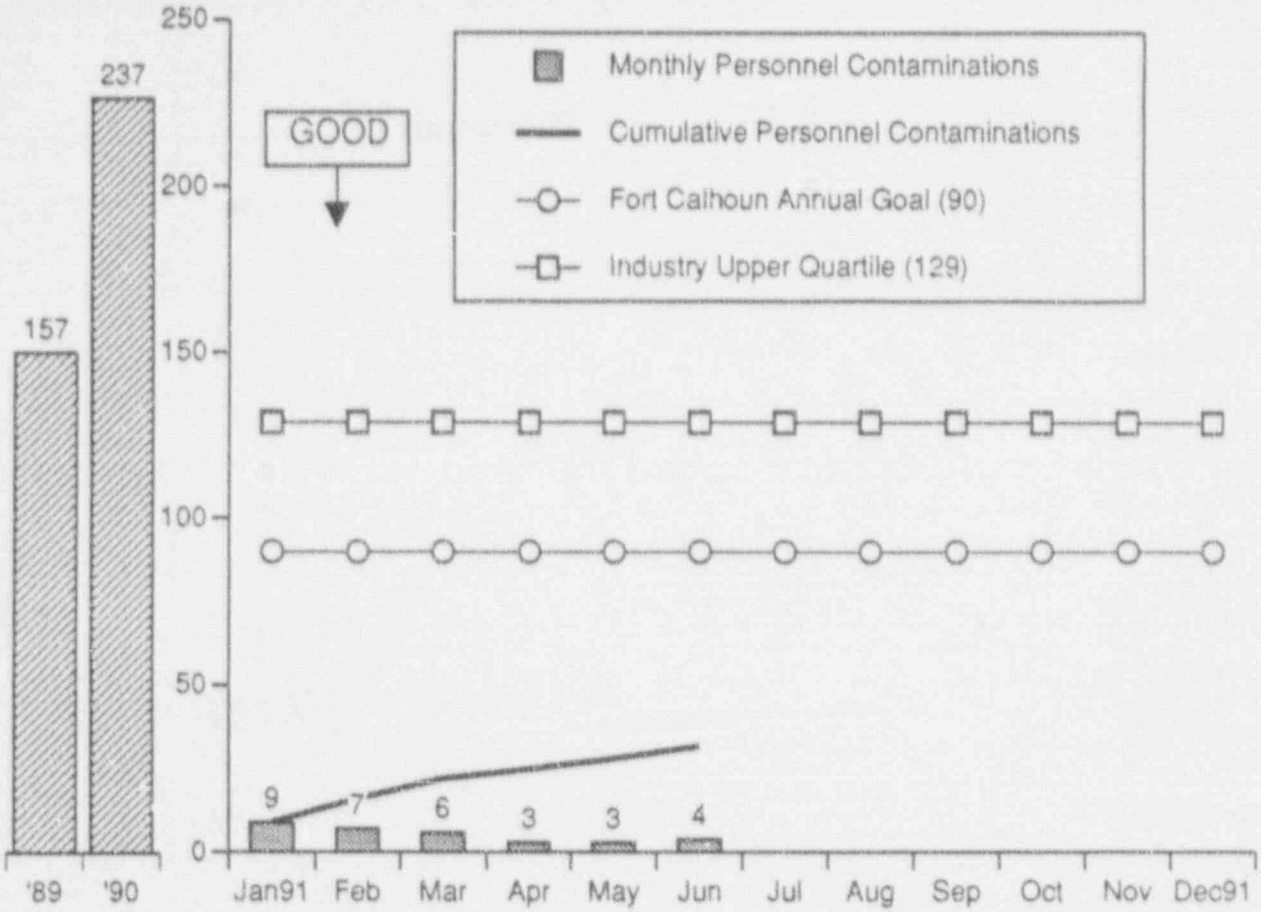
The maximum individual exposure to date for the first quarter of 1991 has been 559 mRem.

The maximum individual exposure reported to date for 1991 has been 901 mRem.

The OPPD limit for the maximum yearly individual radiation exposure is 4,500 mRem/year.

Date Source: Patterson/Williams (Manager/Source)

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 32 cumulative contaminations have occurred during 1991

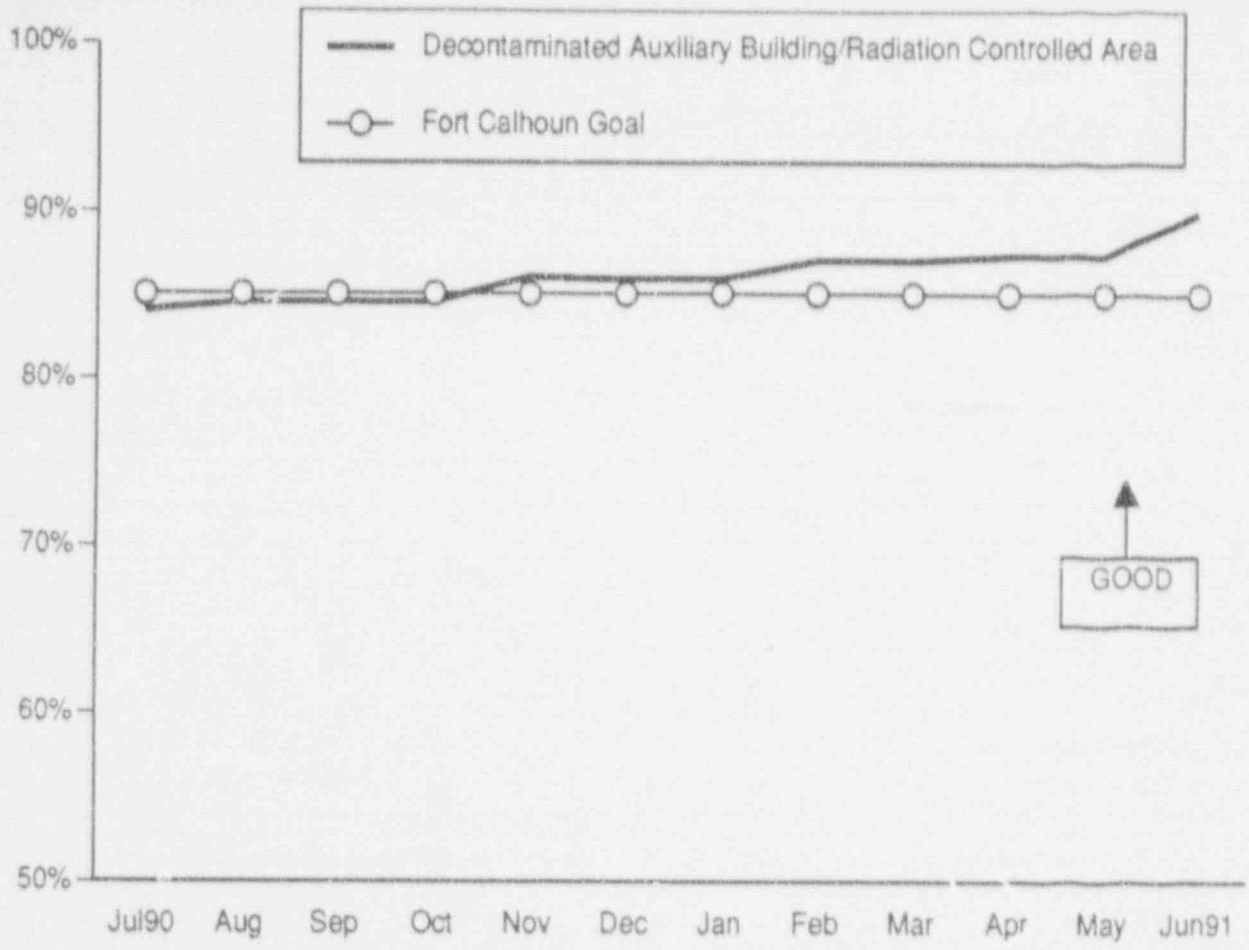
There was a total of 237 skin and clothing contaminations in 1990.

The 1991 goal for skin and clothing is 90 contaminations.

The industry upper quartile value for total skin and clothing contaminations is 129 per unit annually.

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None SEP 15 & 54



DECONTAMINATED RADIATION CONTROLLED AREA

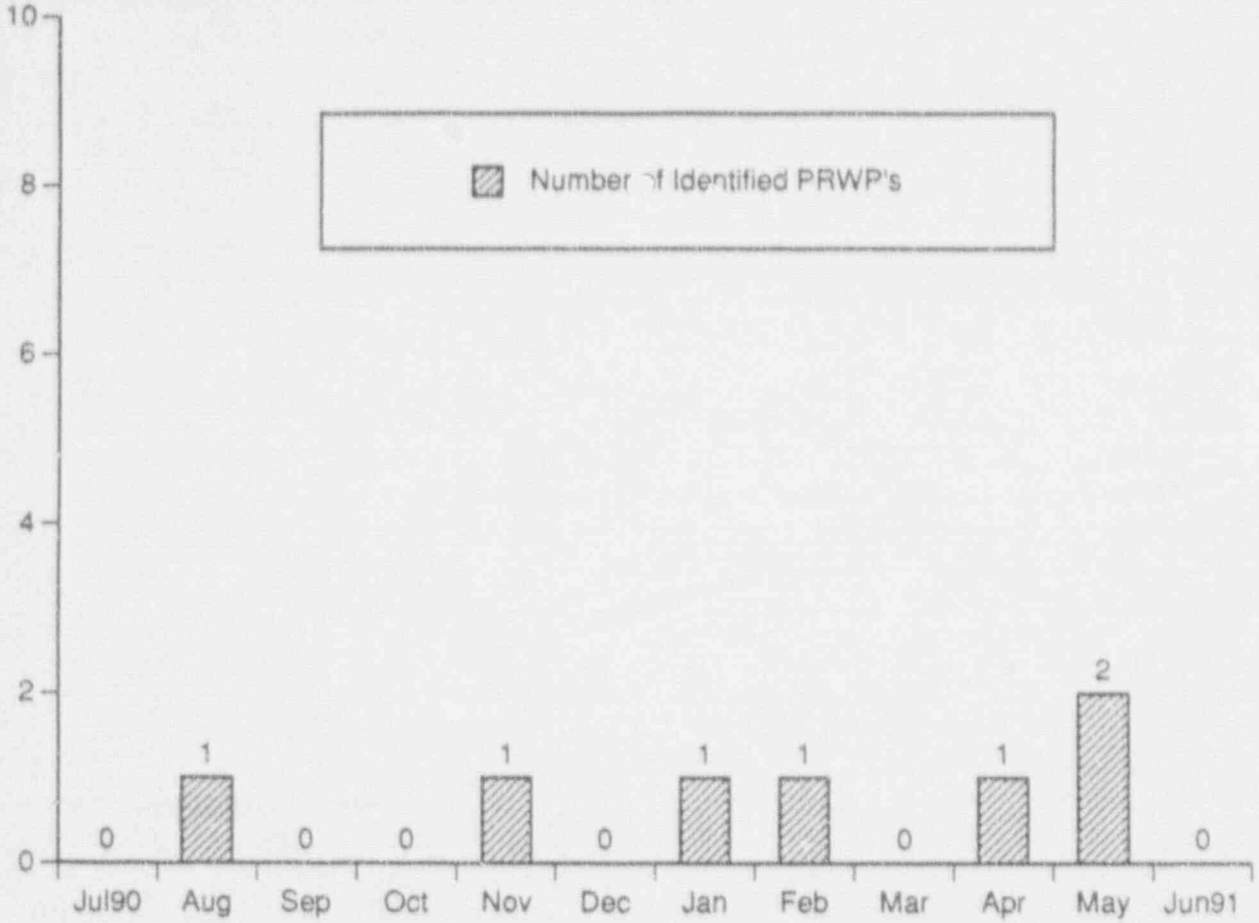
This indicator (formerly titled "Decontaminated Auxiliary Area") has been revised to include the new Radwaste building and the areas of the C/RP building that will be considered Radiologically Controlled. The graph shows the percentage of the RCA which is decontaminated (clean) based on the total square footage, a Fort Calhoun goal of 85% decontaminated for the auxiliary building (non-outage months) and a goal of 75% decontaminated for the auxiliary building (outage months).

As of the end of the reporting month, 89.9% of the total square footage of the RCA was decontaminated.

Date Source: Patterson/Gundal (Manager/Source)

Adverse Trend: None

SEP 54



RADIOLOGICAL WORK PRACTICES PROGRAM

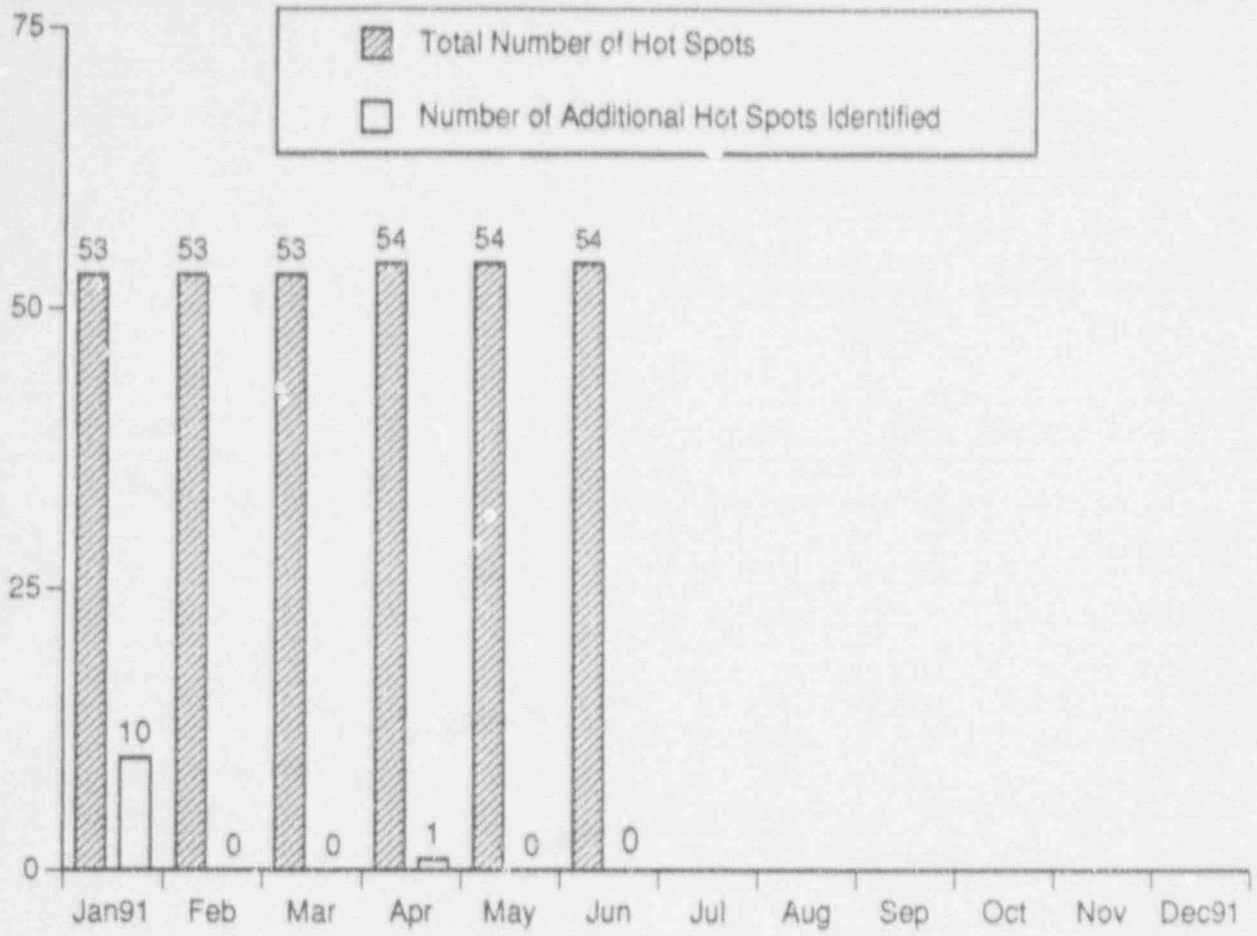
The Radiological Work Practices Progam Indicator shows the number of Poor Radiological Work Practices (PRWP's) which were identified during the reporting month.

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

During the month of June 1991, no (0) PRWPs were identified.

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None SEP 52

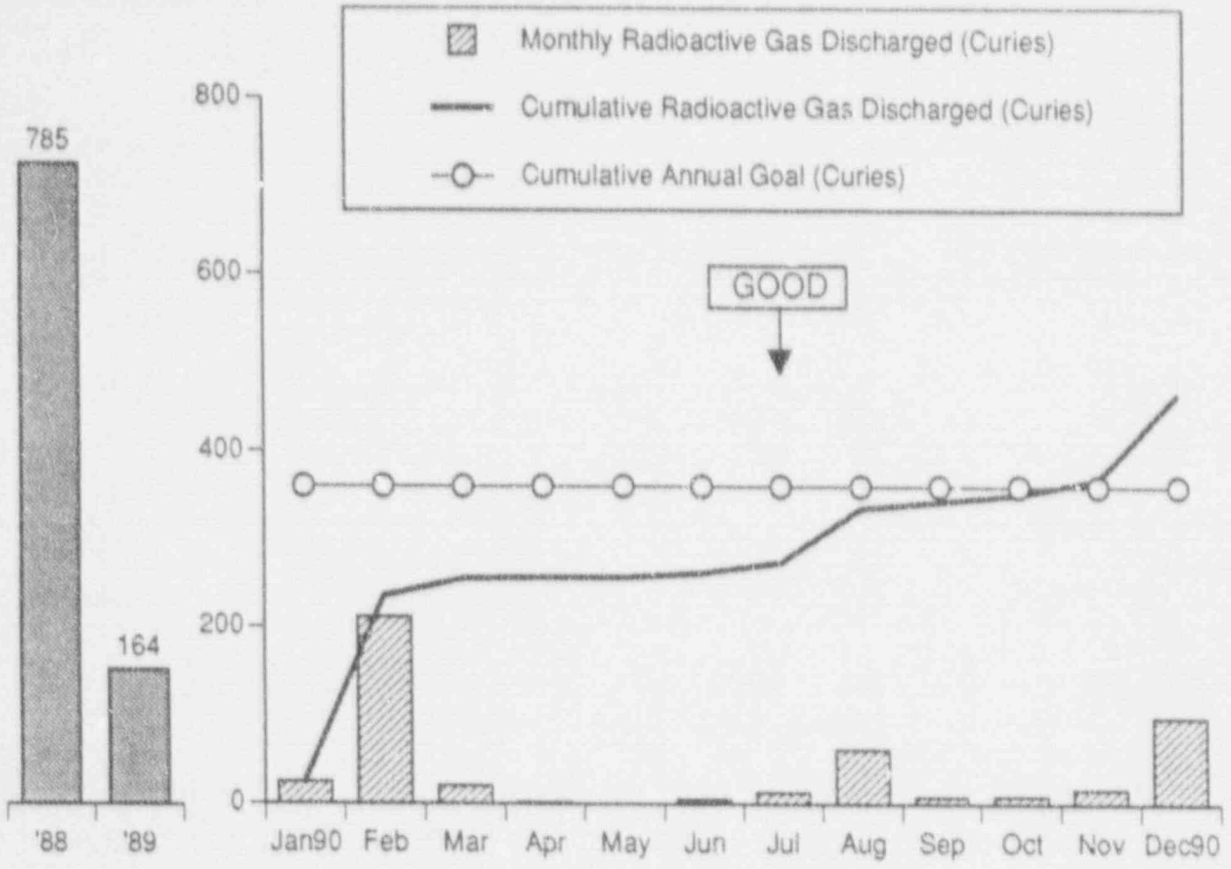


NUMBER OF HOT SPOTS

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.

