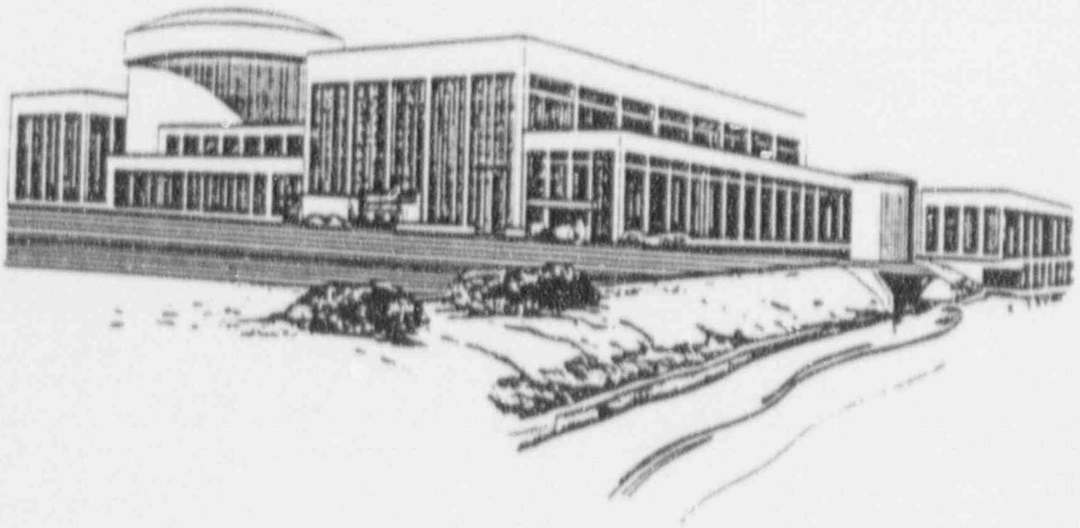
FORT CALHOUN STATION
PERFORMANCE INDICATORS

OCTOBER 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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ABSTRACT

PURPOSE

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

SCOPE

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

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

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

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

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

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

REFERENCES

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

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

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

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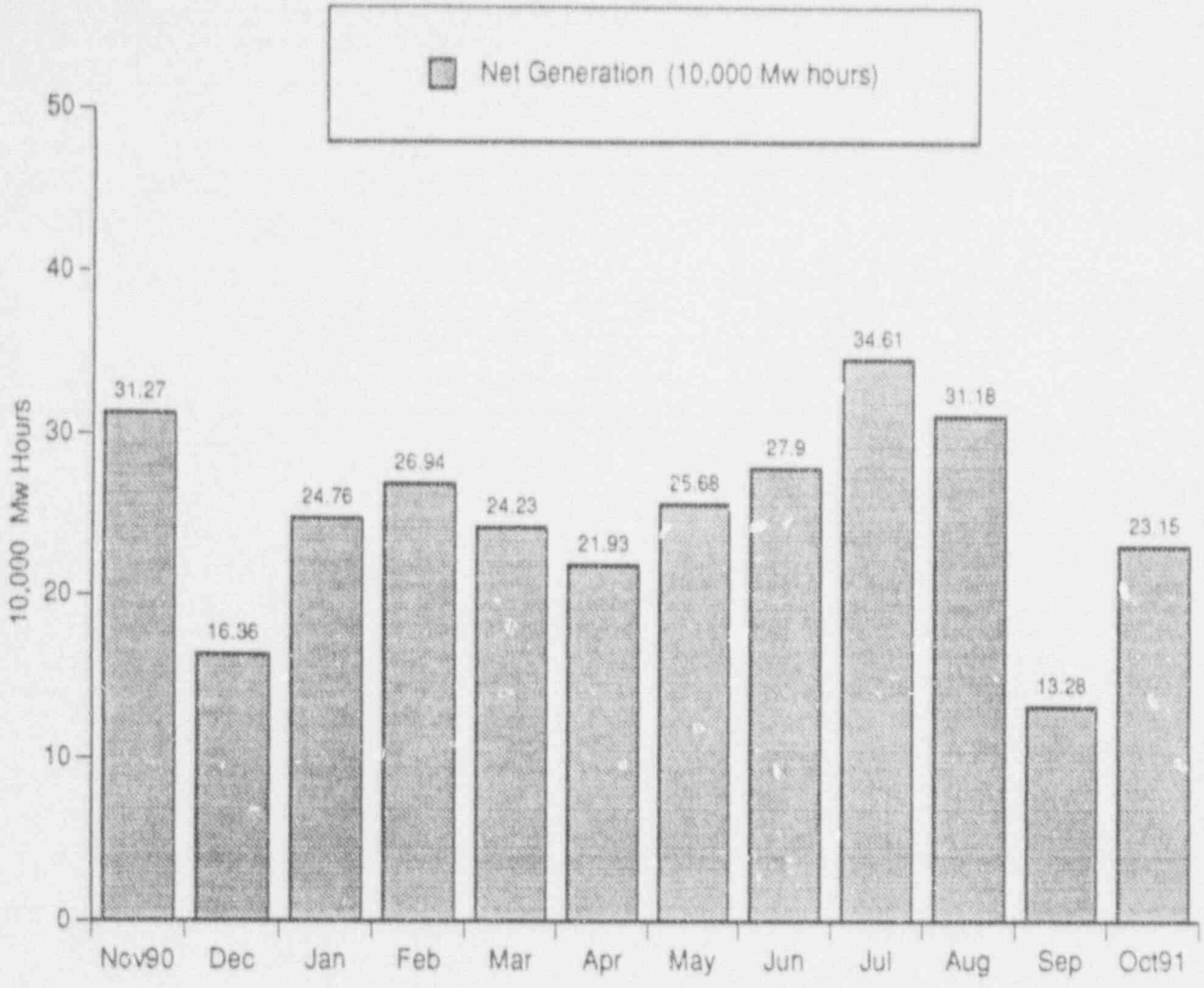
A = ADVERSE TREND
I = IMPROVED PERFORMANCE
D = DECLINING PERFORMANCE
NMA = NEEDS MANAGEMENT ATTENTION
NA = NOT APPLICABLE
* = INPO UPPER QUARTILE



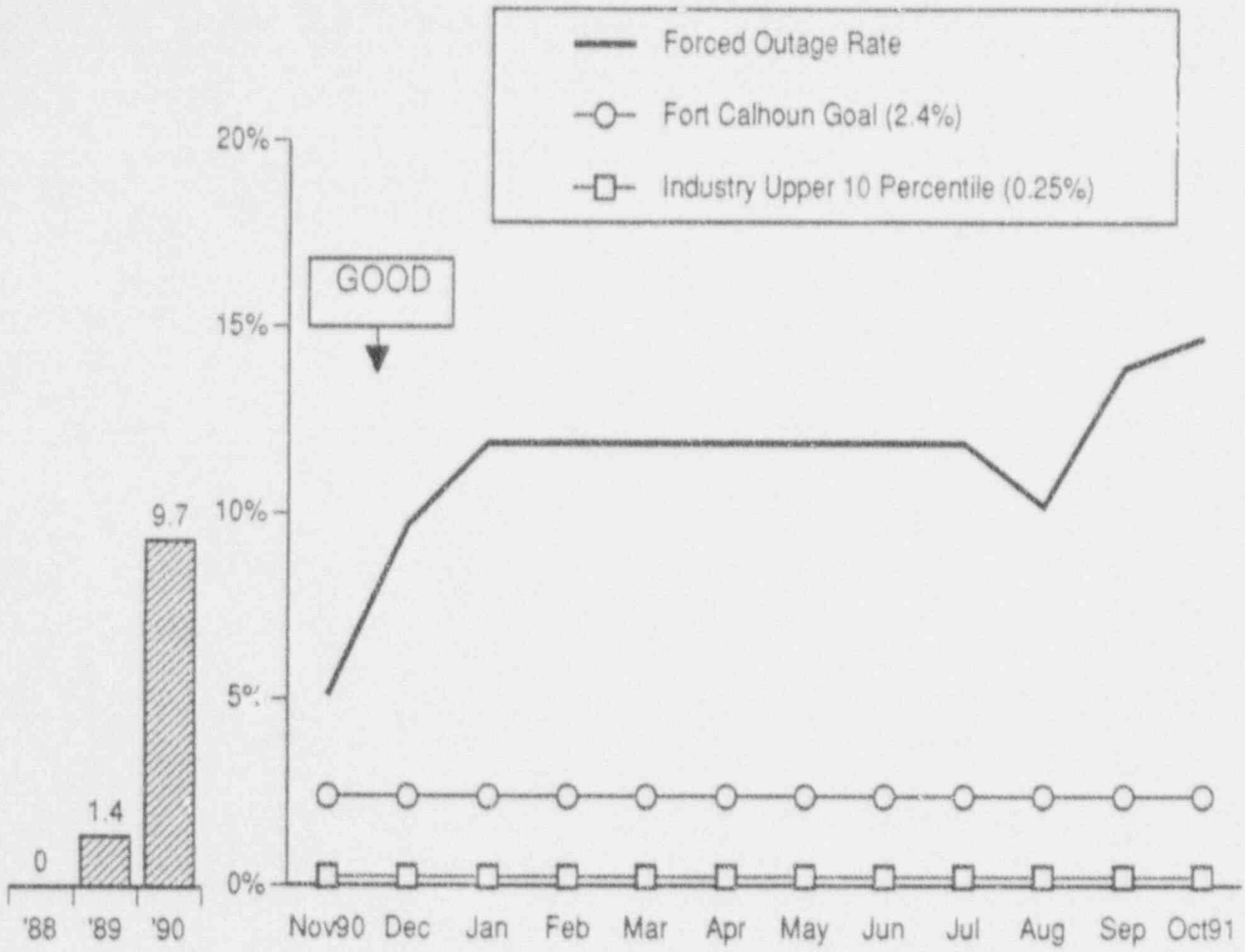
STATION NET GENERATION

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

During the month of October 1991, a net total of 231,537 MWH was generated by the Fort Calhoun Station. This low net generation is due to the following three forced outages: 1) the station batteries replacement outage from 9/12/91 at 2100 hours through 10/6/91 at 1114 hours; 2) a steam leak on the drain line from a turbine control valve was repaired from 10/18/91 at 0307 hours to 10/19/91 at 1116 hours; and 3) a steam leak repair on a test pipe on the high pressure turbine shell from 10/25/91 at 2204 to 10/26/91 at 0810.

Data Source: Station Generation Report

Adverse Trend: None



FORCED OUTAGE RATE

The forced outage rate was reported as 14.7% for the time period from 11/1/90 to 10/31/91.