Date Source: Patterson/Williams (Manager/Source)

Adverse Trends: None



GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT.

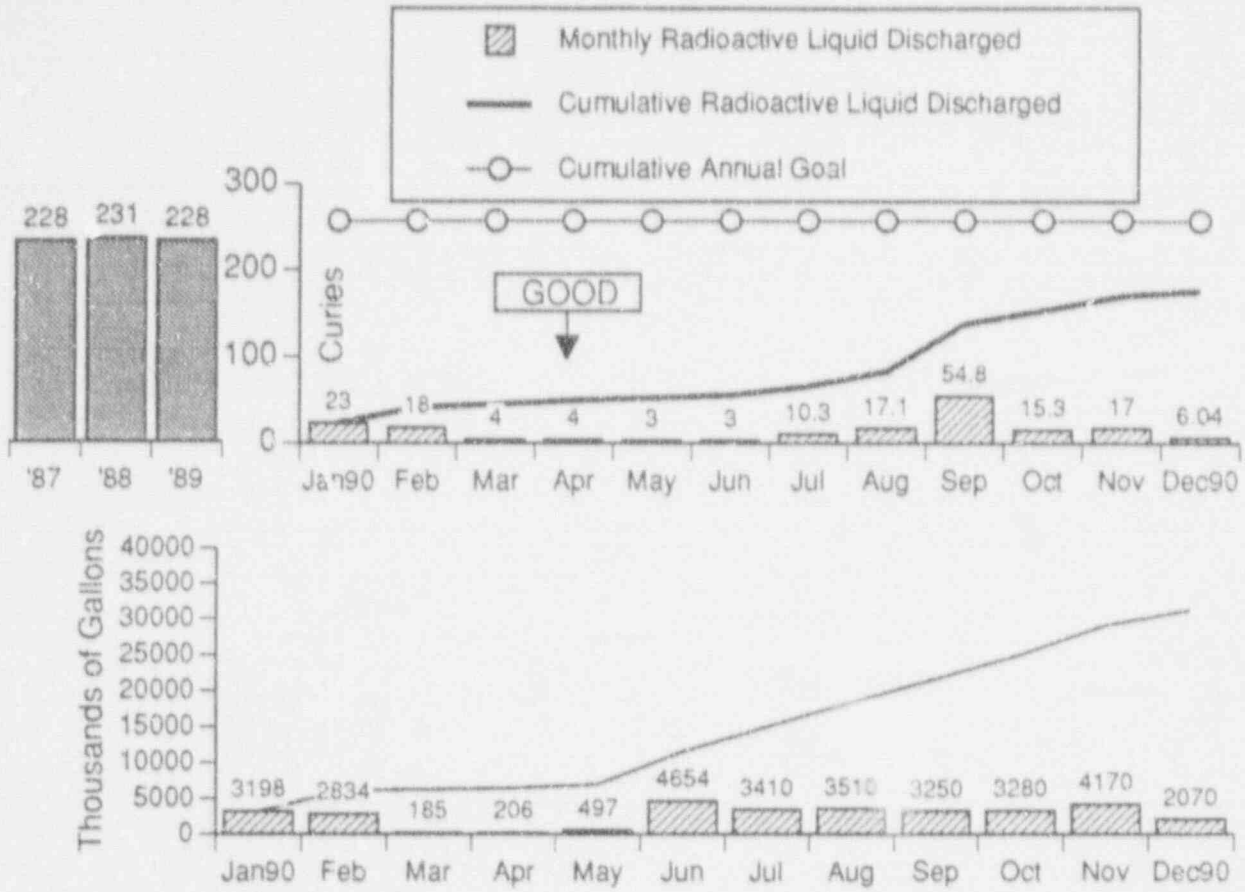
The gaseous radioactive waste being discharged to the environment is shown for January 1990 through December 1990. A total of 465.3 curies have been released to the environment from January through December of 1990. The Fort Calhoun Station goal was 360 curies for this indicator.

The high value of gaseous radioactive waste that was released to the environment during the month of February 1990 was due to a containment purge associated with the 1990 Refueling Outage.

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

Date Source: Franco/Krist (Manager/Source)

Adverse Trend: None



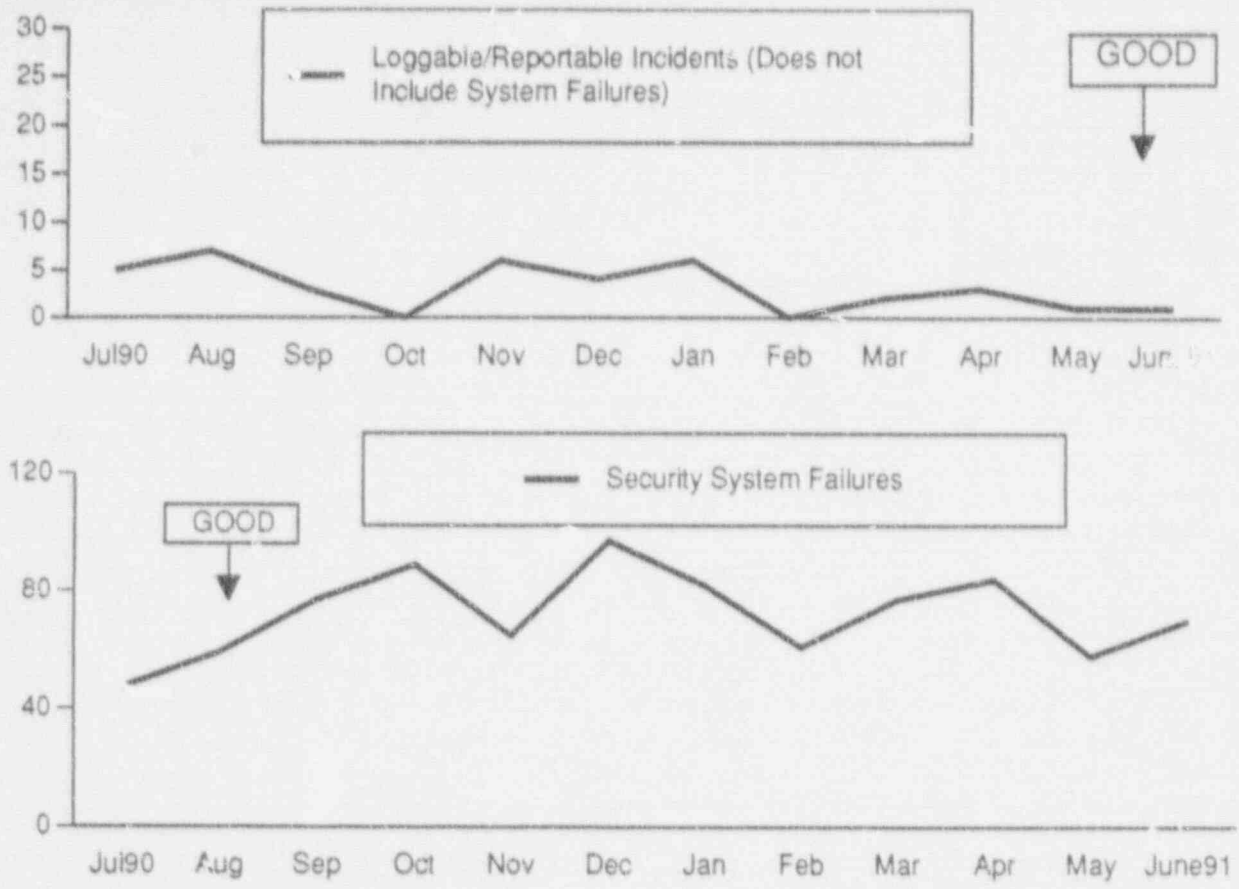
LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

The liquid radioactive waste being discharged to the environment is shown for the months of January 1990 through December 1990. The liquid radioactive waste that was discharged to the environment from all sources totaled 175.5 curies from January through December 1990. The Fort Calhoun Station goal for 1990 is 256 curies.

The bottom graph shows the volume of liquid radioactive waste that has been released form the radioactive waste monitor tanks and steam generators. The volume of liquid radioactive waste discharged to the environment from the radioactive waste monitor tanks and the steam generators totaled 20.7 million gallons from January through December 1990. The liquid radioactive waste that was released to the environment includes liquid released from the steam generators due to the fact that radioisotopes were detected in the steam generator blowdown. The liquid radioactive waste being discharged to the environment is calculated every six months.

Data Source: Franco/Krist (Manager/Source)

Adverse Trend: None



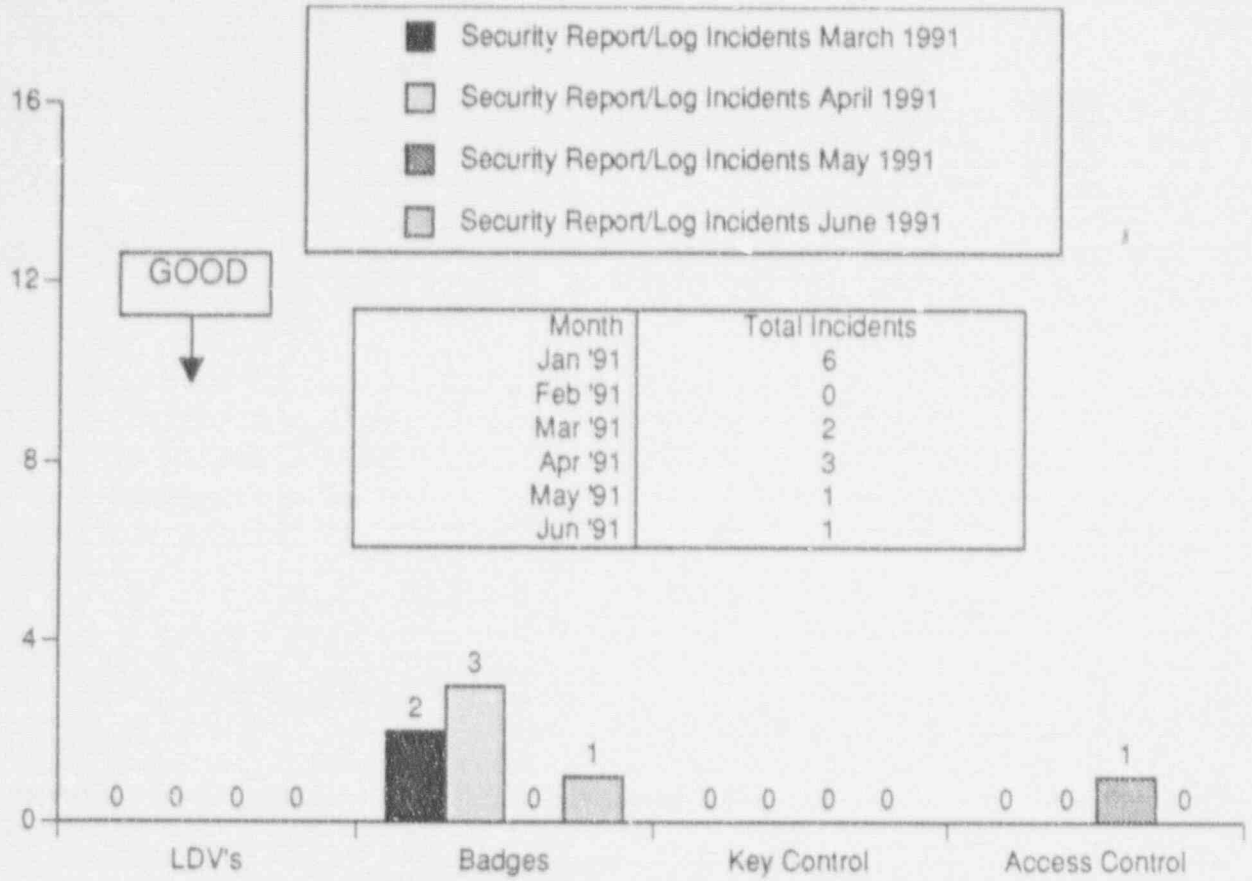
LOGGABLE/REPORTABLE INCIDENTS (SECURITY)

The Loggable/Reportable Incidents (Security) Indicator is depicted in two separate graphs. The first graph depicts the total number of loggable/reportable incidents concerning Licensee Designated Vehicles (LDV's); Security Badges; Security Key Control; and Access Control and Authorization which occurred during the reporting month. The bottom graph shows the total number of loggable/reportable incidents concerning security system failures which occurred during the reporting month.

During the month of June 1991, there were 71 loggable/reportable incidents identified. System failures accounted for 70 (98%) of the loggable/reportable incidents, and of those, 49 (70%) were environmental failures. Poor weather conditions were a major factor in system failures for the month. The remaining non-system loggable incident involved the loss of a security badge. Security Services, Plant Maintenance, and System Engineering continue to pursue improved methods to reduce our environmental failures.

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None SEP 58



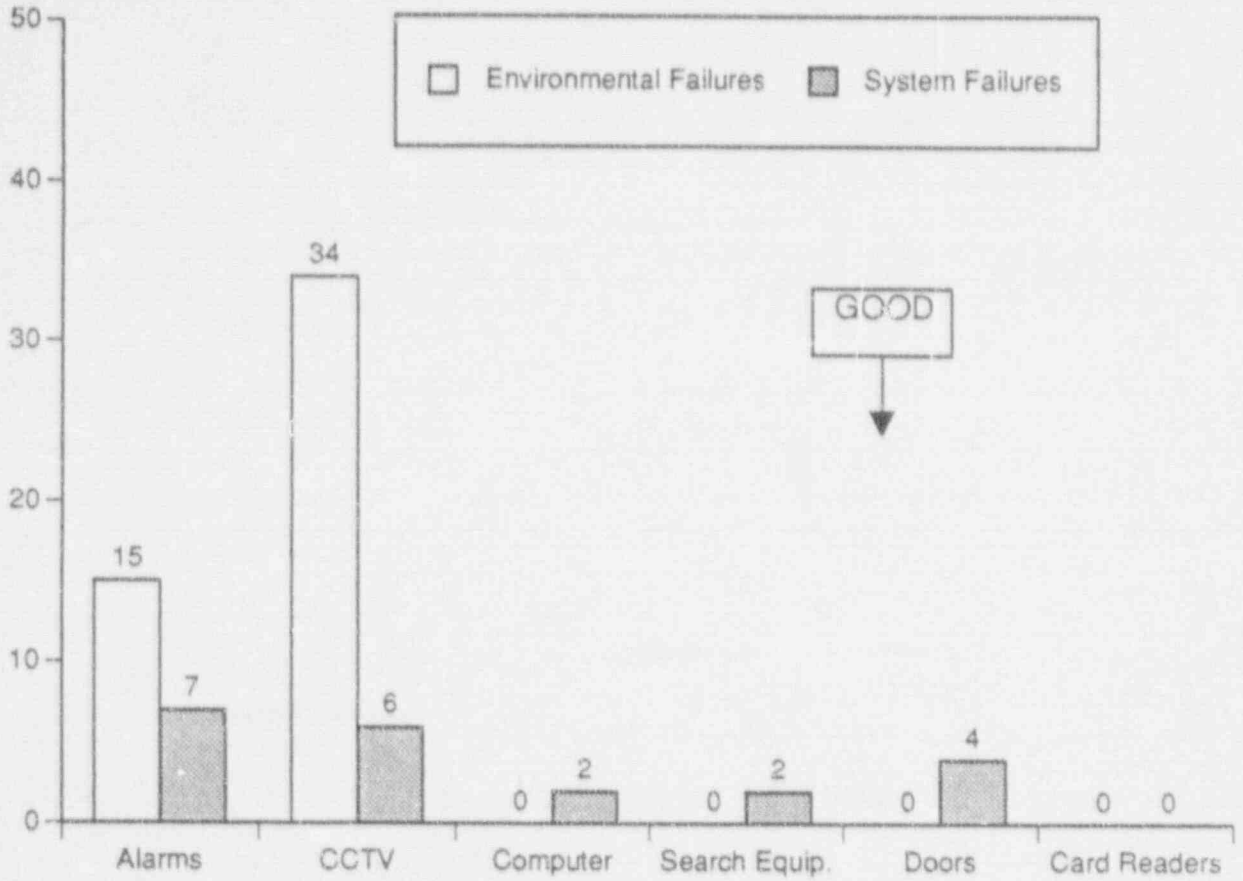
SECURITY INCIDENT BREAKDOWN

This indicator shows the number of incidents concerning the following items for the reporting month: Licensee Designated Vehicles (LDV's) Security Badges; Access Control and Authorization; and Security Key Control.

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None

SEP 58



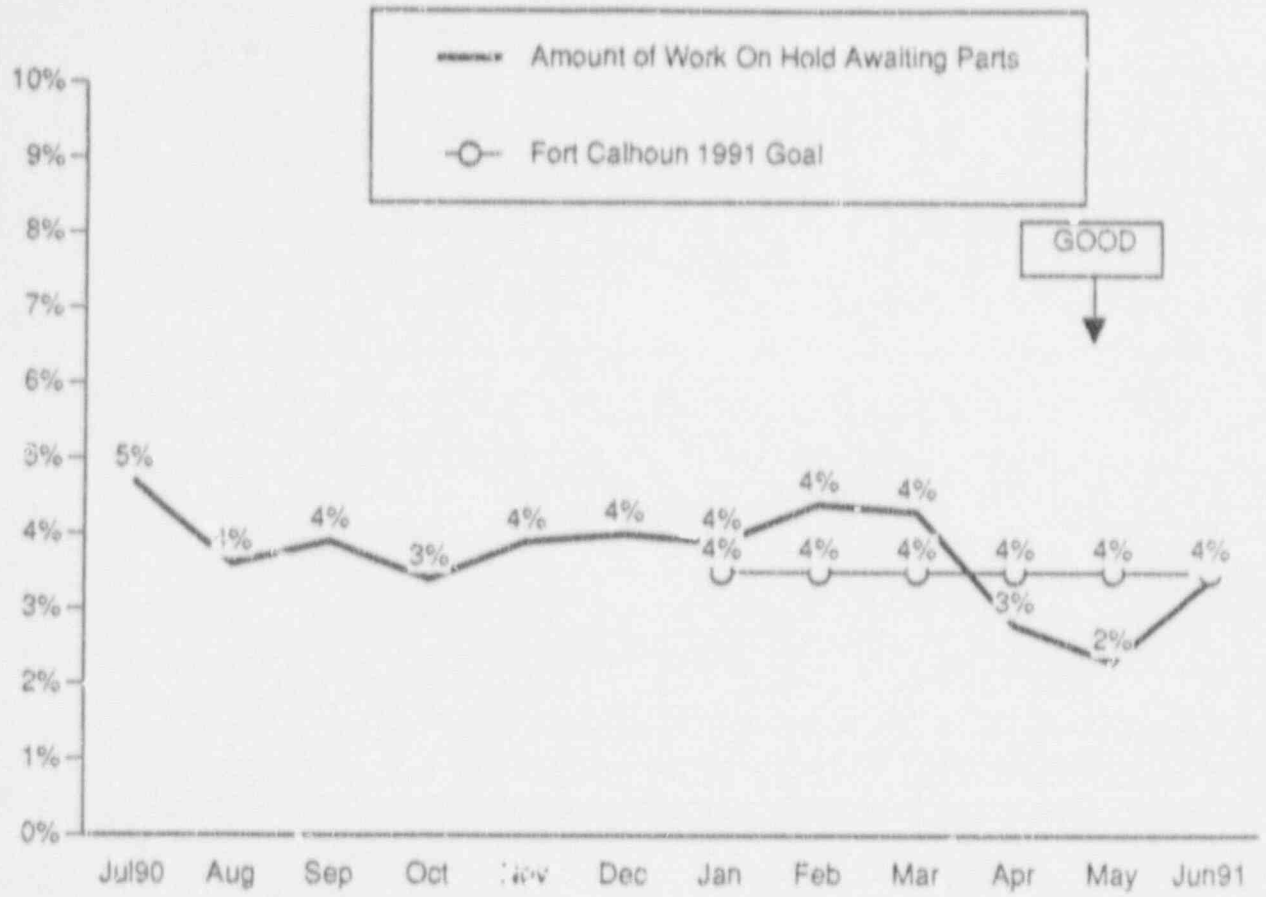
SECURITY SYSTEM FAILURES

This indicator shows the number of incidents concerning the following items for the reporting month: Alarm System Failures, CCTV failures, Security Computer Failures, Search Equipment Failures, Door Hardware Failures, and Card Reader Failures. Alarm systems and CCTV failures will be divided into two categories: environmental failures and system failures.