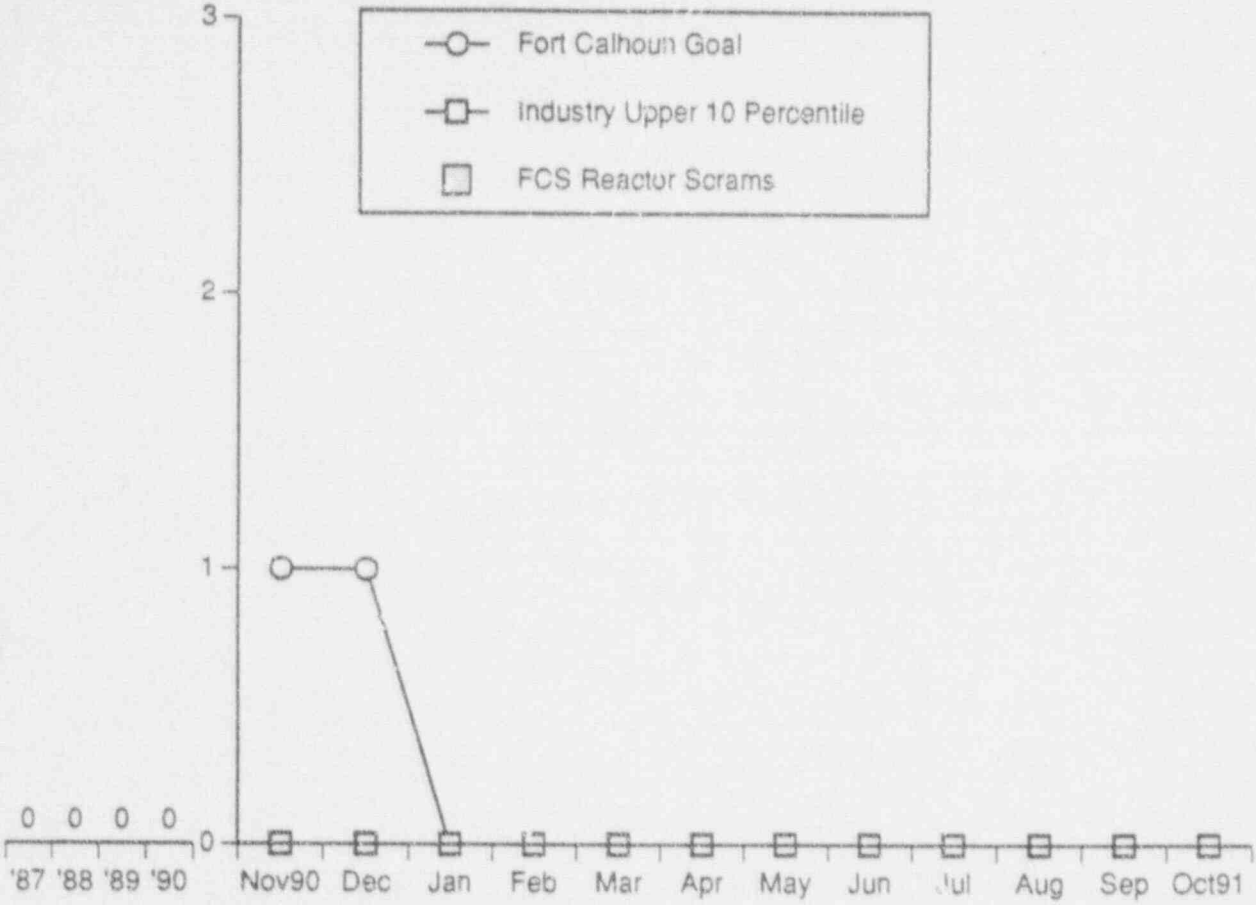
A forced outage occurred during the months of September and October 1991 when the station batteries were declared inoperable. The generator was taken off line on 9/12/91 and remained off line until 10/6 /91.

The generator was taken off line on October 18 & 19 due to a steam leak on a turbine control valve before seat drain line. The generator was again taken off line on October 25 & 26 due to a steam leak from an instrument tap on the high pressure turbine.

A forced outage occurred during the month of August 1991 to replace failed potential transformers (PTs). These PTs convert 345 KV to 120V for use in the breaker synchronization circuit.

Data Source: Monthly Operations Report & NERC GAD Forms

Adverse Trend: None



UNPLANNED AUTOMATIC REACTOR SCRAMS WHILE CRITICAL

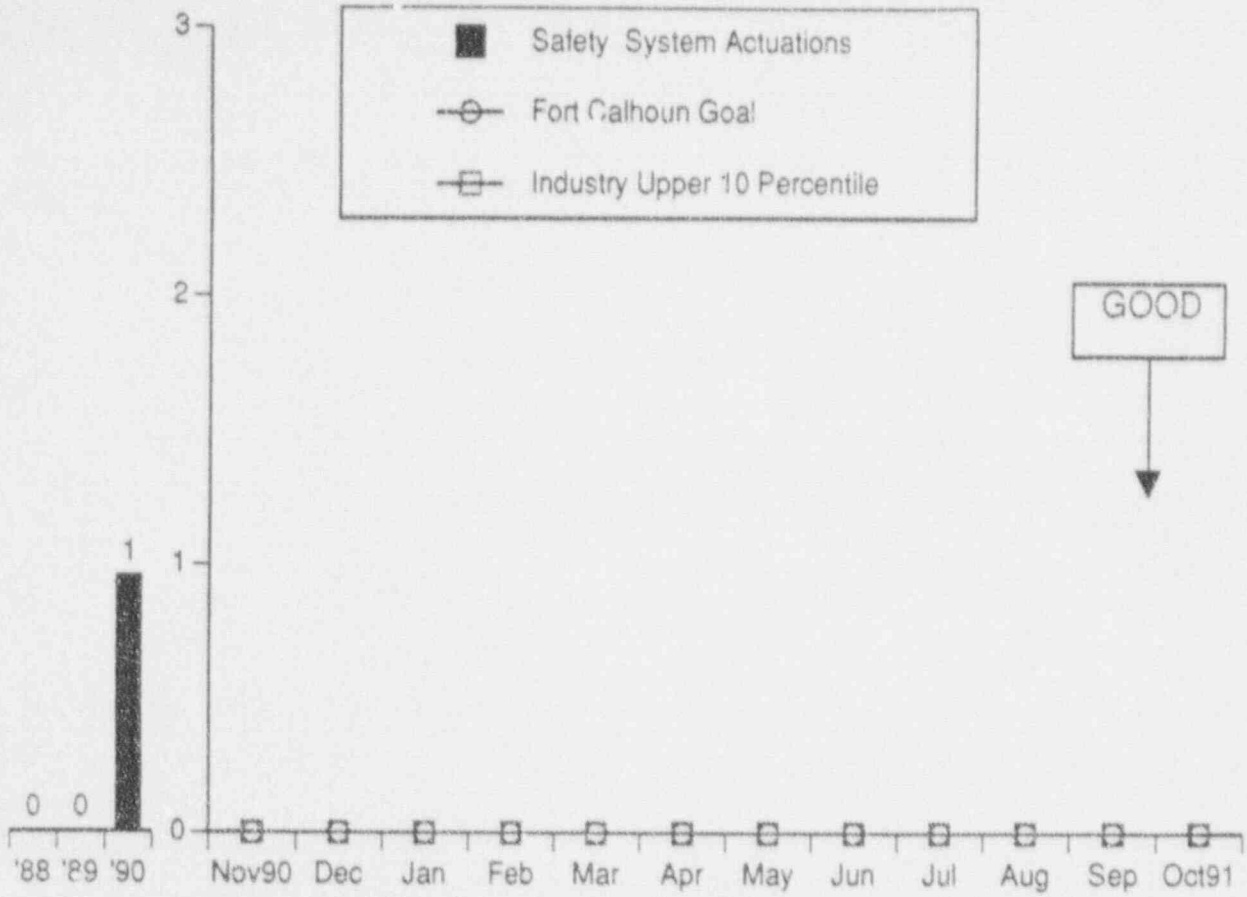
There were no unplanned automatic reactor scrams in October 1991. The last unplanned automatic reactor scram occurred on July 2, 1986.

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

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

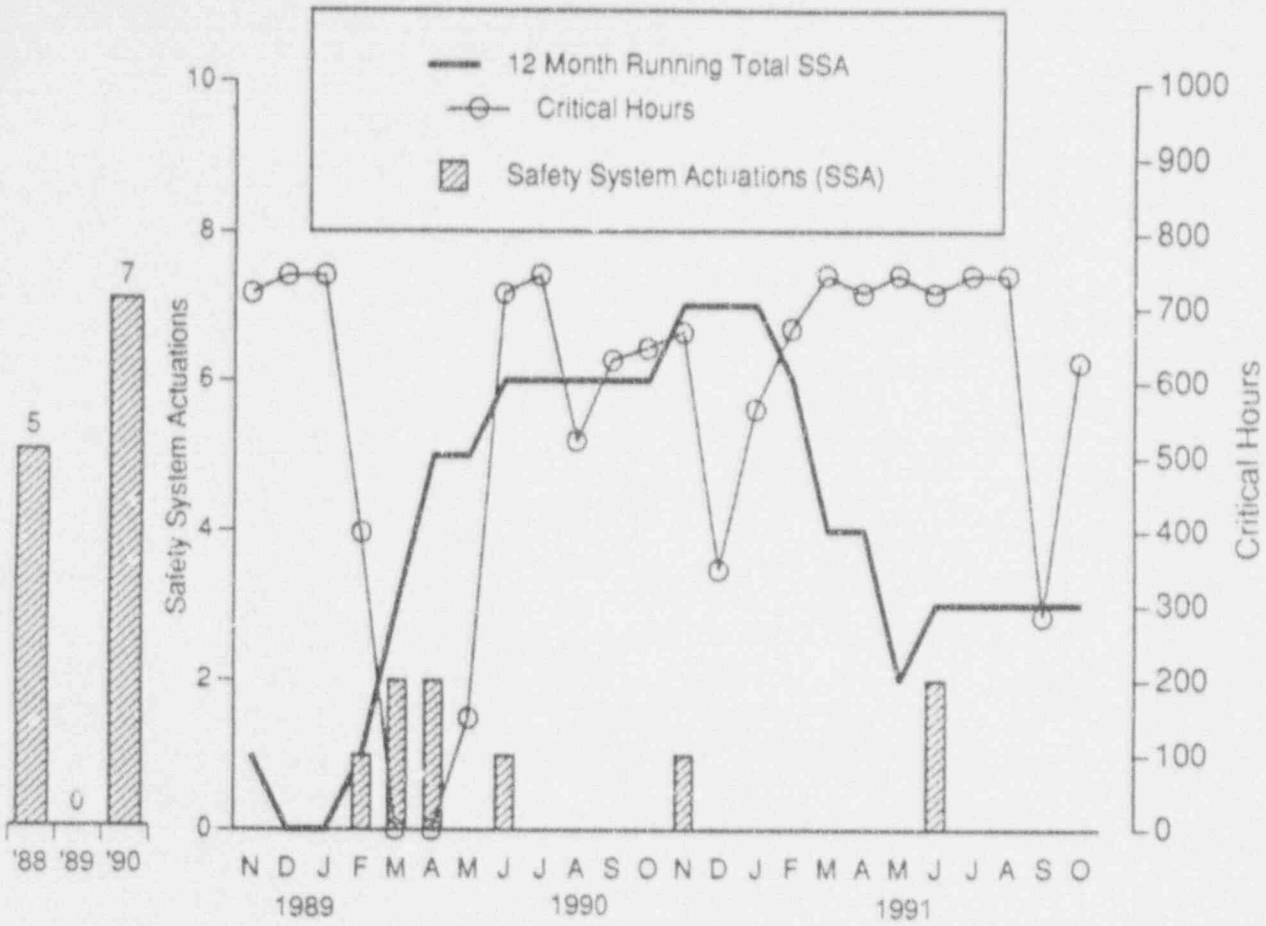
There were no unplanned safety system actuations during the month of October 1991.