Number of Incidents:	May '91		June '91	
System Failures	Env. Fail.	Equip. Fail.	Env. Fail.	Equip. Fail
Alarm Systems	6	9	15	7
CCTV	27	3	34	6
Computer	n/a	1	n/a	2
Search Equipment	n/a	4	n/a	2
Door Hardware	n/a	8	n/a	4
Card Reader	n/a	0	n/a	0
Total	33	25	49	21

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None SEP 58



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

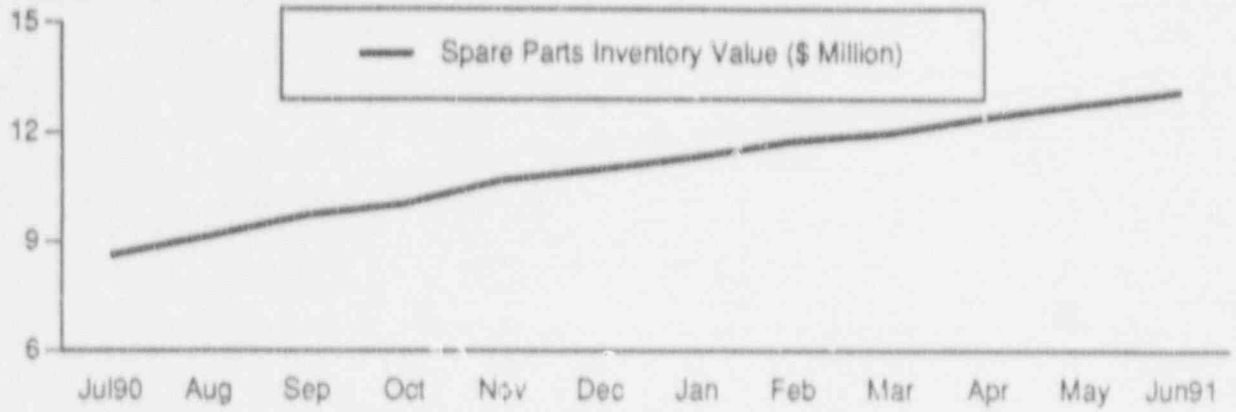
This procurement indicator displays the amount of open, non-outage, maintenance items that are on hold awaiting parts to the total amount of open, non-outage, maintenance items, expressed as a percentage.

There was a total of 728 open, non-outage, maintenance items with 25 of these items on hold awaiting parts at the end of the reporting month.

The 1991 Fort Calhoun Goal for this indicator is 3.43% of the total number of open non-outage maintenance items awaiting parts.

Data Source: Willrett/CHAMPS (Manager/Source)

Adverse Trend: None

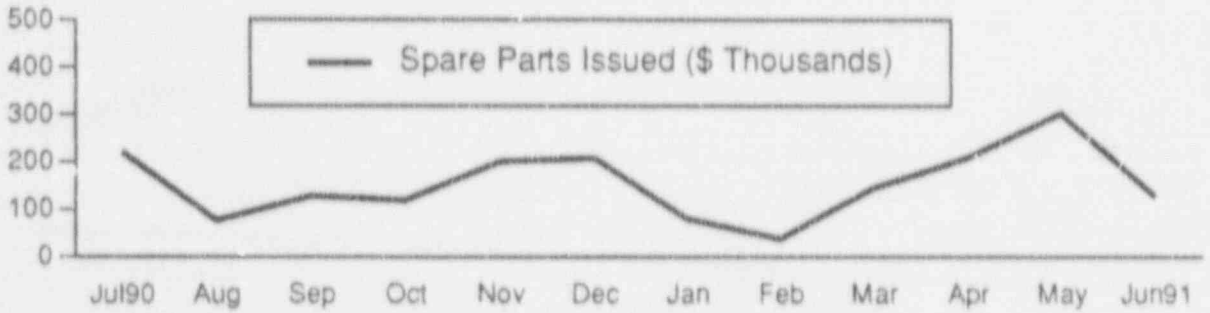


SPARE PARTS INVENTORY VALUE

The spare parts inventory value at the Fort Calhoun Station at the end of June was reported as $13,086,087.

Data Source: Steele/Huliska (Manager/Source)

Adverse Trend: None

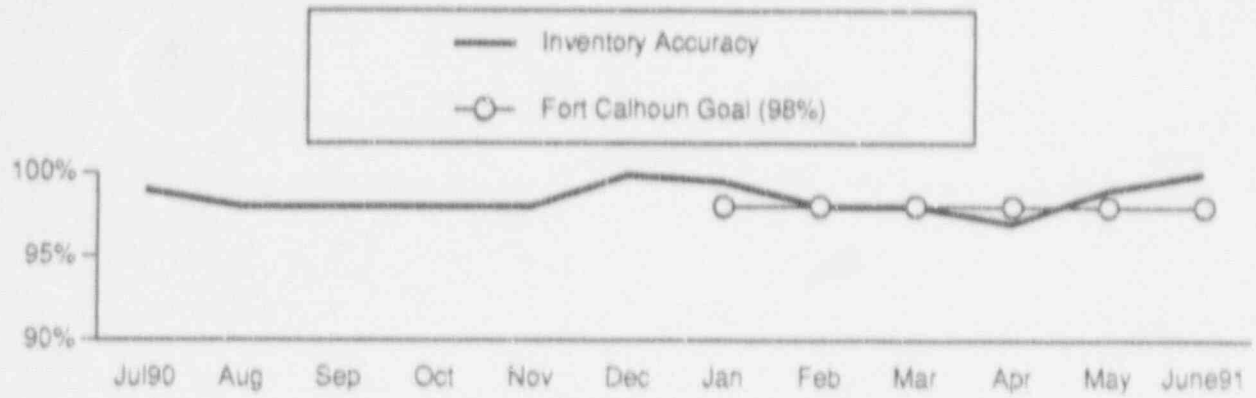


SPARE PARTS ISSUED

The value of the spare parts issued during June totaled $127,324.

Data Source: Steele/Miser (Manager/Source)

Adverse Trend: None



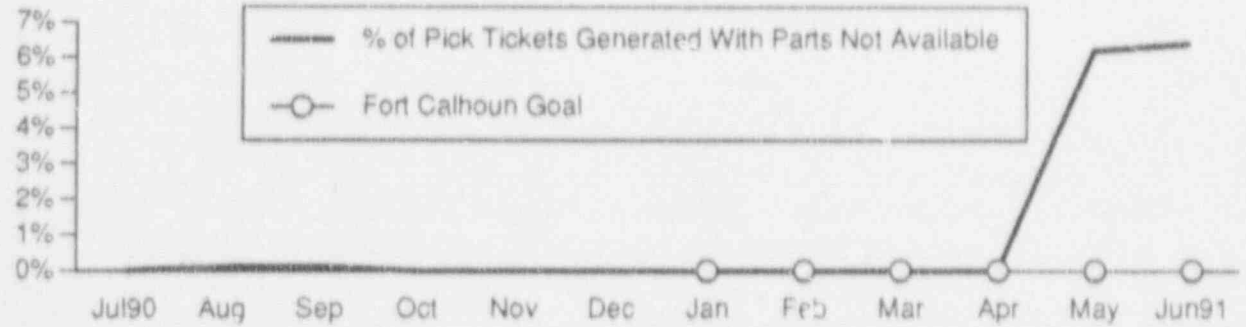
INVENTORY ACCURACY

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 June, 615 different line items were counted in the warehouse. Of the 615 line items counted, 2 items needed count adjustments. The inventory accuracy for the month of June was reported as 100%. The Fort Calhoun goal for this indicator is 98%.

Data Source: Willrett/McCormick (Manager/Source)

Adverse Trend: None



STOCKOUT RATE

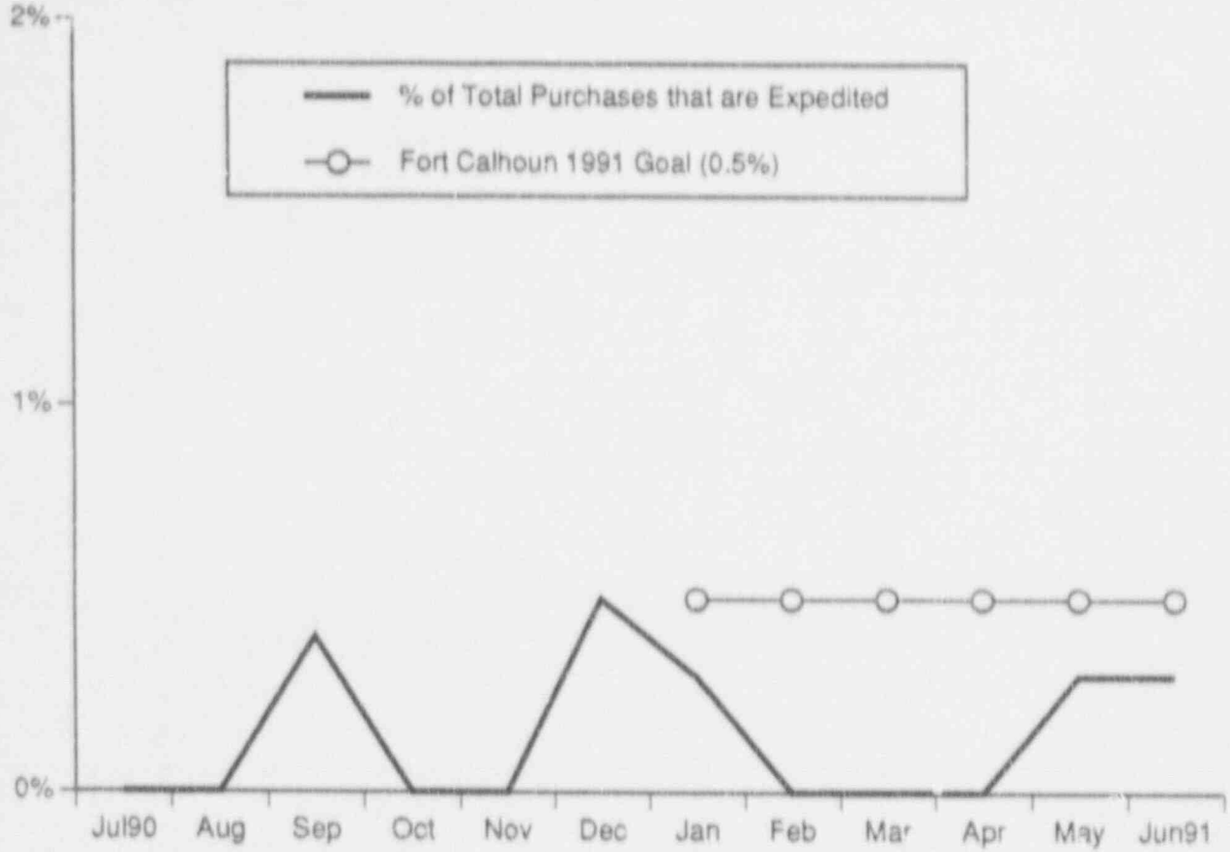
This indicator shows the percentage of the number of Pick Tickets generated with no parts available during the reporting month.

During June, a total of 1042 Pick Tickets were generated. Of the 1042 Pick Tickets generated 67 Pick Tickets were generated with no parts available.

The Fort Calhoun 1991 Goal for Pick Tickets generated with no parts available is 0%.

Data Source: Willrett/McCormick(Manager/Source)

Adverse Trend: None



EXPEDITED PURCHASES

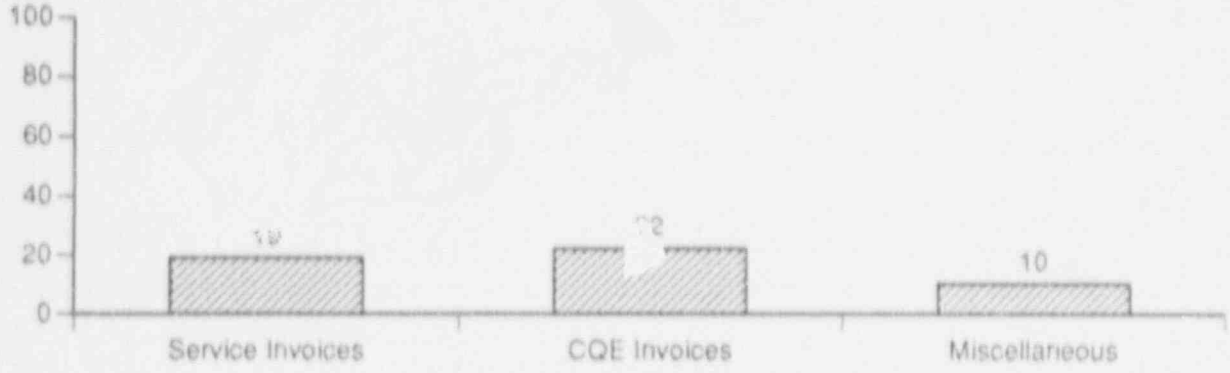
This indicator shows the percentage of expedited purchases compared to the total number of purchase orders generated during the reporting month.

During June, there was a total of 347 purchase orders generated. Of the 347 purchase orders generated, there was one (1) expedited purchase.

The Fort Calhoun goal for this indicator 0.5%.

Date Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None

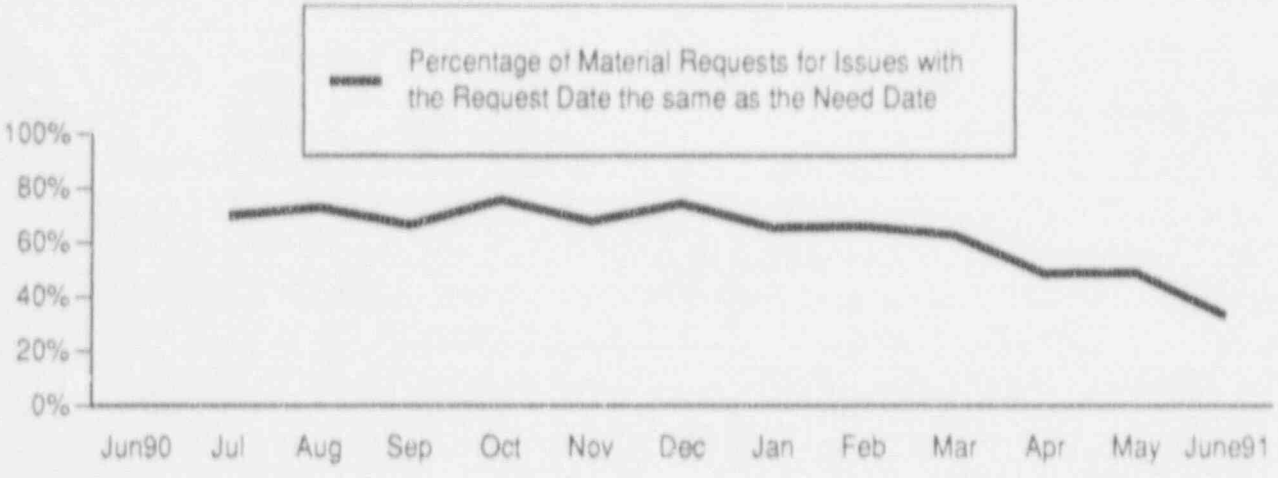


INVOICE BREAKDOWN

This indicator shows the number of service invoices, CQE invoices, and miscellaneous invoices for the month of June 1991.

Date Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None



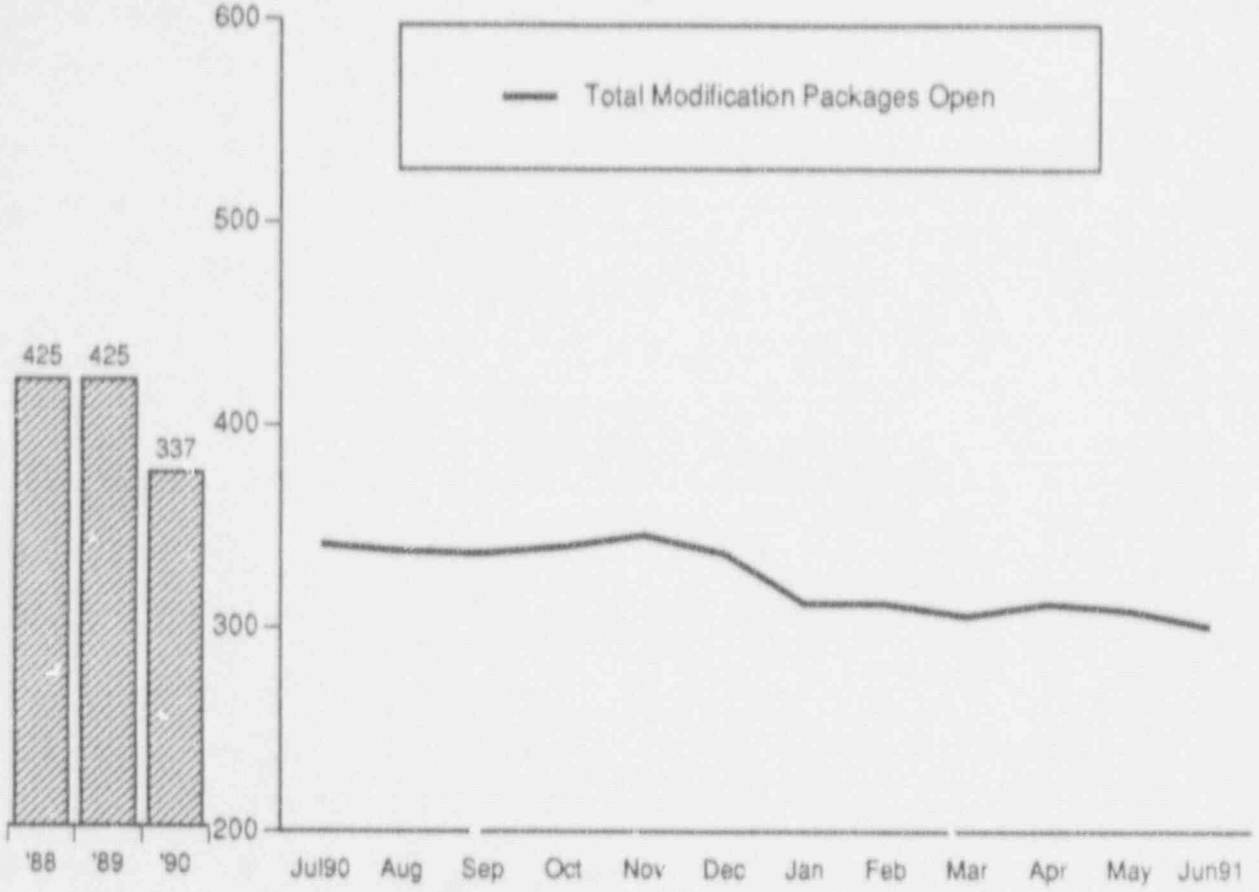
MATERIAL REQUEST PLANNING

This indicator shows the percent of material requests (MR's) for issues with their request date the same as their need date compared to the total number of MR's for issues for the reporting month.