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

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (NRC DEFINITION)

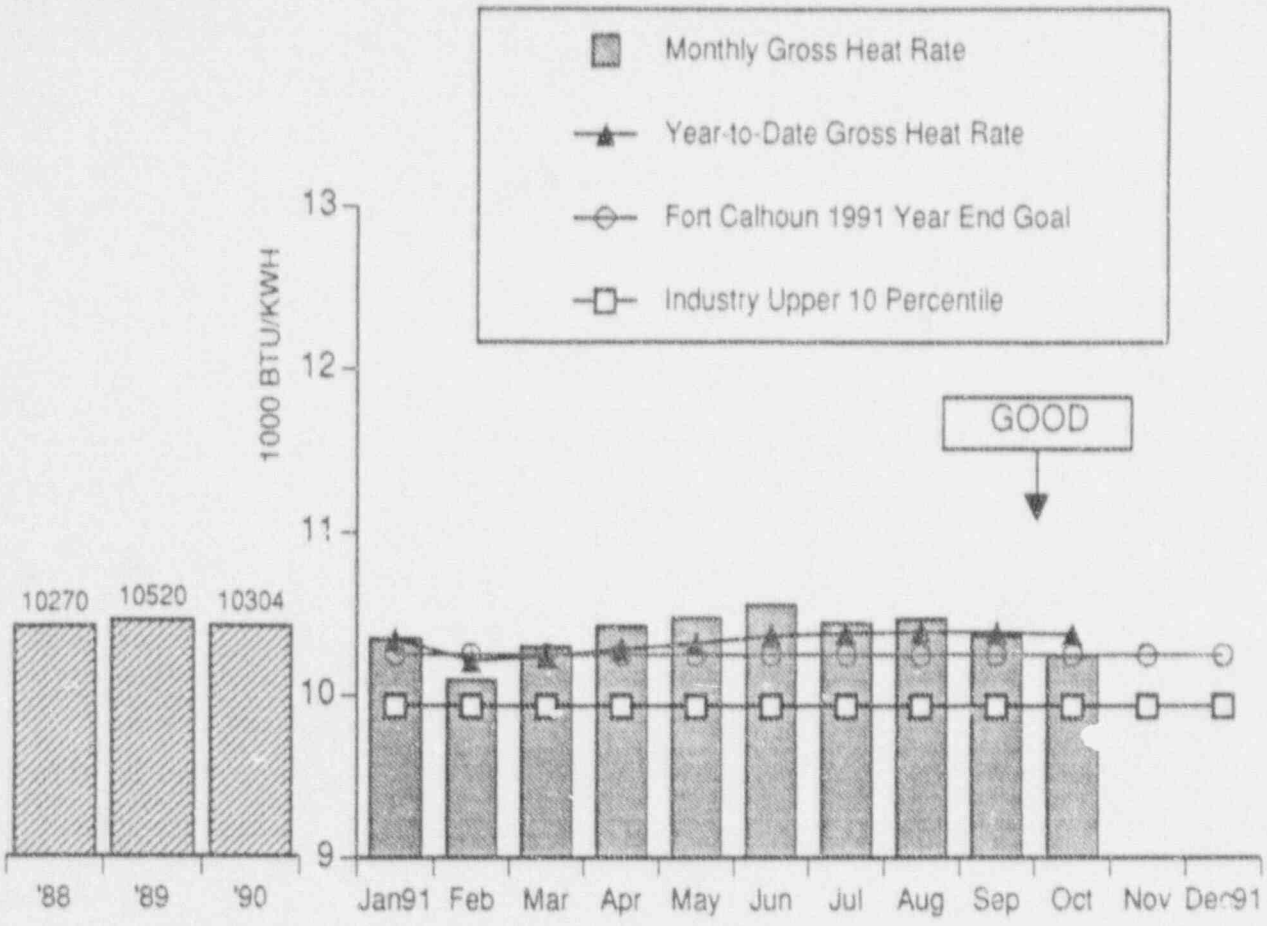
This indicator shows the number of unplanned safety system actuations (SSAs) which include the High and Low Pressure Safety Injection Systems, the Safety Injection Tanks, and the Emergency Diesel Generators. The NRC classification of SSAs includes actuations when major equipment is operated and when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

The last event of this type occurred in June 1991 when 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 SSAs 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 SSAs at Fort Calhoun.

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

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 for the Fort Calhoun Station was reported as 10,245 BTU/KWH during the month of October.

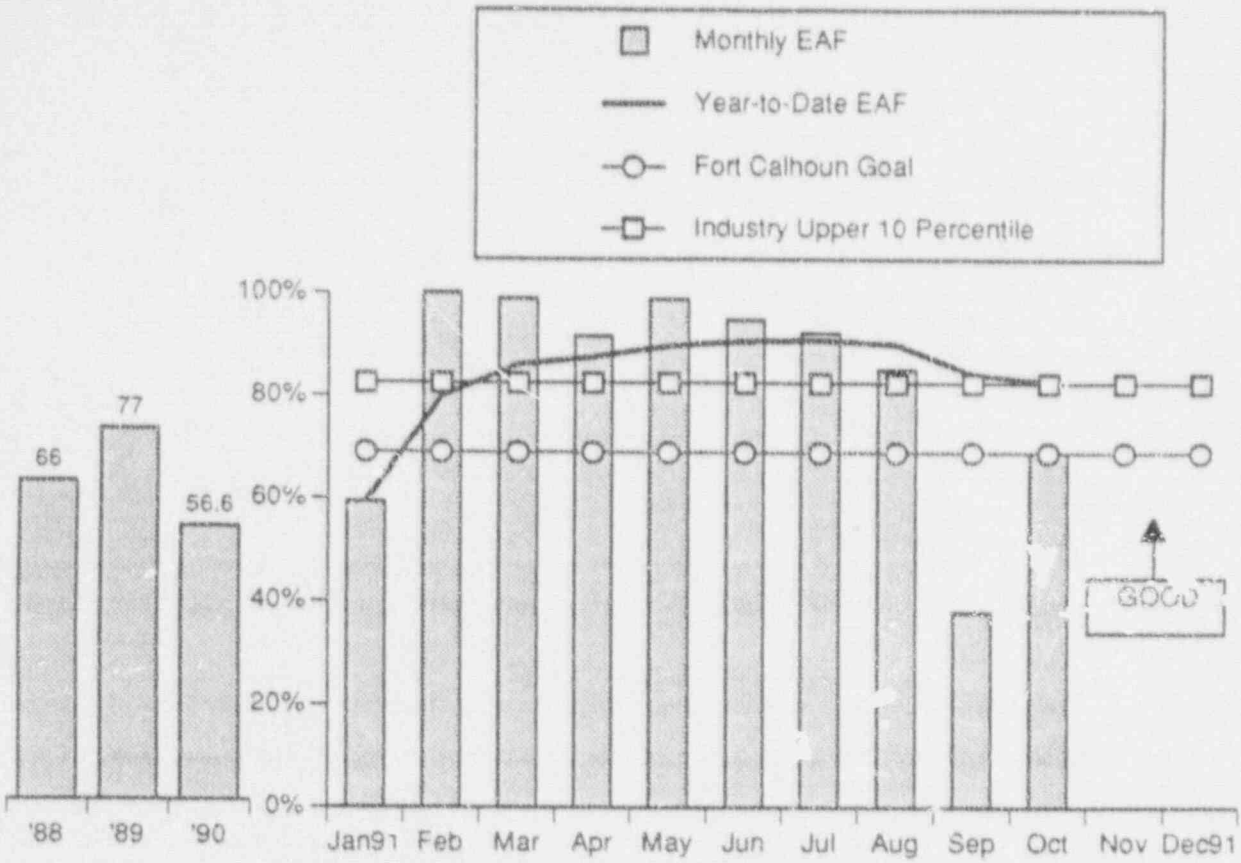
The year-to-date gross heat rate was reported as 10,377 BTU/KWH.

The above 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: None



EQUIVALENT AVAILABILITY FACTOR

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

The EAF was reported as 69% for the month of October 1991. This figure is low due to a forced outage that occurred from 9/12/91 to 10/6/91 when the station batteries were declared inoperable. Also during October: power was reduced from 100% to 10% from 10/18/91 to 10/19/91 due to a steam leak on a turbine control valve before seat drain line; and power was reduced from 100% to 10% from 10/25/91 to 10/26/91 due to a steam leak from an instrument tap on the high pressure turbine. 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).

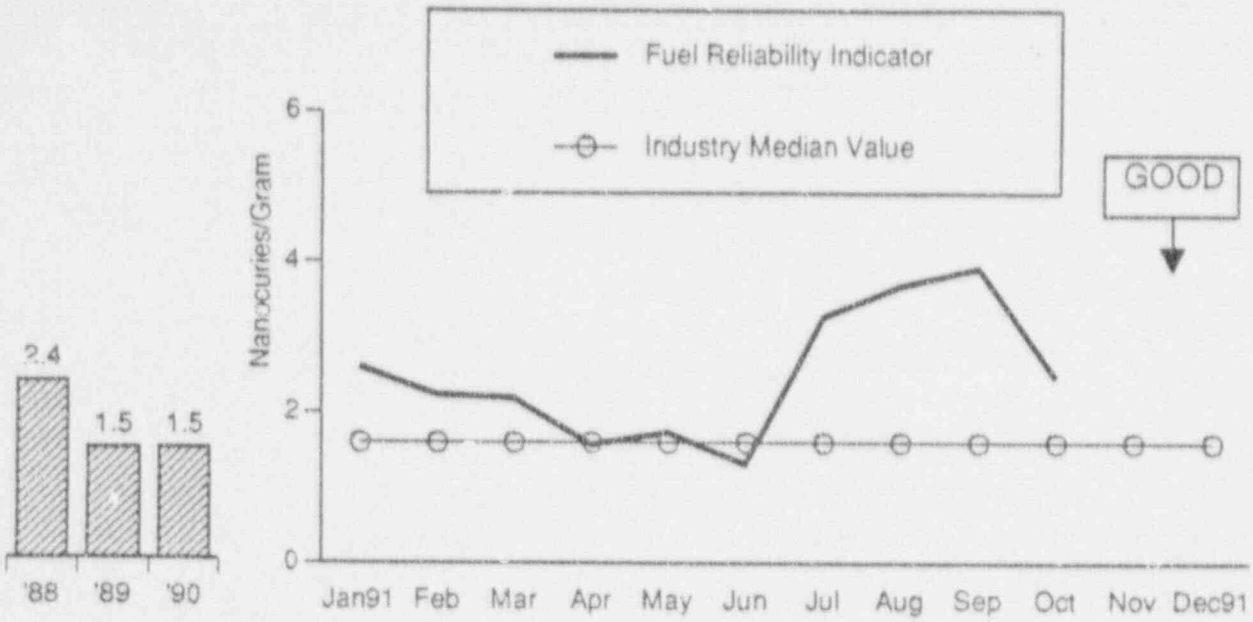
The year-to-date EAF was reported as 83%.

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 2.46 nanocuries/gram for the month of October 1991.

This INPO indicator uses an industry normalized letdown purification rate with a density correction factor. The FRI value using the plant's actual letdown purification rate was reported as 2.76 nanocuries/gram.

The October FRI was calculated using the data from October 12 through 17. These dates were chosen in accordance with INPO's requirements of steady state operation. Under these requirments, a plant must be in continuous operation for at least three days at a power level that does not vary more than + or - 5 percent. Plants should collect data for this indicator at a power level above 85 percent, when possible.