During the month of June, a total of 1042 MR's were received by the warehouse. Of the 1042 total MR's received by the warehouse, 349 MR's were for issues with their request date the same as their need date.

Data Source: Willrett/McCormick (Manager/Source)

Adverse Trend: None



OUTSTANDING MODIFICATIONS

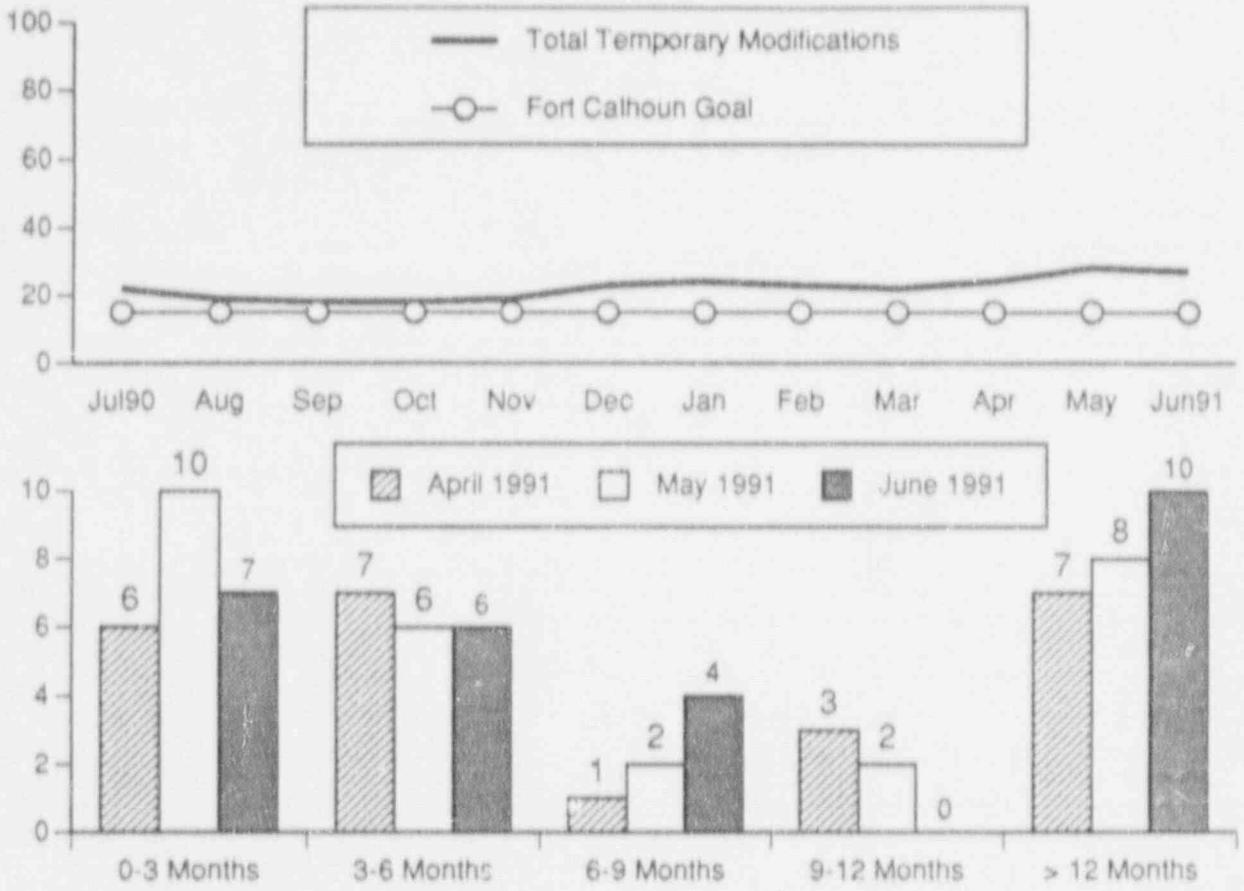
This indicator shows the total number of outstanding modifications (excluding outstanding modifications which are proposed to be cancelled).

Category	Reporting Month
Form FC-1133 Backlog/In Progress	18
Mod. Requests Being Reviewed	98
Design Engr. Backlog/In Progress	103
Construction Backlog/In Progress	27
Design Engr. Update Backlog/In Progress	55
Total	301

As of the end of June, 19 additional modification requests have been issued this year and 17 modification requests have been cancelled. The Nuclear Projects Review Committee (NPRC) has completed 66 backlog modification request reviews this year. The Nuclear Projects Committee (NPC) has completed 80 backlog modification request reviews this year.

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

Adverse Trend: None



TEMPORARY MODIFICATIONS (EXCLUDING SCAFFOLDING)

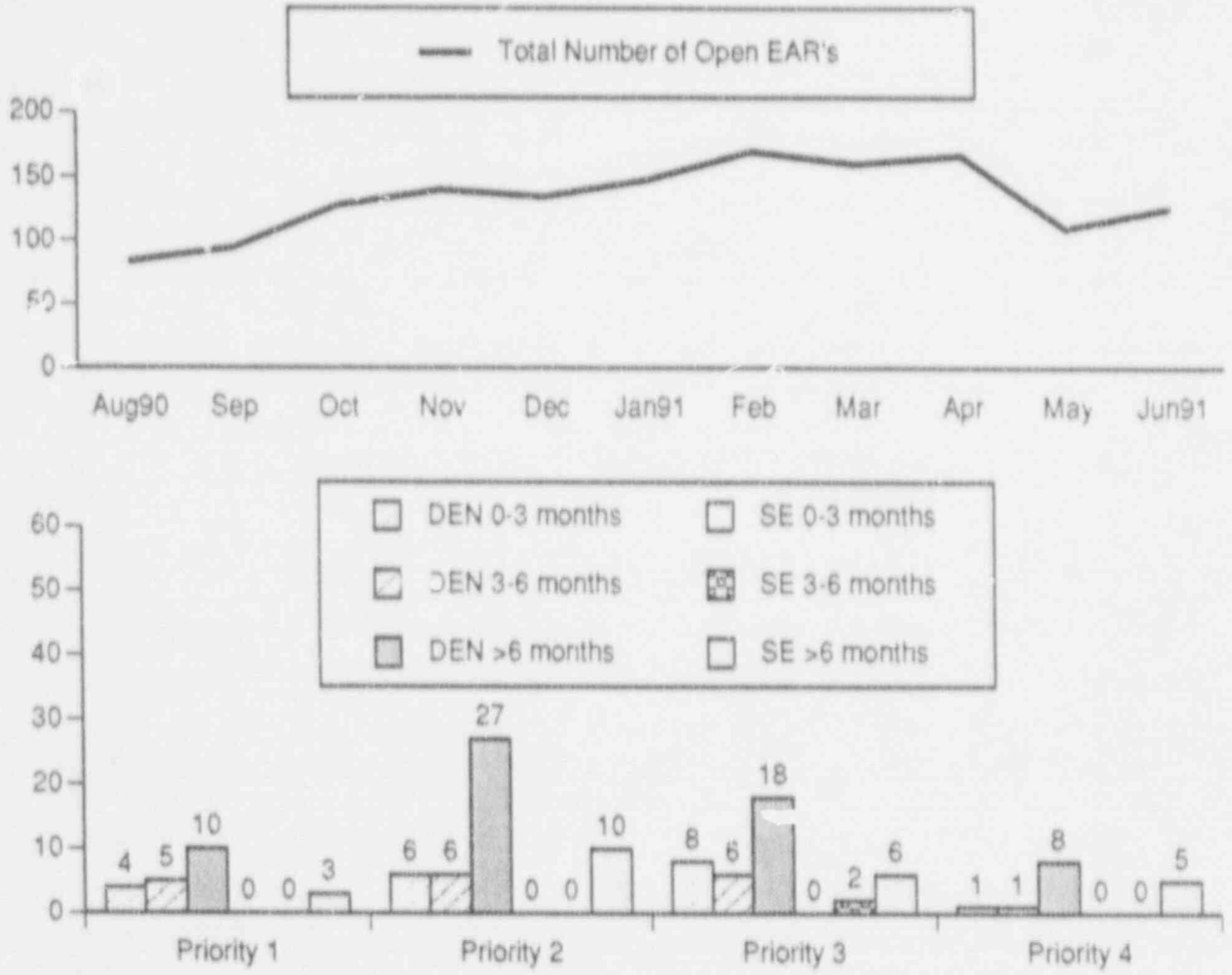
The top graph shows the total number of temporary modifications (TM's) installed in the Fort Calhoun Station and the Fort Calhoun goal. The bottom graph shows the age of all installed TM's in the plant for the respective month.

At the end of June, there was a total of 27 TM's installed in the Fort Calhoun Station. 15 of the 27 installed TM's require an outage for removal. The current Fort Calhoun goal for the total number of installed TM's is less than 15.

Data Source. Jaworski/Turner (Manager/Source)

Adverse Trend. Temporary modifications greater than twelve months old continue to increase due to the need for outage conditions to remove the item. Currently 15 temporary modifications require an outage for removal.

SEP 62 & 71



OUTSTANDING ENGINEERING ASSISTANCE REQUESTS (EAR's)

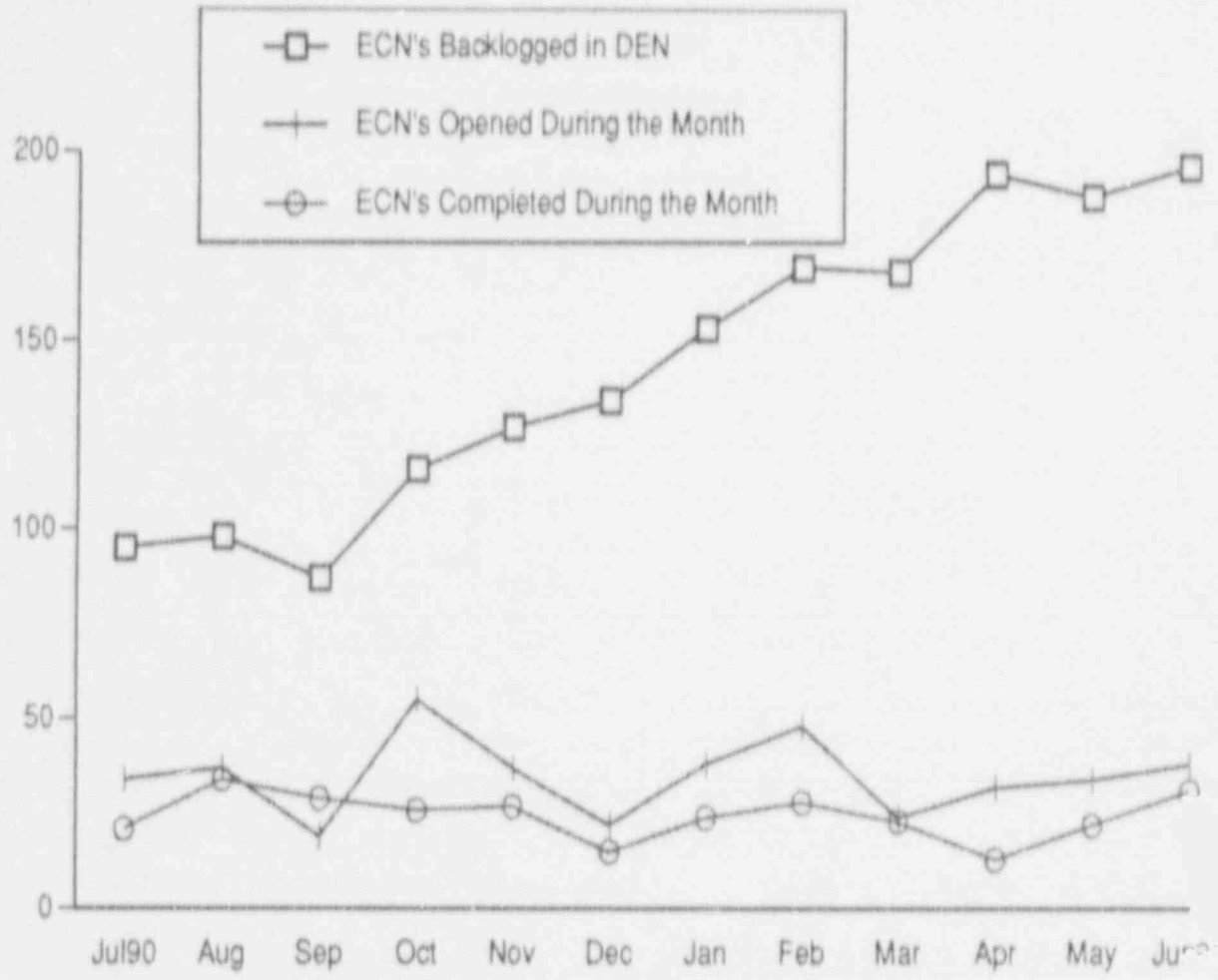
The top graph shows the total number of open EAR's at the end of the reporting month. The bottom graph shows the EAR's by Design Engineering Nuclear or System Engineering responsibility and their age in months at the end of the reporting month.

The decrease in open EAR's at the end of May resulted from a review of the backlog. This review found many had been closed or cancelled which were incorrectly updated in AMRTS and counted as open.

There was a total of 125 open EAR's at the end of June. Of the 125 total open EAR's, 99 were Design Engineering Nuclear's responsibility and 26 were System Engineering's responsibility.

Data Source: Jaworski/Van Osdel (Manager/Source) SEP 62

Adverse Trend: None



ENGINEERING CHANGE NOTICE STATUS

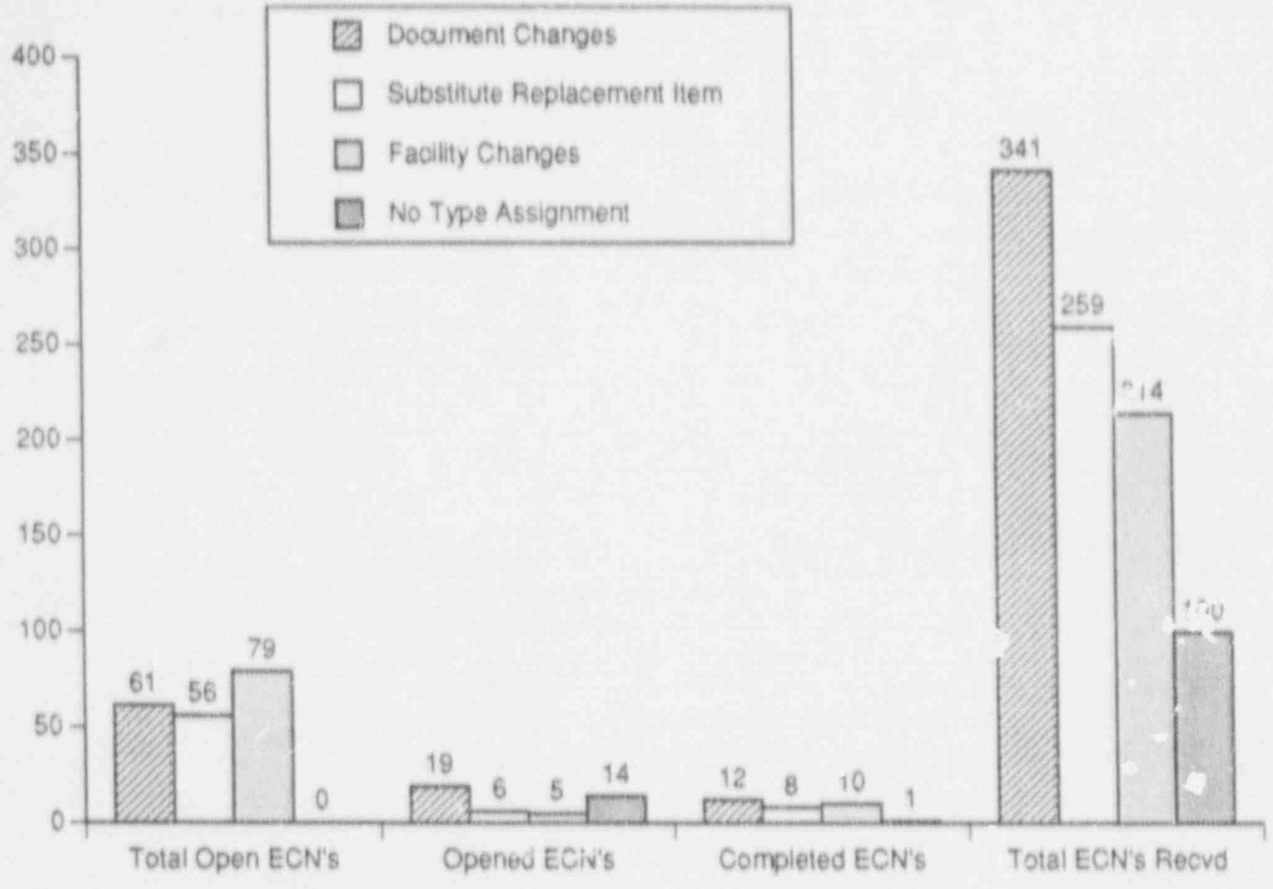
This indicator shows the number of Engineering Change Notices (ECN's) awaiting completion by DEN, the number of ECN's opened during the reporting month, and the number of ECN's completed by DEN during the reporting month.

At the end of June 1991, there was a total of 196 DEN backlogged open ECN's. There were 38 ECN's opened, and 31 ECN's completed during the month.

Although the number of open ECN's is currently high, activities are in progress to reduce the backlog of open ECN's. It is expected that in several months the number of open ECN's will begin to decrease.

Data Source: Phelps/Pulverenti (Manager/Source)

Adverse Trend: None

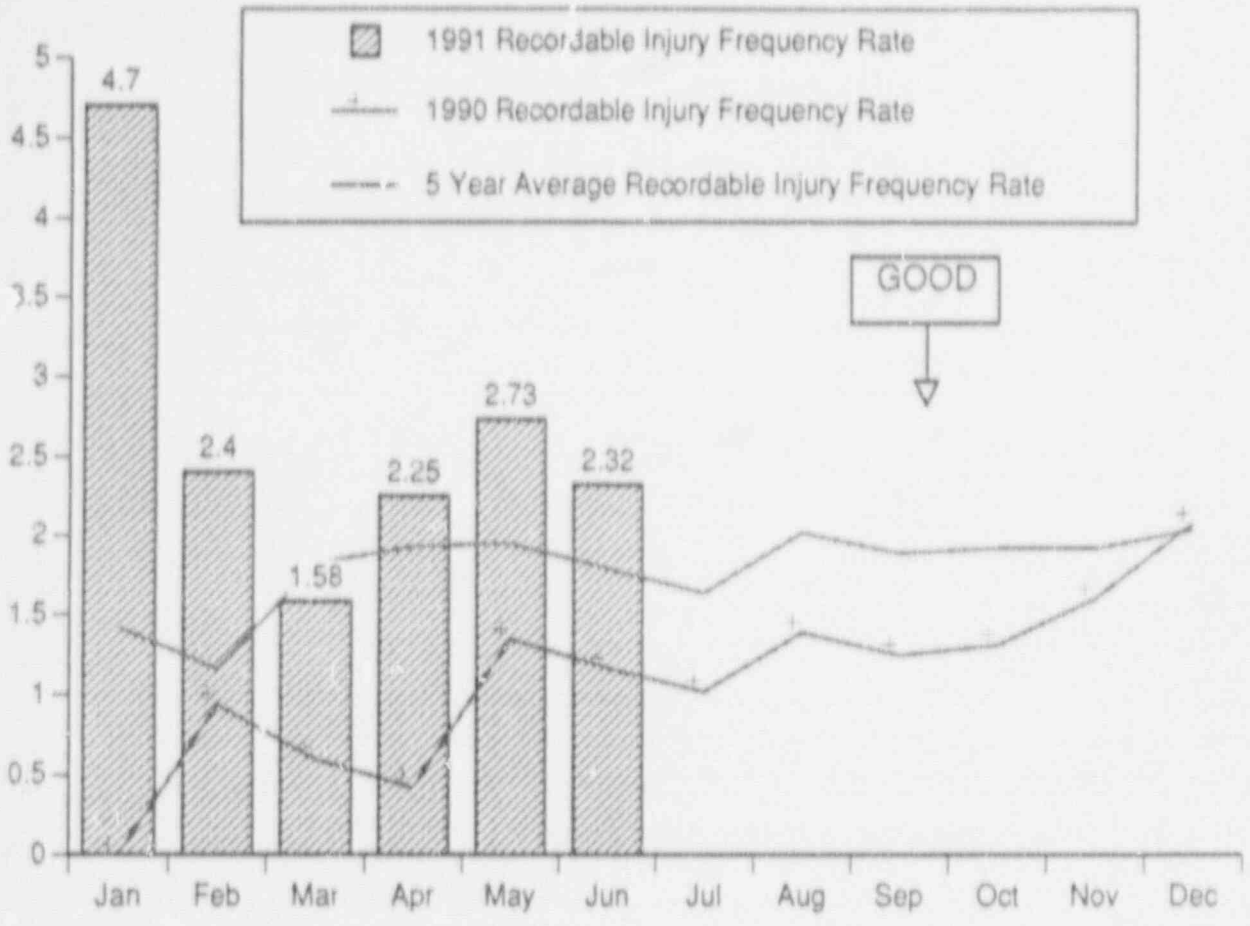


ENGINEERING CHANGE NOTICE BREAKDOWN

This indicator breaks down the number of Engineering Change Notices (ECN's) that remain open awaiting completion by Design Engineering Nuclear (DEN), the number of ECN's that were opened, and the number of ECN's that were completed by DEN during the reporting month. The total number of ECN's received by DEN since the initiation of the ECN process in 1989 is also shown.

Data Source: Phelps/Pulverenti (Manager/Source)

Adverse Trend: None SEP 62



RECORDABLE INJURY CASES FREQUENCY RATE

This indicator shows the 1991 monthly, 1990 monthly, and the FCS 5 year monthly average of the recordable injury/illness cases frequency rates.

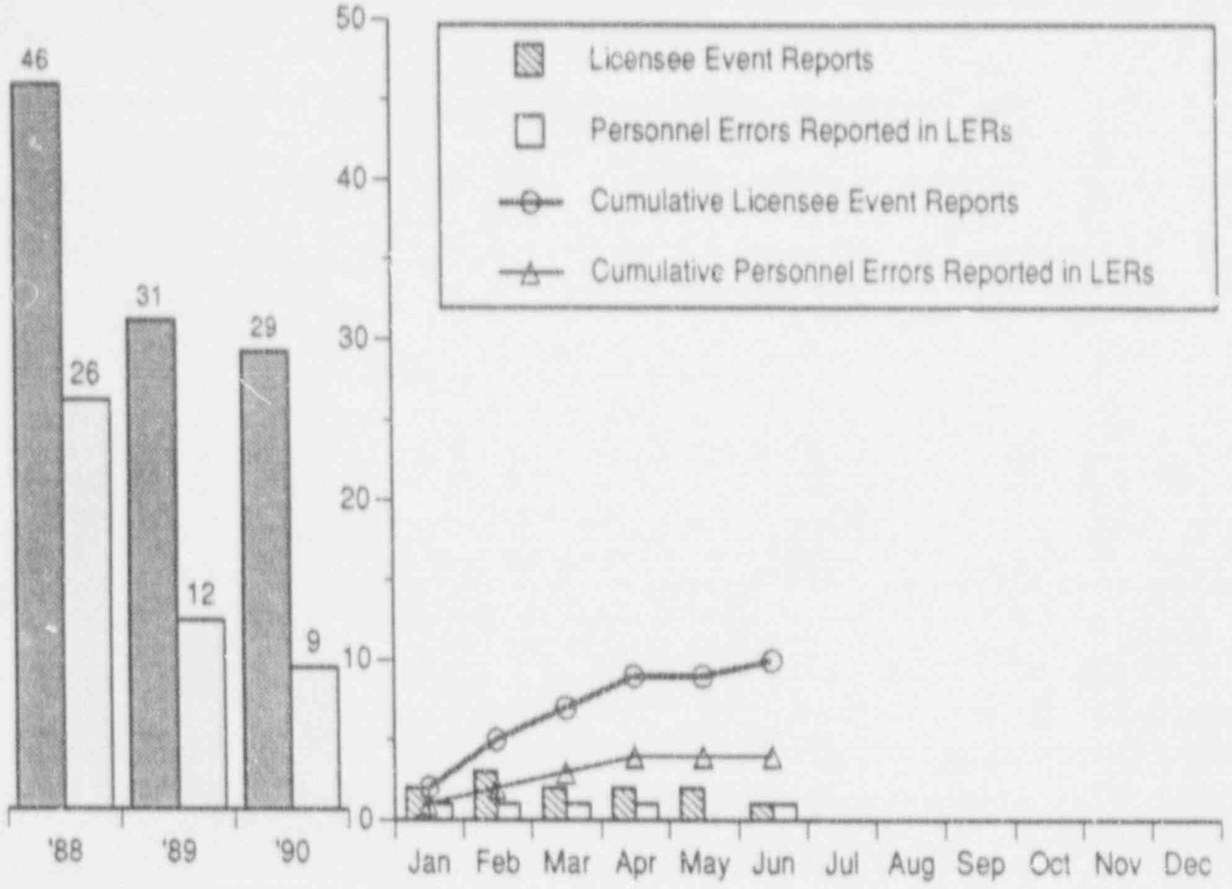
A recordable injury/illness case is reported if Nuclear Operations Division personnel are injured on the job and require corrective medical treatment beyond first aid. The recordable cases frequency rate is computed on a year-to-date basis.

There were no (0) recordable injury/illness cases reported during the month of June. There has been a total of 6 recordable injury/illness cases so far in 1991.

Year	Recordable Cases	Year-End Rate
1988	11	2.6
1989	11	2.2
1990	1	2.1

Data Source: Sorenson/Skaggs (Manager/Source)

Adverse Trend: Based on the 5 year average recordable injury/illness frequency rate, an adverse trend is indicated. SEP 15, 25 & 26



NUMBER OF PERSONNEL ERRORS REPORTED IN LER'S

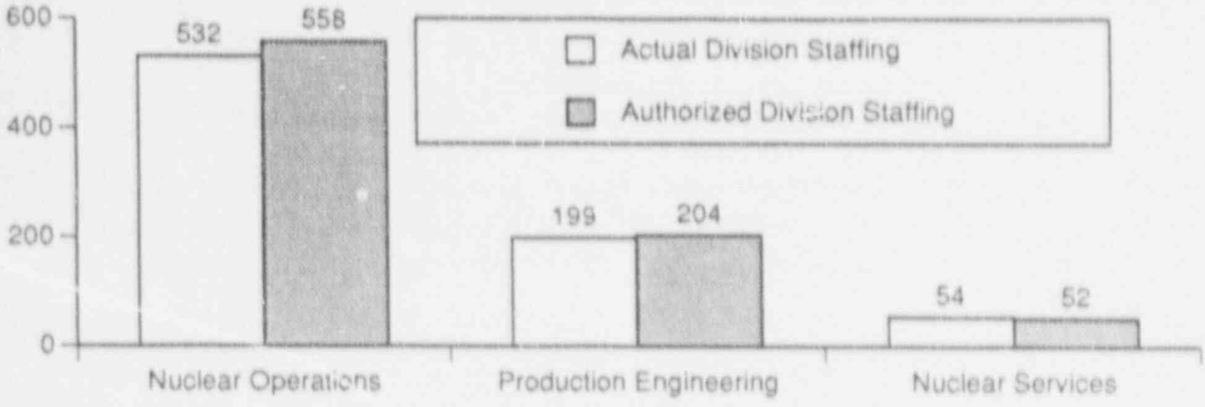
This indicator shows the number of Licensee Event Reports (LER's) with event dates during the reporting month, the LER's attributed to personnel errors, and the cumulative total of both. The year-end totals for the three previous years are also shown.

In June 1991, there was one (1) LER reported. This LER was attributable to personnel error.

There have been 10 LER's reported so far in 1991 and 4 of these LER's have been attributable to personnel error.

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None SEP 15

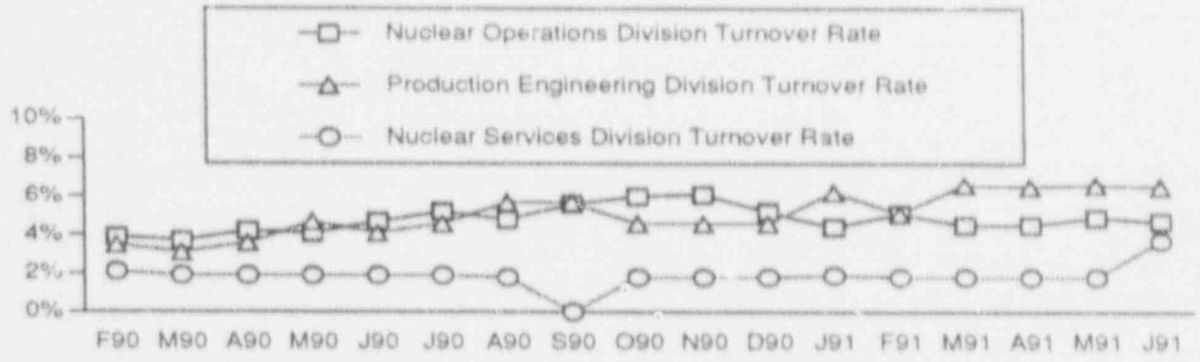


STAFFING LEVEL

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

Data Source: Sorenson/Burke (Manager/Source)

Adverse Trend: None SEP 24



PERSONNEL TURNOVER RATE

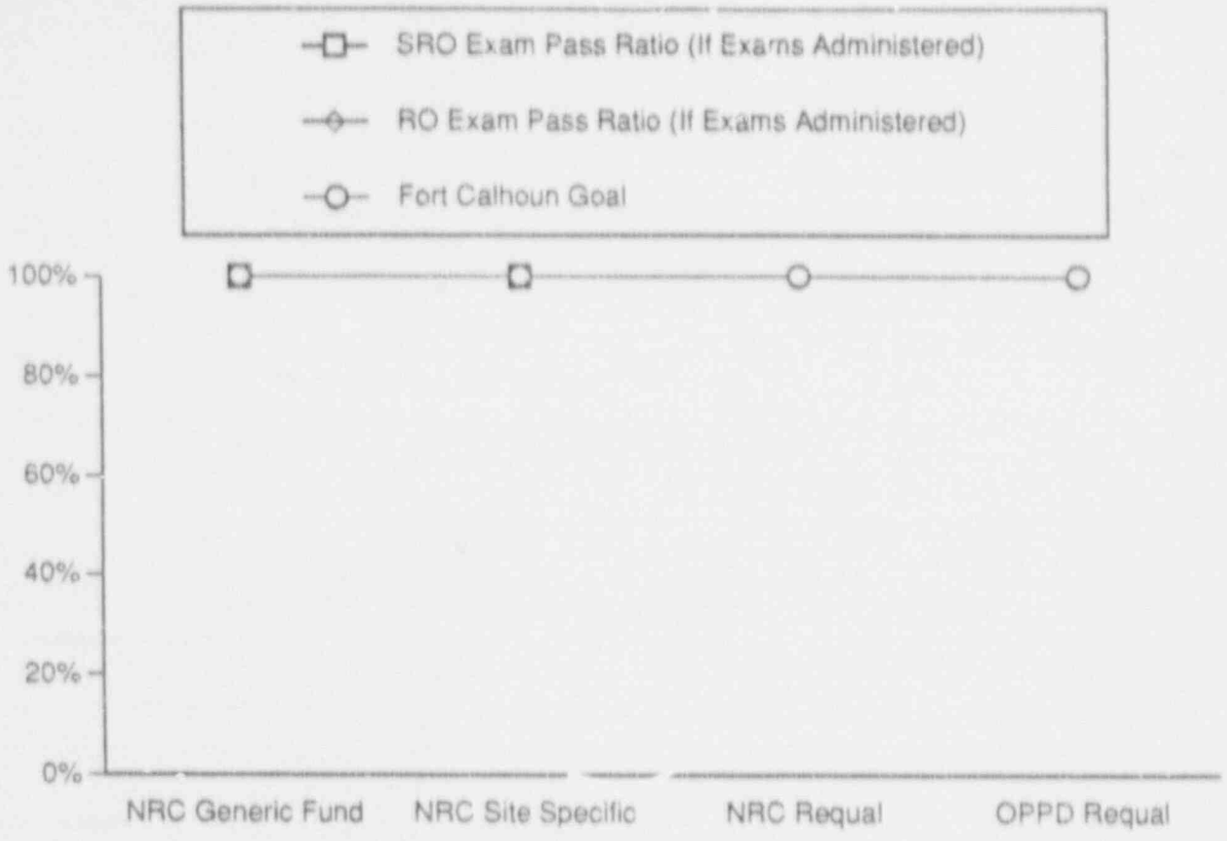
The turnover rates for the three Divisions are calculated using only resignations from OPPD.

Division	Turnover Rate
NOD	4.7%
PED	6.5%
NSD	3.7%

Currently, the OPPD corporate turnover rate is being reported as approximately 4.0%. This OPPD corporate turnover rate is based on the turnover rate over the last four years.

Data Source: Sorenson/Burke (Manager/Source)

Adverse Trend: None



SRO AND RO LICENSE EXAMINATION PASS RATIO

SRO License Examination Pass Ratio
The Senior Reactor Operator (SRO) License Examination Pass Ratio Indicator shows the number of NRC administered Generic Fundamentals Exams (GFE's), the number of NRC administered Site Specific Exams, the number of NRC administered license requalification exams, and the number of OPPD administered license requalification exams.

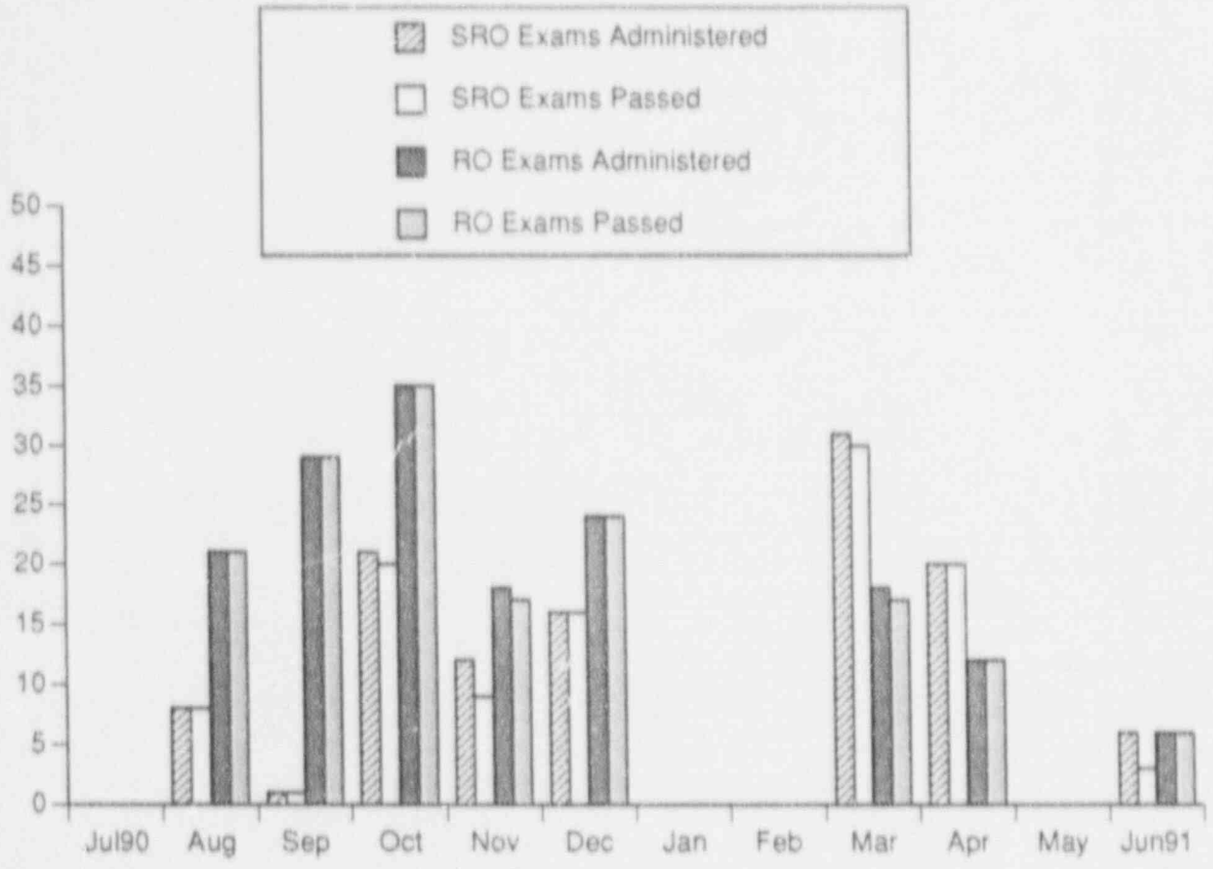
RO License Examination Pass Ratio
The Reactor Operator (RO) License Examination Pass Ratio Indicator shows the number of NRC administered Generic Fundamentals Exams (GFE's), the number of NRC administered Site Specific Exams, the number of NRC administered license requalification exams, and the number of OPPD administered license requalification exams.

The 1991 Fort Calhoun goal for this indicator is 100% pass ratio.

During the month of June 1991 there were four (4) NRC administered SRO exams and three (3) NRC administered RO exams given. All of these exams were passed.