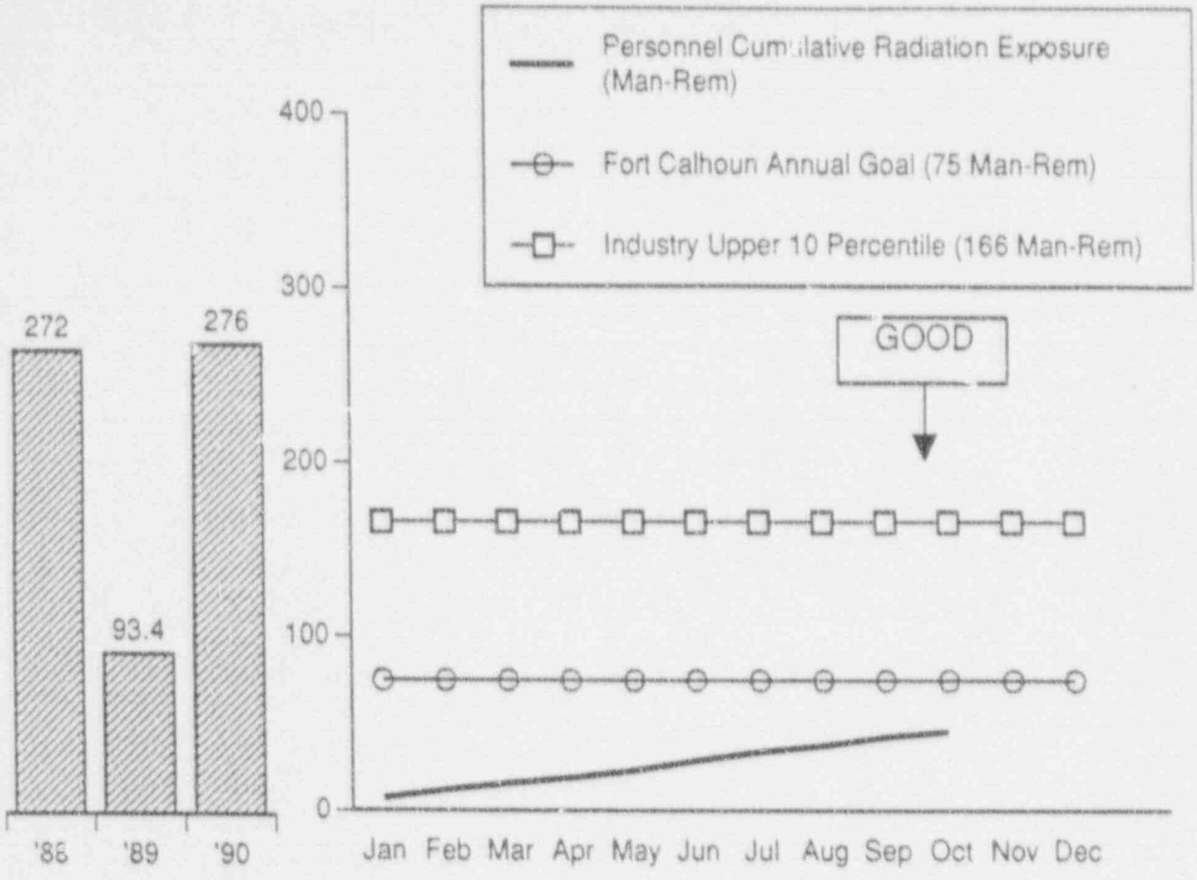
The last detected fuel failure was during Cycle 10. The FRI values observed during Cycle 10 were in the 20 to 80 nanocuries/gram range (without the density correction factor which would make the FRI values larger). There have been no observable iodine spikes which would be indicative of fuel failure during Cycle 13 operation.

The INPO industry median value of 1.6 nanocuries/gram has been added to this graph.

A Fort Calhoun goal of 0.75 nanocuries/gram will be utilized in 1992. Fort Calhoun recognizes the INPO 1995 U.S. industry goal of 0.5 nanocuries/gram and will revise our FRI goal accordingly upon completion of the current FRI re-evaluation by INPO.

Data Source: Holtnaus/Guliani

Adverse Trend: None



PERSONNEL RADIATION EXPOSURE (CUMULATIVE)

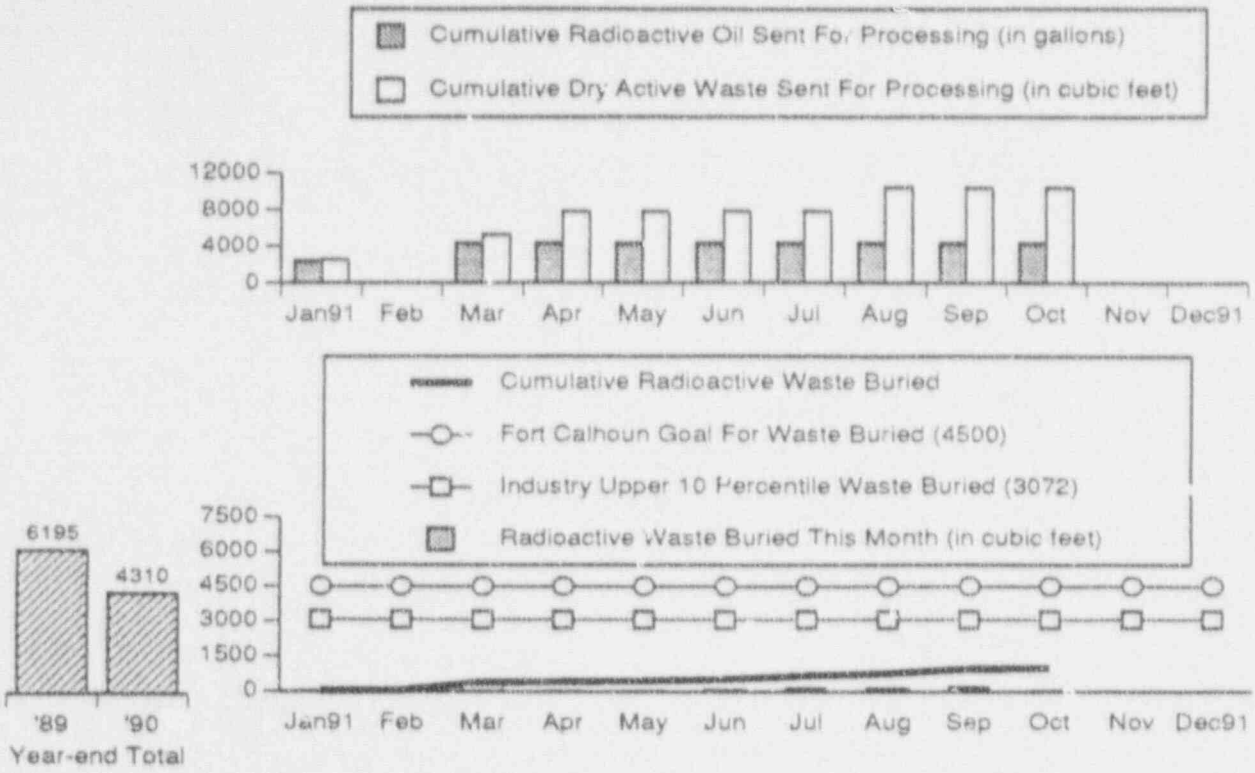
During October 1991, 3.24 man-rem was recorded by TLD's worn by personnel while working at the Fort Calhoun Station. The year-to-date exposure is 45.984 man-rem.