Data Source: Gasper/Herman (Manager/Source)

Adverse Trend: None SEP 68



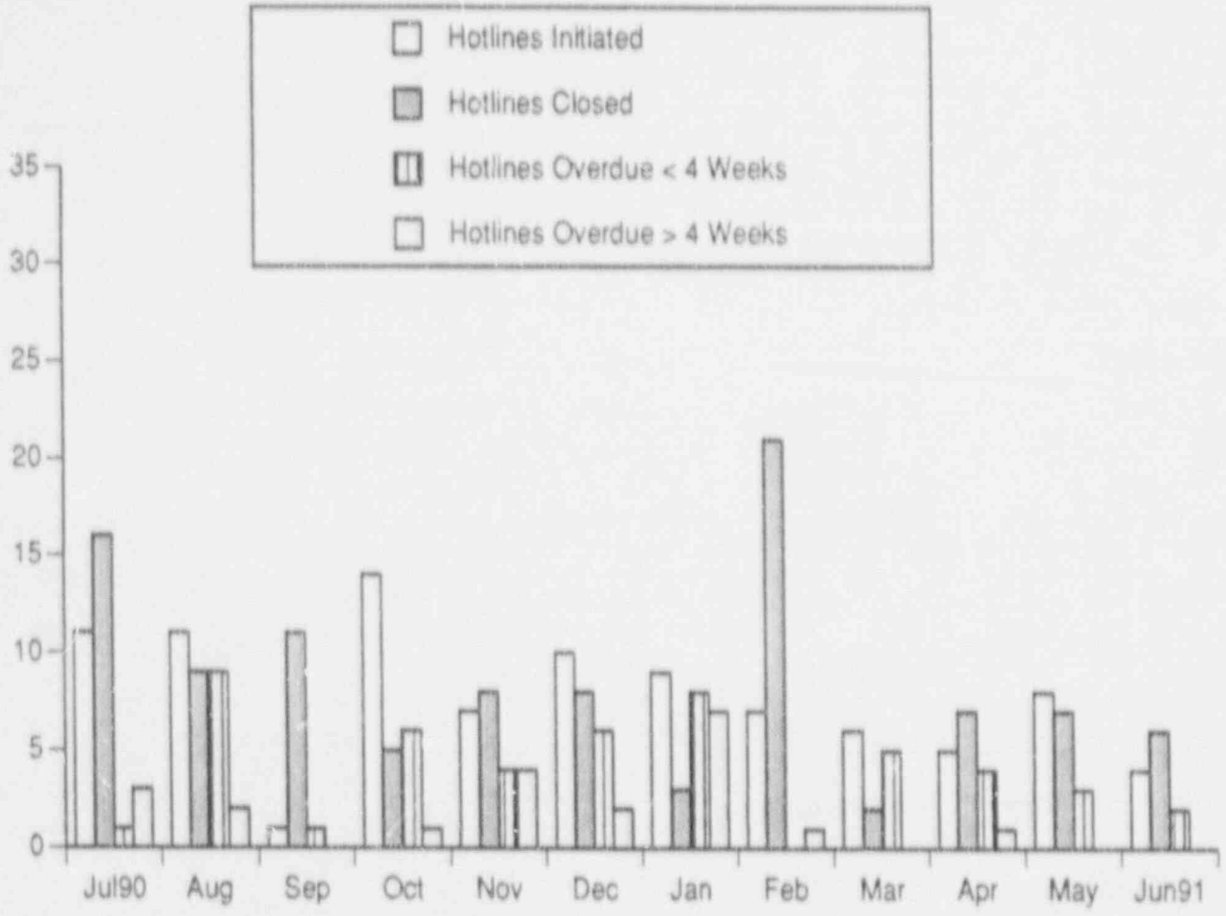
LICENSE CANDIDATE EXAMS

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.

During the month of June 1991, six (6) SRO exams were taken and three of these exams were passed. Six (6) RO exams were taken and and all six (6) exams were passed.

Data Source: Gasper/Herman (Manager/Source)

Adverse Trend: None SEP 68



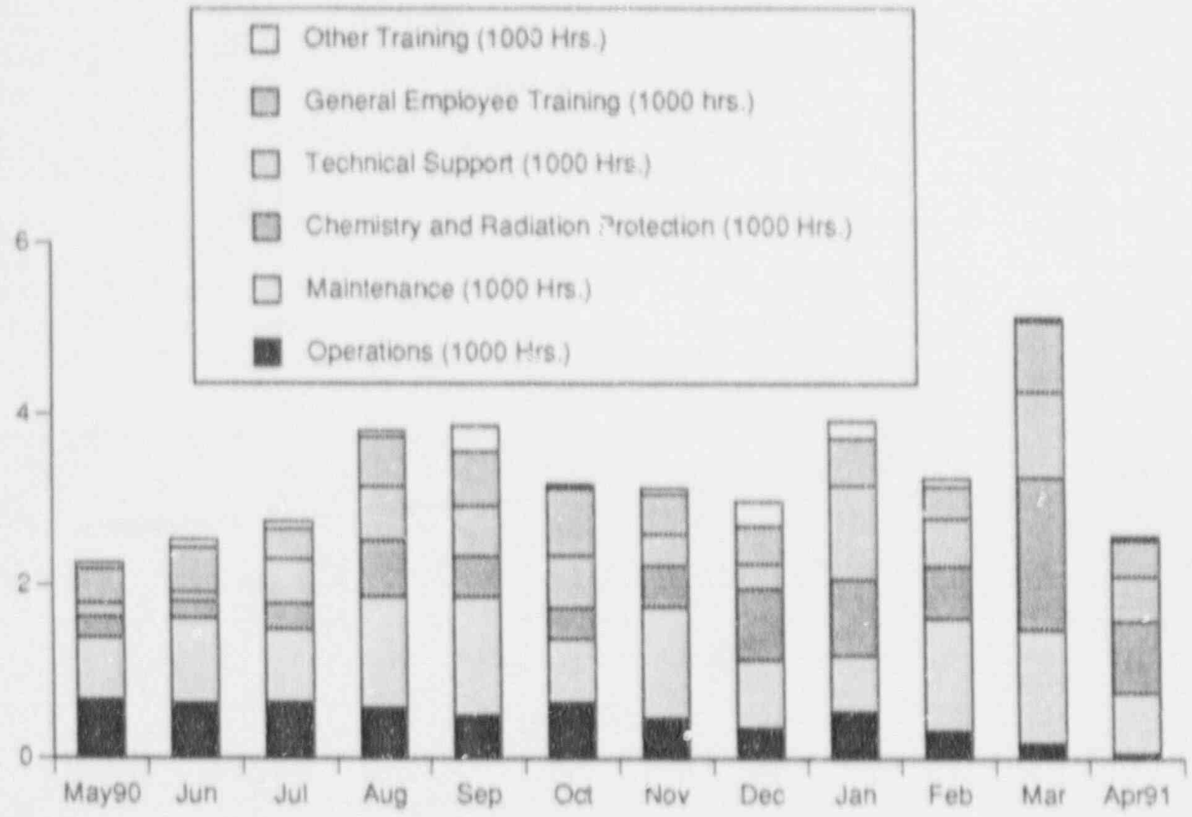
HOTLINE TRAINING MEMOS

This indicator shows the number of Hotline Training Memos that were initiated, returned for close out, overdue less than four weeks, and overdue greater than four weeks for the reporting month.

May 1991	
Initiated Hotlines	4
Closed Hotlines	6
Hotlines Overdue < 4 wks.	2
Hotlines Overdue > 4 wks	0

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



TOTAL INSTRUCTION HOURS

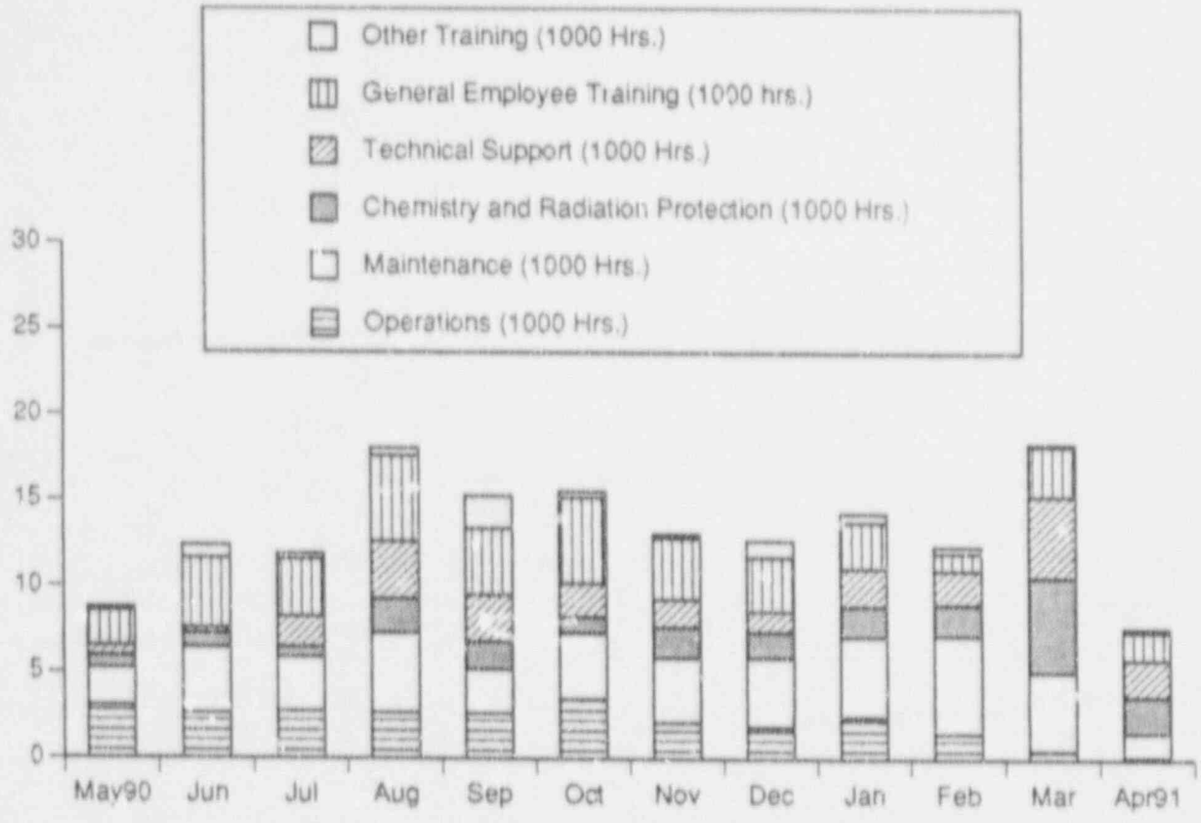
This indicator displays the training instruction hours administered to the listed departments for the reporting month. Due to a programming problem, information for the month of May was unavailable at the time of this report's publication.

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

DEPARTMENT	MAR '91	APR '91
Operations	187	61
Maintenance	1313	712
Chemistry and Radiation Protection	1776	823
Technical Support	1004	523
General Employee Training	822	422
Other	39	43
Total	5141	2584

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



TOTAL HOURS OF STUDENT TRAINING

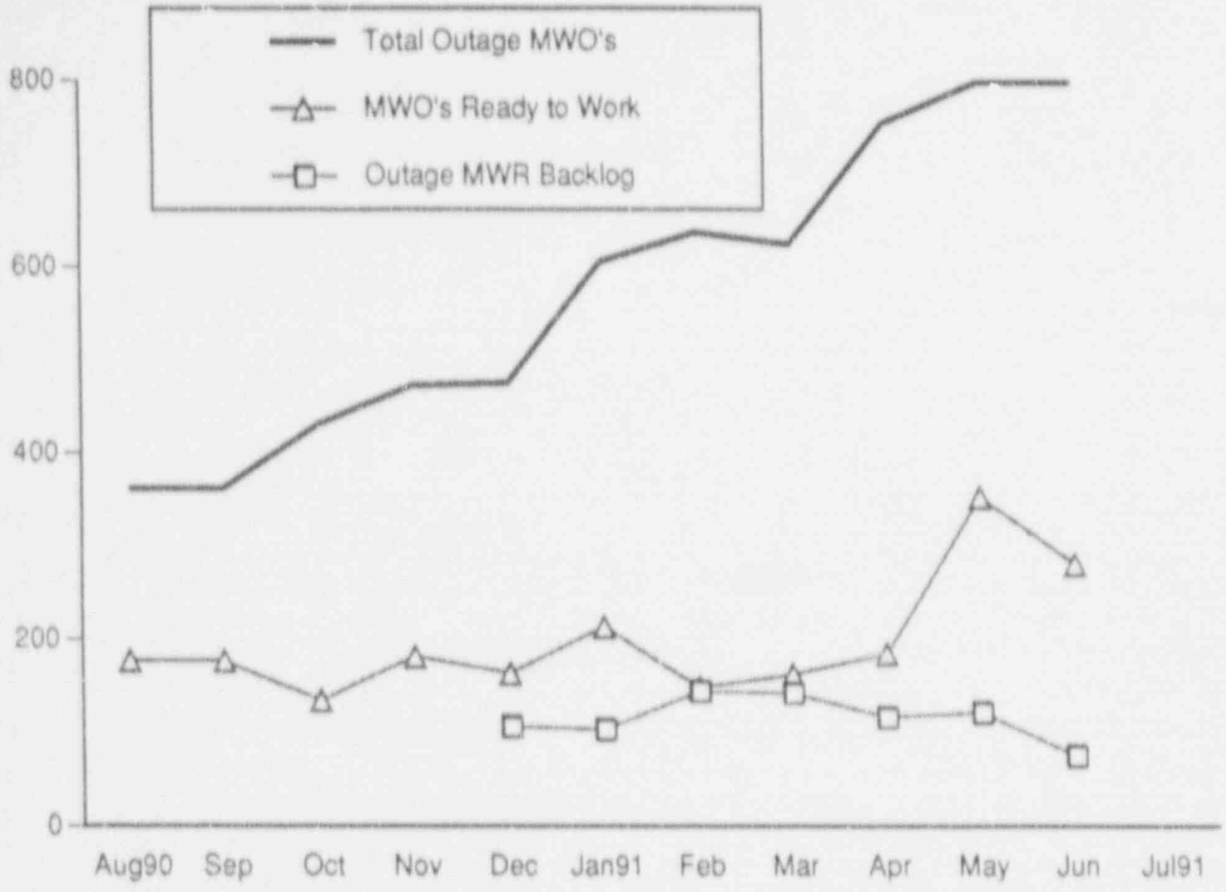
This indicator shows the total number of student hours for Operations, Maintenance, Chemistry and Radiation Protection, Technical Support, General Employee Training, and Other Training conducted for the Fort Calhoun Station. Due to a programming problem, information for the month of May was unavailable at the time of this report's publication.

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

DEPARTMENT	MAR '91	APR '91
Operations	524	166
Maintenance	4579	1400
Chemistry and Radiation Protection	5543	2129
Technical Support	4694	2124
General Employee Training	2905	1633
Other	112	182
Total	18357	7634

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



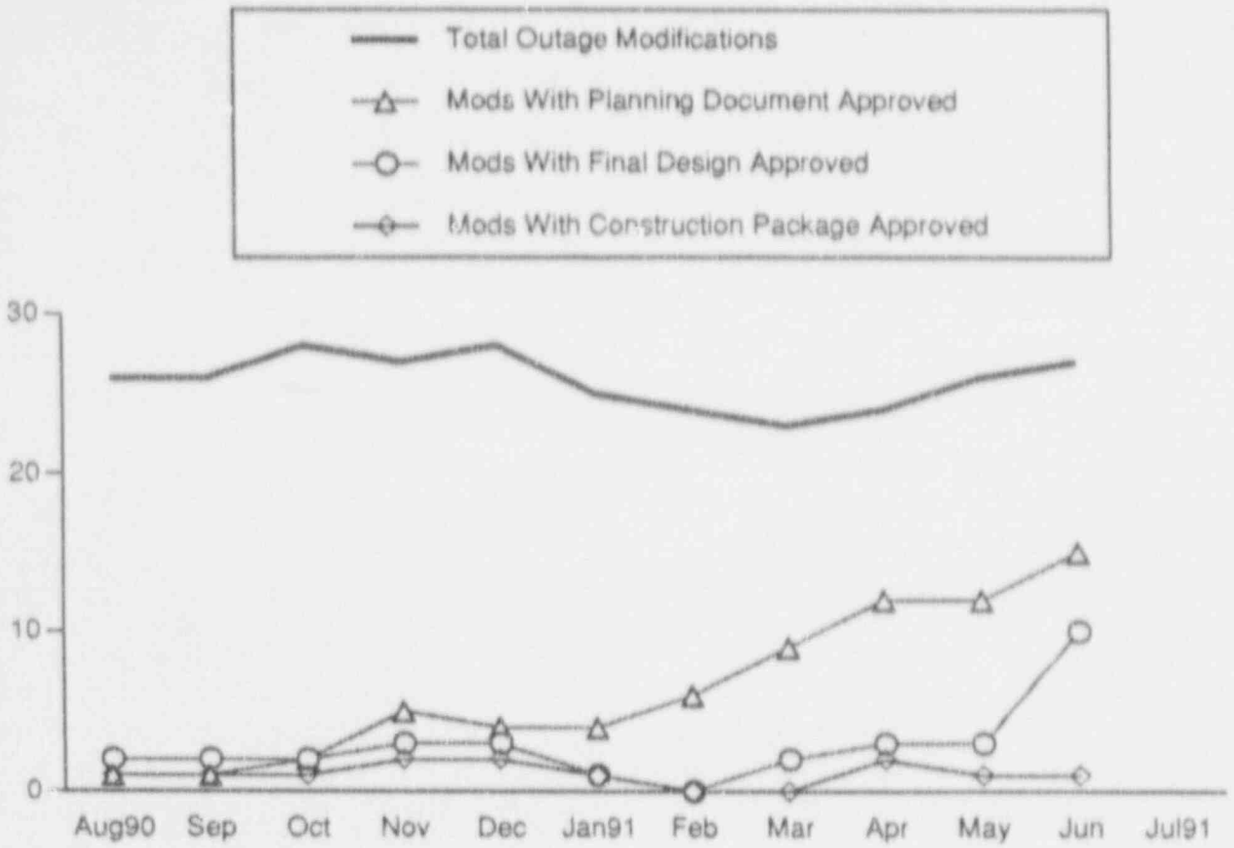
MWO OVERALL STATUS (CYCLE 13 REFUELING OUTAGE)

This indicator shows the total number of Maintenance Work Orders (MWO's) that have been written over the past reporting periods for completion during the Cycle 13 Refueling Outage and the number of MWO's that are ready for work (the parts for these MWO's are staged, the procedures are approved, and the paperwork is ready for field use.) Also included is the number of outage Maintenance Work Requests (MWR's) which have been identified for the Cycle 13 Refueling Outage, but have not yet been converted to MWO's. Any MWO's written after the start of the outage will be reflected in the indicator labeled Emergent MWO's. Approximately 3000 maintenance orders were completed during each of the previous two refueling outages.

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

Data Source: Patterson/Dunham (Manager/Source)

Adverse Trend: None SEP 31



PROGRESS OF CYCLE 13 OUTAGE MODIFICATION PLANNING

This indicator shows the number of modifications approved for planning (to determine feasibility) or for completion during the Cycle 13 Refueling Outage (RFO). Additional data points will be added to this indicator as information becomes available.

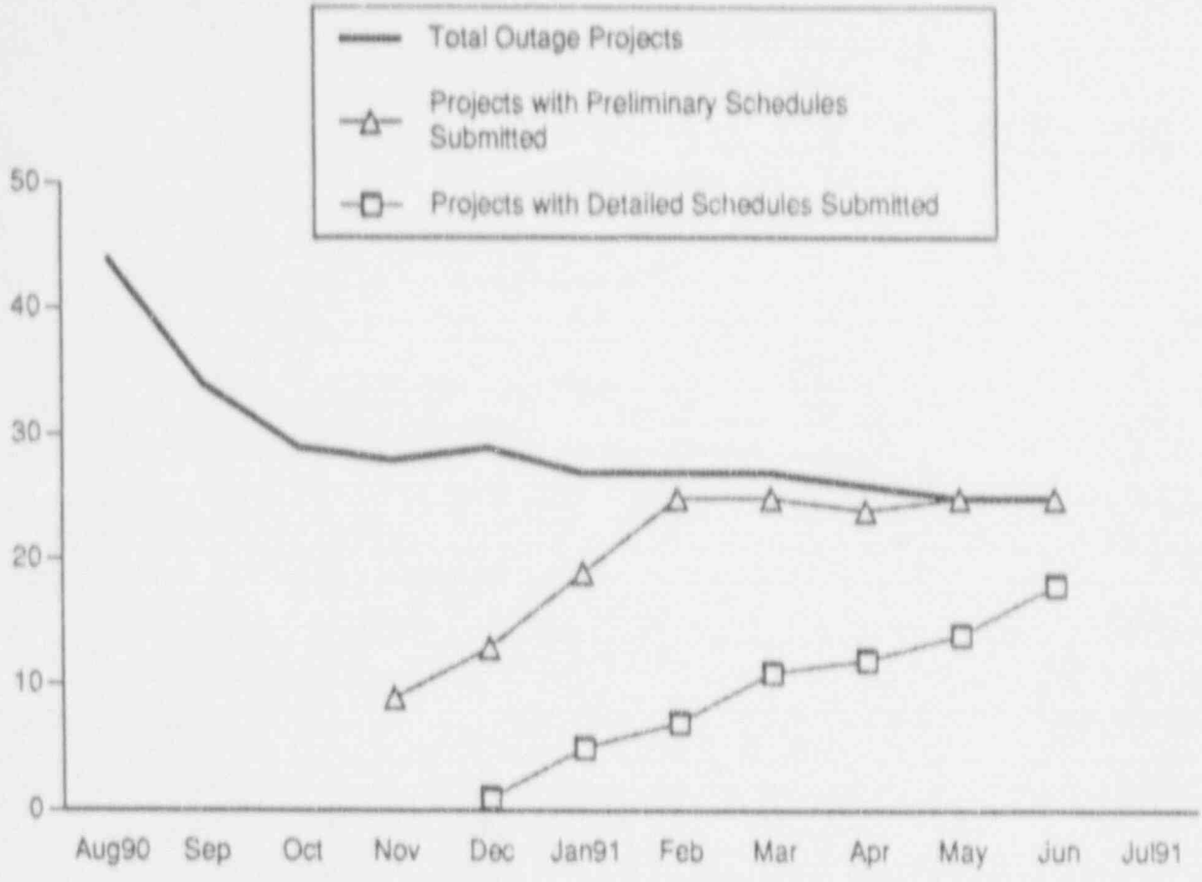
The current schedule for completion of the modification phases of the Cycle 13 Refueling Outage is as follows.

Outage Scope Freeze*	Oct. 1, 1990
Planning Documents Approved*	Feb. 22, 1991
Final Designs Approved*	Apr. 24, 1991
Construction Packages Approved*	June 15, 1991
Schedule Incorporated*	July 26, 1991
Material On Site*	July 26, 1991
Construction Started	Feb. 15, 1992
Construction Complete	Mar. 30, 1992
Accepted by SAC	Apr. 10, 1992

* Indicates milestones which have not been changed as a result of the new Jan. '92 refueling outage start date. A forced outage after Nov. '91 could result in an early start date for the Cycle 13 RFO.

Data Source: Patterson/Dunham (Manager/Source)

Adverse Trend: None SEP 31



OVERALL PROJECT STATUS (CYCLE 13 REFUELING OUTAGE)

This indicator shows the status of the projects which affect the scope of the Cycle 13 Refueling Outage.

The projects that do not yet have preliminary schedules are Liquid Effluent Releases and Radiography.

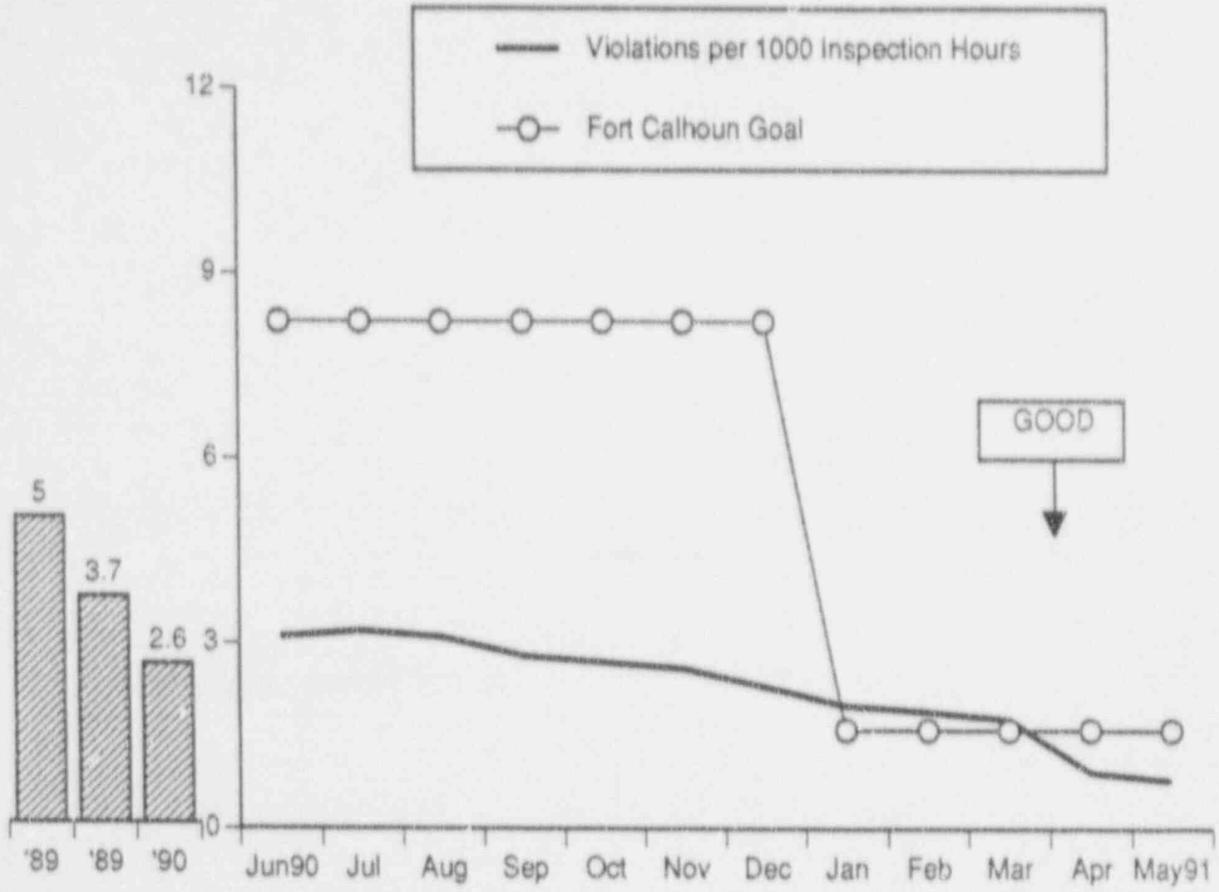
Additional data points will be added to this indicator as information becomes available.

The schedule for the Cycle 13 Refueling Outage projects is as follows:

All Projects Identified and Outage Scope Frozen	Oct. 1, 1990
All Projects Scheduled in Detail	June 28, 1991
Procedures Ready	Oct. 26, 1991
Parts Staged	Nov. 16, 1991

Data Source: Patterson/Dunham (Manager/Source)

Adverse Trend: None SEP 31



VIOLATIONS PER 1000 INSPECTION HOURS

This indicator displays the number of NRC violations cited in inspection reports per 1000 NRC inspection hours. This indicator is one month behind the reporting month due to the time involved with collecting and processing the data.

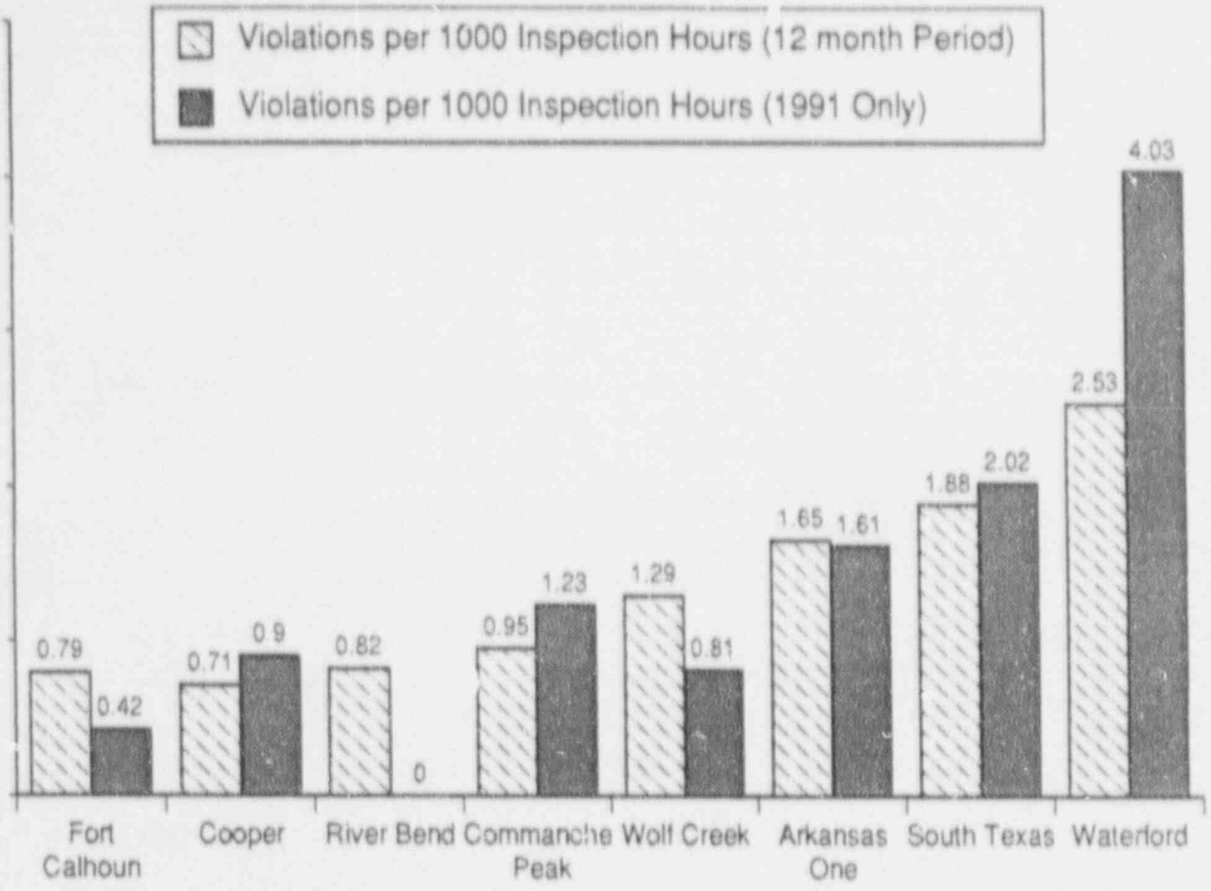
The violations per 1000 inspection hours indicator was reported as 0.79 for the month of May 1991.

The Fort Calhoun Goal is 1.6 violations per 1000 hours of inspection for 1991.

There was a total of 7,672 inspection hours in 1990 which resulted in 20 violations.

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None

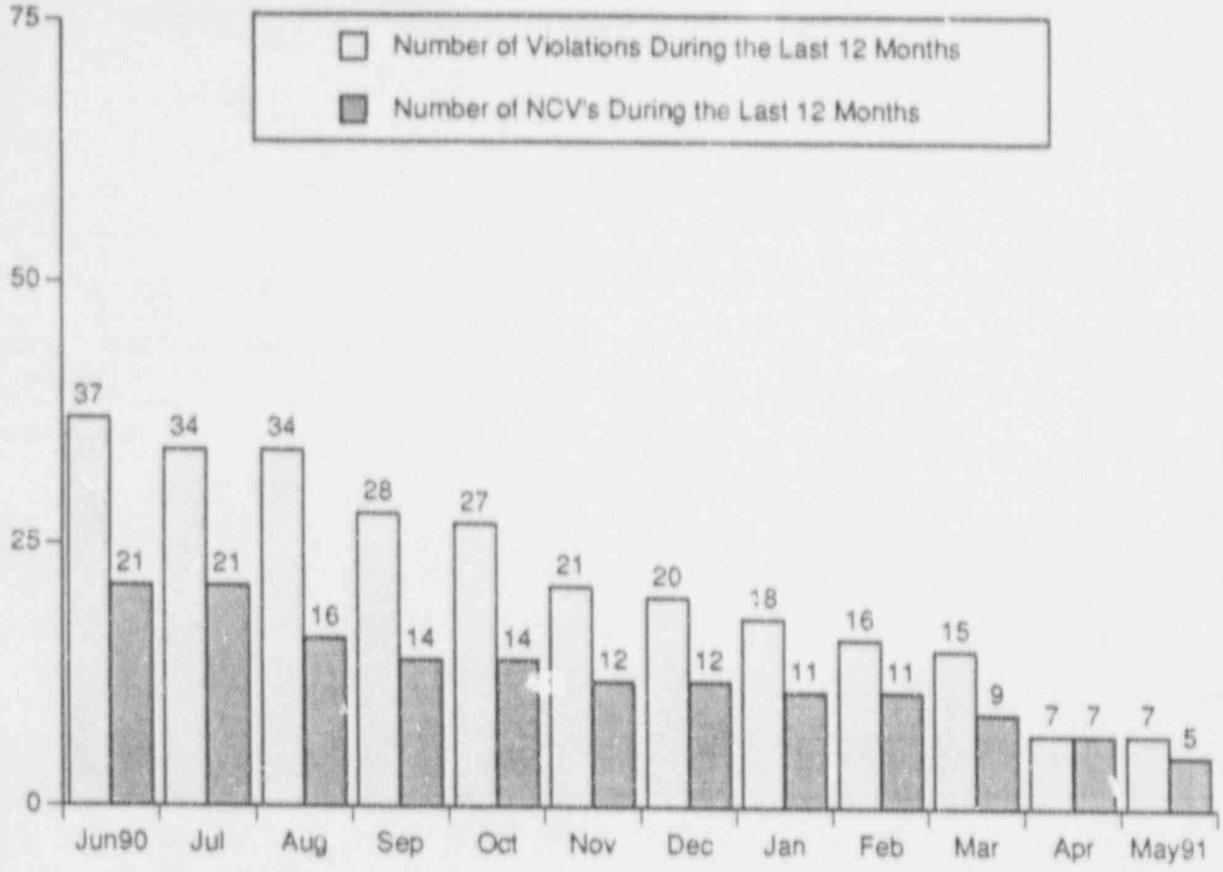


COMPARISON OF VIOLATIONS AMONG REGION IV PLANTS

This indicator provides a comparison of violations per 1000 inspection hours among Region IV nuclear power plants. The data is compiled for a twelve month period from June 1, 1990 to May 31, 1991 and for the calendar year 1991 only.

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None



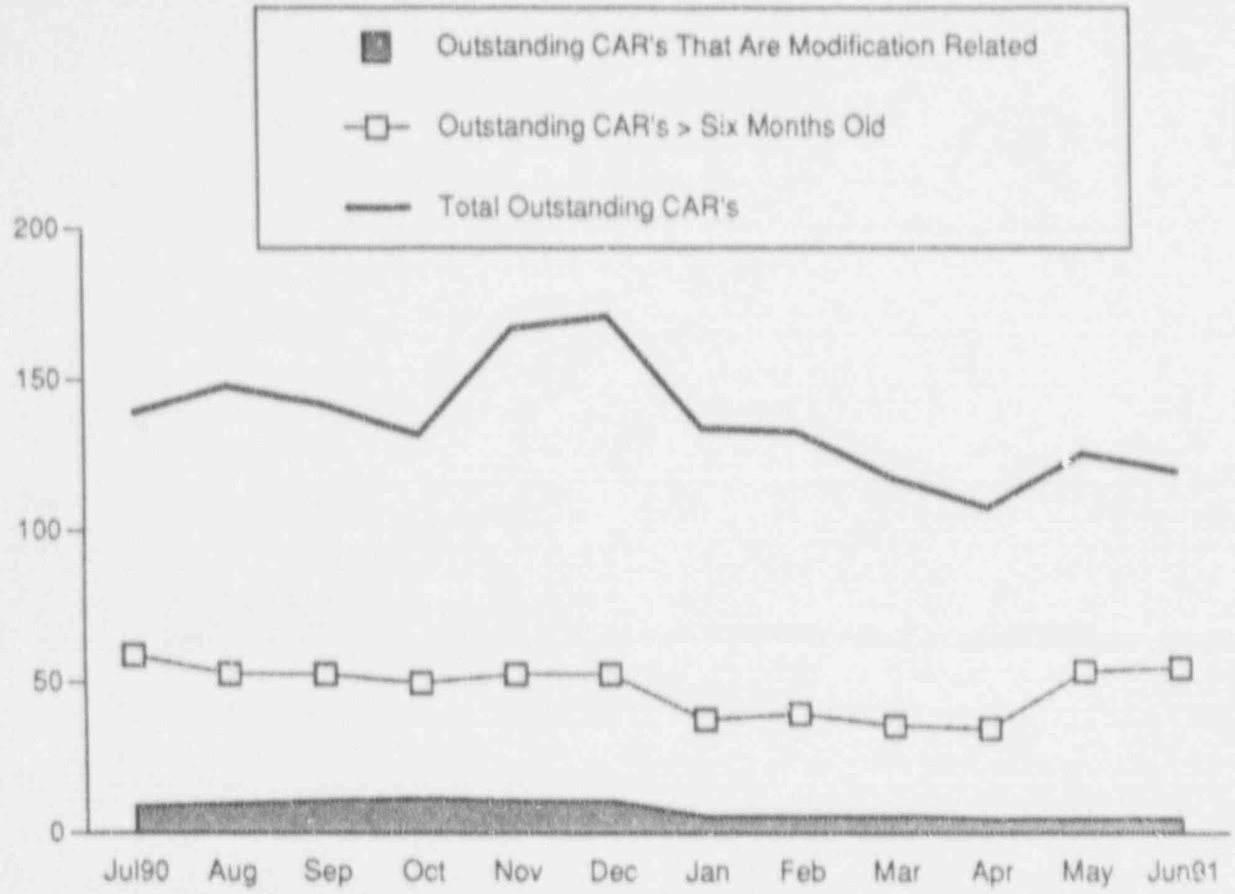
CUMULATIVE VIOLATIONS AND NCV's (TWELVE-MONTH RUNNING TOTAL)

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

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

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None



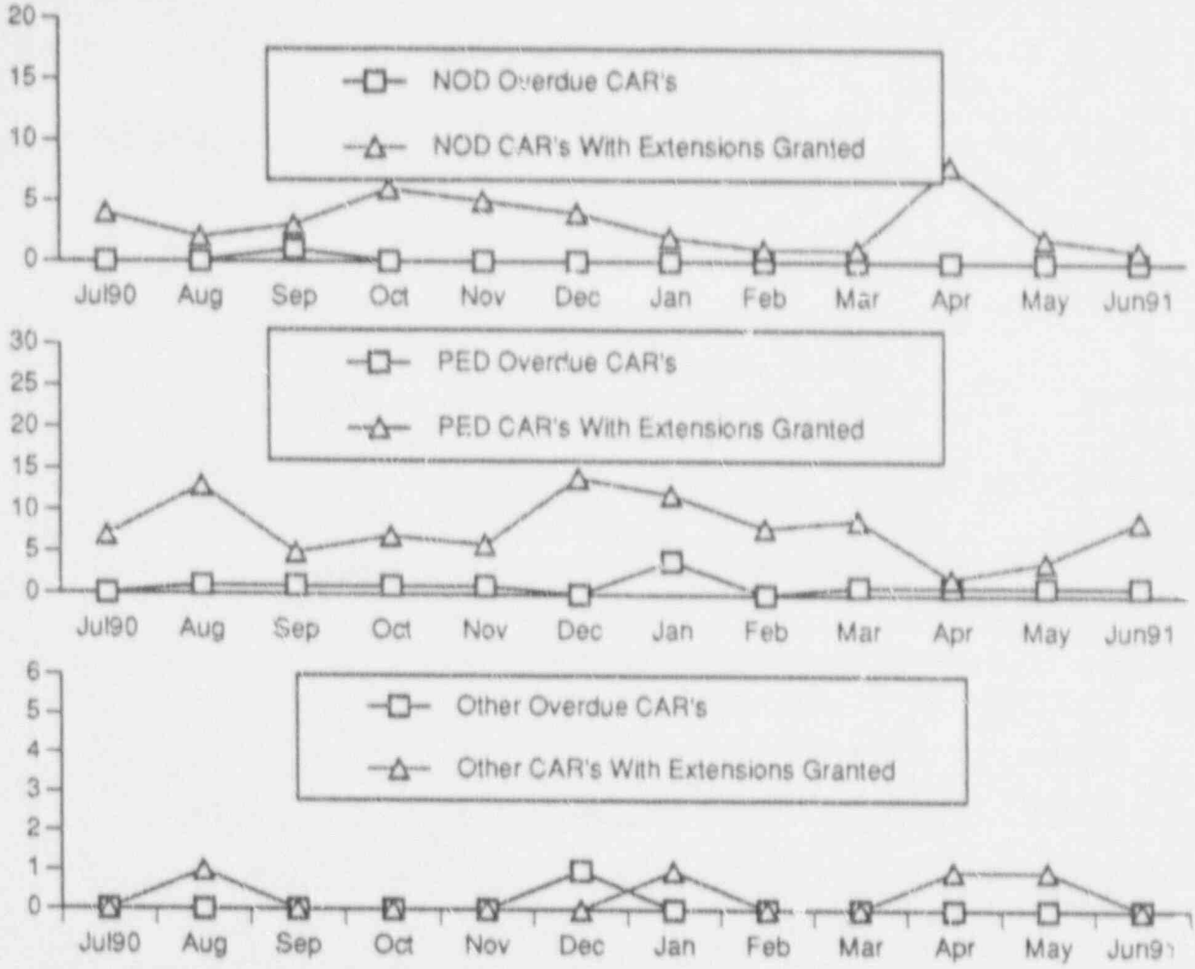
OUTSTANDING CORRECTIVE ACTION REPORTS

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

As of the end of June 1991, there are 120 outstanding CAR's, 55 CAR's that are greater than six months old, and 5 CAR's that are modification related.

Data Source: Orr/Gurtis (Manager/Source)

Adverse Trend: None



OVERDUE AND EXTENDED CORRECTIVE ACTION REPORTS

This indicator shows tha number of overdue CAR's and the number of CAR's that received extensions broken down by organization.

Overdue CAR's

	April 91	May 91	June 91
NOD	0	0	0
PED	1	1	1
Others	0	0	0
Total	1	1	1

Extended CAR's

	April 91	May 91	June 91
NOD	8	2	1
PED	2	4	9
Others	1	1	0
Total	11	7	10

Data Source: Orr/Gurtis (Manager/Source)

Adverse Trend: None

1990 SALP Funct. Area	CAR's	Signif. CAR's	NRC Viola.	LER's
A) Plant Operations	62	0	2	10
B) Radiolog. Controls	28	2	0	0
C) Maint/Surveil.	180	8	6	4
D) Emergency Preparedness	7	0	3	0
E) Security	26	0	5	3
F) Engr/ Tech Support	172	5	3	12
G) Safety Assess/ Qual. Verif.	29	0	0	0
H) Other	1	0	0	0
Total	505	15	19	29

1991 SALP Funct. Area	CAR's	Signif. CAR's	NRC Viola.	LER's
A) Plant Operations	16(5)	1	1	1
B) Radiolog. Controls	7	0	0	0
C) Maint/Surveil.	49(4)	0	0	2
D) Emergency Preparedness	15	0	0	0
E) Security	2(1)	0	1(1)	1
F) Engr/Tech Support	50(9)	1	0	5
G) Safety Assess/ Qual. Verif.	14	0	0	1
H) Other	0	0	0	0
Total	153(19)	2	2	10

Note: () indicate value for the reporting month.

CARs ISSUED vs SIGNIF. 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 1990 and 1991. 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. There was one (1) violation due to personnel error during the reporting month.

Data Source: Orr/Gurtis (Manager/Source)
Therkildsen/Howman (Manager/Source)

Adverse Trend: None SEP 15, 20, 21

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, on-outage, maintenance work orders that are on hold awaiting parts, to the total number of open, non-outage, maintenance work orders.

AUXILIARY SYSTEMS CHEMISTRY 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.

CHECK VALVE FAILURE RATE
The Fort Calhoun check valve failure rate and 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.

COMPARISON OF VIOLATIONS AMONG REGION IV PLANTS
Provides data on violations per 1000 inspection hours for Region IV nuclear power plants.

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.

DECONTAMINATED RADIATION CONTROLLED AREA
The percentage of the Radiation Controlled Area, which includes the auxiliary building, the radwaste building, and areas of the CRP building,which is decontaminated based on the total square footage.

DISABLING INJURY 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). It does not include contractor personnel. This indicator tracks personnel performance for SEP #20.

DOCUMENT REVIEW (INTERNAL)
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 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 pre-

dicted. Failures are counted during any valid load-run demands.

5)ExceptionsUnsuccessful 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.

ENGINEERING CHANGE NOTICE (ECN) BREAKDOWN
This indicator breaks down the number of Engineering Change Notices (ECN's) that remain open awaiting completion by Design Engineering Nuclear (DEN), the number of ECN's that were opened, and the number of ECN's that were completed by DEN during the reporting month. The total number of ECN's received by DEN since the initiation of the ECN process in 1989 are also shown. This indicator tracks performance for SEP #62.

ENGINEERING CHANGE NOTICE (ECN) STATUS
The number of ECN's that were opened, completed, and open backlog ECN's awaiting completion by DEN, for the reporting month. This indicator tracks performance for SEP #62.

EQUIPMENT FORCED OUTAGES PER 1000 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 which occurred 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 startup 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 operations above 85 percent power for at least seven days.This INPO indicator uses an industry normalized letdown purification rate. The FRI has also been calculated using FCS's actual letdown purification rate. These calculations revealed that the use of the plant's actual rate would result in an approximate 45% increase in FRI data.

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.

HOTLINE TRAINING MEMOS
The number of Hotline Training Memos (HTM) that are initiated, closed, and overdue less or greater than 4 weeks for the indicated month. A HTM is a training document sent out for immediate review. The HTM should be reviewed and signed within 5 days of receipt of the HTM.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

HOURS CHEMISTRY IS OUTSIDE OWNERS GROUP GUIDELINES
Total hours for 13 secondary side chemistry parameters exceeding guidelines during power operation. Power operation is defined as greater than 30% power. The 13 parameters tracked are steam generator pH, cation conductivity, boron silica, chloride, sulfate, sodium, feed water pH, dissolved oxygen, hydrazine, iron, copper, and condensate pump discharge dissolved oxygen.

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. The License Candidate Exams Indicator tracks Training performance for SEP #68.

LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT
This indicator displays the volume of liquid radioactive waste released from the radioactive waste monitor tanks, to include releases through the plant blowdown if radioactive nuclides are detected in the blowdown system. The curies from all releases from FCS to the Missouri River are also shown.

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 during the last 12 months.

MAINTENANCE WORK ORDER BACKLOG
The number of corrective non-outage maintenance work orders that remain open at the end of the reporting month. This indicator was added to the PI Report to trend open corrective non-outage maintenance work orders as stated in SEP #36.

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 (MR's) for issues with their request date the same as their need date compared to the total number of MR's.

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 OVERALL STATUS (CYCLE 13 REFUELING OUTAGE)
The total number of Maintenance Work Orders (MWO's) that have been written for completion during the Cycle 13 Refueling Outage. MWO's which are written after the start of the Refueling Outage will be labeled Emergent MWO's. Also shown is the number of MWR's which have been identified for the Cycle 13 Refueling Outage, but have not yet been converted to MWO's. This indicator tracks performance for SEP #31.

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 NUCLEAR PLANT RELIABILITY DATA SYSTEM (NPRDS) FAILURE REPORTS SUBMITTED
The data plotted is the total number of NPRDS component failures (confirmed and possible) and the number of confirmed NPRDS component failures. The total number of NPRDS component failures are based on the number of failure reports that have been sent to the Institute of Nuclear Power Operations (INPO). Confirmed NPRDS component failures are based upon failure reports that have been accepted by INPO. Possible NPRDS component failures are based upon failure reports that are still under review by INPO. NPRDS is a utility industry users group program which has been outlined by INPO and implemented at FCS.

NUMBER OF OUT-OF-SERVICE CONTROL ROOM INSTRUMENTS
A control room instrument that cannot perform its design function is considered as out-of-service. A control room instrument which has had a Maintenance Work Order (MWO) written for it and has not been repaired by the

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

end of the reporting period is considered out-of-service and will be counted. The duration of the out-of-service condition is not considered. Computer CRTs are not considered as control room instruments.

NUMBER OF PERSONNEL ERRORS REPORTED IN LER'S

The number of Licensee Event Reports (LERs) attributed to personnel error on the original LER submittal. This indicator trends personnel performance for SEP #15.

NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS

The number of Surveillance Tests (ST's) that result in Licensee Event Reports (LER's) during the reporting month. This indicator tracks missed ST's for SEP's #60 and #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 (CAR's), the number of CAR's that are older than six months and the number of modification related CAR's.

OUTSTANDING ENGINEERING ASSISTANCE REQUESTS (EAR's)

The total number of open EAR's and the number of open EAR's broken down by their age in months. This indicator tracks performance for SEP #62.

OUTSTANDING MODIFICATIONS

The number of Modification Requests (MR'S) in any state between the issuance of a Modification Number and the completion of the drawing update.

1)Form FC-1133 Backlog/In ProgressThe Form FC-1133 has not been plant approved.

2)Modification Requests Being ReviewedThis category includes:

A.)Modification Requests that are not yet reviewed

B.)Modification Requests being reviewed by the Nuclear Projects Review Committee (NPRC)

C.)Modification Requests being reviewed by the Nuclear Projects Committee (NPC)

These Modification Requests may be reviewed several times before they are approved for accomplishment or cancelled. Some of these Modification Requests are returned to Engineering for more information, some approved for evaluation, some approved for study, and some approved for planning. Once planning is completed and the scope of the work is clearly defined, these Modification Requests may be approved for accomplishment with a year assigned for construction or they may be cancelled. All of these different phases require review.

3)Design Engineering Backlog/In Progress Nuclear Planning has assigned a year in which construction will be completed and design work may be in progress.

4)Construction Backlog/In Progress The Construction Package has been issued or construction has begun but the modification has not been accepted by the System Acceptance Committee (SAC).

5)Design Engineering Update Backlog/In ProgressPED 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 13 REFUELING OUTAGE)

The number of projects which affect the scope of the Cycle 13 Refueling Outage and the number of projects for which detailed schedules have been submitted. This indicator tracks performance for SEP #31.

OVERDUE AND EXTENDED CORRECTIVE ACTION REPORTS

The number of overdue Corrective Action Reports (CAR's) and the number of CAR's 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 week. This % is shown for each maintenance craft. Maintenance activities include MWR's, MWO's, ST's, PMO's, calibrations, and other miscellaneous activities. These indicators track Maintenance performance for SEP #33.

PERSONNEL RADIATION EXPOSURE (CUMULATIVE)

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 man-rem. This indicator tracks radiological work performance for SEP #54.

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.

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 percent 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.

PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

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

PROGRESS OF CYCLE 13 OUTAGE MODIFICATION PLANNING

The number of modifications approved for planning (to determine feasibility) for completion during the Cycle 13 Refueling Outage. This indicator tracks performance for SEP #31.

RADIOLOGICAL WORK PRACTICES PROGRAM

The number of identified poor radiological work practices (PRWP) 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 CASES FREQUENCY RATE (RECORDABLE INJURY 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 and #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 greater than 30 percent power.

SECONDARY SYSTEM CHEMISTRY PERFORMANCE INDEX (CONTINUED)

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 conductivityNa = average blowdown sodium concentration, O_2 = average condensate pump discharge dissolved oxygen concentration.

SECURITY INCIDENTS BREAKDOWN

The number of Security loggable/reportable incidents is broken down into the following categories:

1) Licensee Designated Vehicles (LDVs)Incidents related to the use of LDVs, e.g., keys left in the vehicle, loss of keys, or failure to return keys.

2) Security BadgesIncidents 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.

3) Access Control and AuthorizationAdministrative 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.

4) Security Key ControlIncidents involving Security key control, e.g., lost Security keys, Security keys removed from site, or failure to return Security keys. This type of event does not reflect incidents concerning LDV keys.This indicator tracks security performance for SEP #58.

SECURITY SYSTEM FAILURES

Incidents involving alarm system failures, CCTV failures, security computer failures, search equipment failures, door hardware failures, and card reader failures. These system failures are further categorized as follows:

1)Alarm System Failure - Detection system events involving false/nuisance alarms and mechanical failures.

2)Alarm System Environmental Failures - 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 Environmental Failures - 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 defective or did not function properly during testing.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

7) Door Hardware Failures - Failure of the door alarm and door hardware such as latches, electric strikes, doorknobs, locks, etc.
8) Card Reader Failures - Incidents caused by mechanical breakdown of card readers, but not improper use of the card readers. (See Access Control and Authorization)This indicator tracks security performance for SEP #58.

SPARE PARTS ISSUED
The dollar value of the spare parts issued for FCS during the reporting period.

SRO & RO OPERATOR LICENSE EXAMINATION PASS RATIO
The SRO & RO license examination pass ratio for NRC administered Generic Fundamentals Exams (GFE's), NRC administered Site Specific Exams, NRC administered license requalification exams, and OPPD administered license requalification exams. This indicator tracks Training performance for SEP #68.

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.

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 with no parts available expressed as a percentage.

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 EEAR's have been submitted will be considered as temporary modifications until final resolution of the EEAR and the jumper or block is removed or is permanently recorded on the drawings.This indicator tracks temporary modifications for SEP's #62 & #71.

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

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 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.

UNPLANNED AUTOMATIC REACTOR SCRAMS WHILE CRITICAL
This indicator is defined as the number of unplanned automatic scrams (reactor protection system logic actuations) that occur while the reactor is critical. The indicator is further defined as follows:
1)Unplanned means that the scram was not part of a planned test or evolution.
2)Scram means the automatic shutdown of the reactor by a rapid insertion of all control rods 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 pushbuttons) 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 equal to one.

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 1000 INSPECTION HOURS

This indicator is defined as the number of violations sited in NRC inspection reports for FCS per 1000 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 active 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 active waste includes contaminated rags, cleaning materials, disposable protective clothing, plastic containers, and any other material to be disposed of at a low-level radioactive waste disposal site, except resin, sludge, or evaporator bottoms. Low-level refers to all radioactive waste that is not spent fuel or a by-product of spent fuel processing.This indicator tracks radiological work performance for SEP #54.

SAFETY ENHANCEMENT PROGRAM INDEX

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

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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. Indicators with data showing an apparent adverse trend which is not considered adverse, will have an explanation which defines why an adverse trend does not exist.

Gross Heat Rate
(Page 6)
This indicator is exhibiting an adverse trend based upon the occurrence of an increase in GHR for four consecutive months. The increases are due to the plant operating at planned reduced power and an increase in river water temperature. It is expected that the GHR will be lower in the future when the plant is operated at 100% power for an entire month.

Disabling Injury Frequency Rate (Lost Time Accident Rate)
(Page 11)
This indicator has been defined by the Manager of the Safety Department (E. Skaggs) as exhibiting an adverse trend. The high rate for this indicator can be attributed to the occurrence of histoplasmosis, a work related illness.

Temporary Modifications
(Page 57)
This indicator is exhibiting an adverse trend due to a continuing increase in the number of temporary modifications greater than twelve months old. These modifications continue to increase in number due to the need for outage conditions to remove the items. Currently fifteen temporary modifications require an outage for removal.

Recordable Injury Cases Frequency Rate
(Page 61)
This indicator has been defined by the Manager of the Safety Department as exhibiting an adverse trend based on the 5 year recordable injury frequency rate.

End of Adverse Trend Report.

INDICATORS NEEDING INCREASED MANAGEMENT ATTENTION REPORT

This section lists the indicators which show inadequacies as compared to the OPPD goal and indicators which show inadequacies as compared to the industry upper quartile. The indicators will be compared to the industry upper quartile as relevant to that indicator.

Ratio of Preventive to Total Maintenance
(Page 21)
The ratio of preventive to total maintenance was reported below the Fort Calhoun goal of 60%. This ratio decreased in December and January due to the high number of hours in which maintenance was involved in corrective maintenance violations per 1000 manhours of inspection.

Number of Out of Service Control Room Instruments
(Page 23)
The total number of out-of-service control room instruments for the reporting month (32) is above the Fort Calhoun goal of 15.

Stockout Rate
(Page 53)
The number of Pick Tickets generated with no parts available for the months of May and June has been above the Fort Calhoun goal of 0%.

End of Management Attention Report.

PERFORMANCE INDICATOR REPORT IMPROVEMENTS/CHANGES

Decontaminated Auxiliary Building
(Page 43)
This indicator has been revised to include the new Radwaste building and the areas of the C/RP building that will be considered Radiologically Controlled. The indicator title has been changed to "Decontaminated Radiation Controlled Area".

Engineering Change Notice Status
(Page 59)
The figures for the months of April and May 1991 were revised based on a clarification of the definitions of backlogged ECNs, opened ECNs, and ECNs completed for the reporting month.

Comparison of Violations Among Region IV Plants
(Page 73)
This indicator has been added to the report.

End of Indicator Improvement/Changes Report.

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 - 09/30/77	2,805,927	9,958,888
3rd Refueling	09/30/77 - 12/09/77	*	*
Cycle 4	12/09/77 - 10/14/78	3,026,832	12,985,720
4th Refueling	10/14/78 - 12/24/78	*	*
Cycle 5	12/24/78 - 01/18/80	3,882,734	16,868,454
5th Refueling	01/18/80 - 06/11/80	*	*
Cycle 6	06/11/80 - 09/18/81	3,899,714	20,768,168
6th Refueling	09/18/81 - 12/21/81	*	*
Cycle 7	12/21/81 - 12/06/82	3,561,866	24,330,034
7th Refueling	12/06/82 - 04/07/83	*	*
Cycle 8	04/07/83 - 03/03/84	3,406,371	27,736,405
8th Refueling	03/03/84 - 07/12/84	*	*
Cycle 9	07/12/84 - 09/28/85	4,741,488	32,477,893
9th Refueling	09/28/85 - 01/16/86	*	*
Cycle 10	01/16/86 - 03/07/87	4,356,753	36,834,646
10th Refueling	03/07/87 - 06/08/87	*	*
Cycle 11	06/08/87 - 09/27/88	4,936,859	41,771,505
11th Refueling	09/27/88 - 01/31/89	*	*
Cycle 12	01/31/39 - 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	# Planned Dates	*
13th Refueling#	02/01/92- 05/01/92	*	*
Cycle 14#	05/01/92- 09/18/93	*	*
14th Refueling	09/18/93 - 11/13/93	*	*
Cycle 15#	11/13/93 - 03/11/95	*	*
15th Refueling#	03/11/95 - [illegible]/95	*	*

FORT CALHOUN STATION
CURRENT PRODUCTION AND OPERATIONS "RECORDS"

First Sustained Reaction	August 5, 1973 (5:47 p.m.)
First Electricity Supplied to the System	August 25, 1973
Commercial Operation (180,000 KWH)	September 26, 1973
Achieved Full Power (100%)	May 4, 1974
Longest Run (477 days)	June 8, 1987-Sept. 27,1988
Highest Monthly Net Generation (364,468,800 KWH)	October 1987
Most Productive Fuel Cycle (4,936,859 MWH)(Cycle 11)	June 8, 1987-Sept. 27, 1988