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 the monthly, the cumulative annual total, and the year-end total of radioactive waste buried the previous 2 years.

The monthly and cumulative volumes of radioactive waste which were buried during the month of October 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.

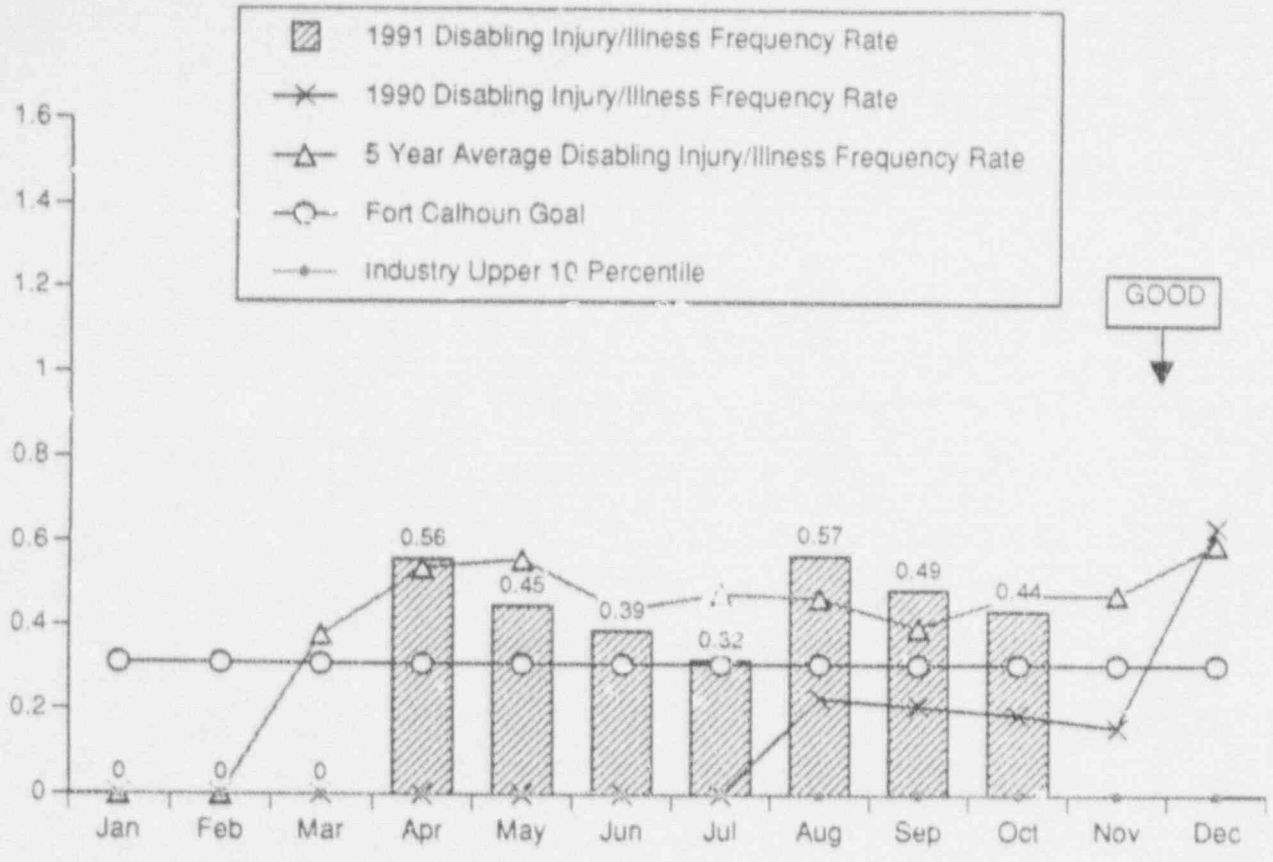
Cumulative volume of radioactive oil shipped off-site for processing (gallons)	4,330.0
Cumulative amount of solid radwaste shipped off-site for processing (cubic feet)	10,338.0
Volume of solid radioactive waste which was buried during the month of October (cubic feet)	32.1
Cumulative volume of solid radioactive waste buried (cubic feet)	992.5
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/ILLNESS 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 (zero) lost time accidents reported at the Fort Calhoun Station in October. The total number of lost time accidents that have been reported during 1991 is two.

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

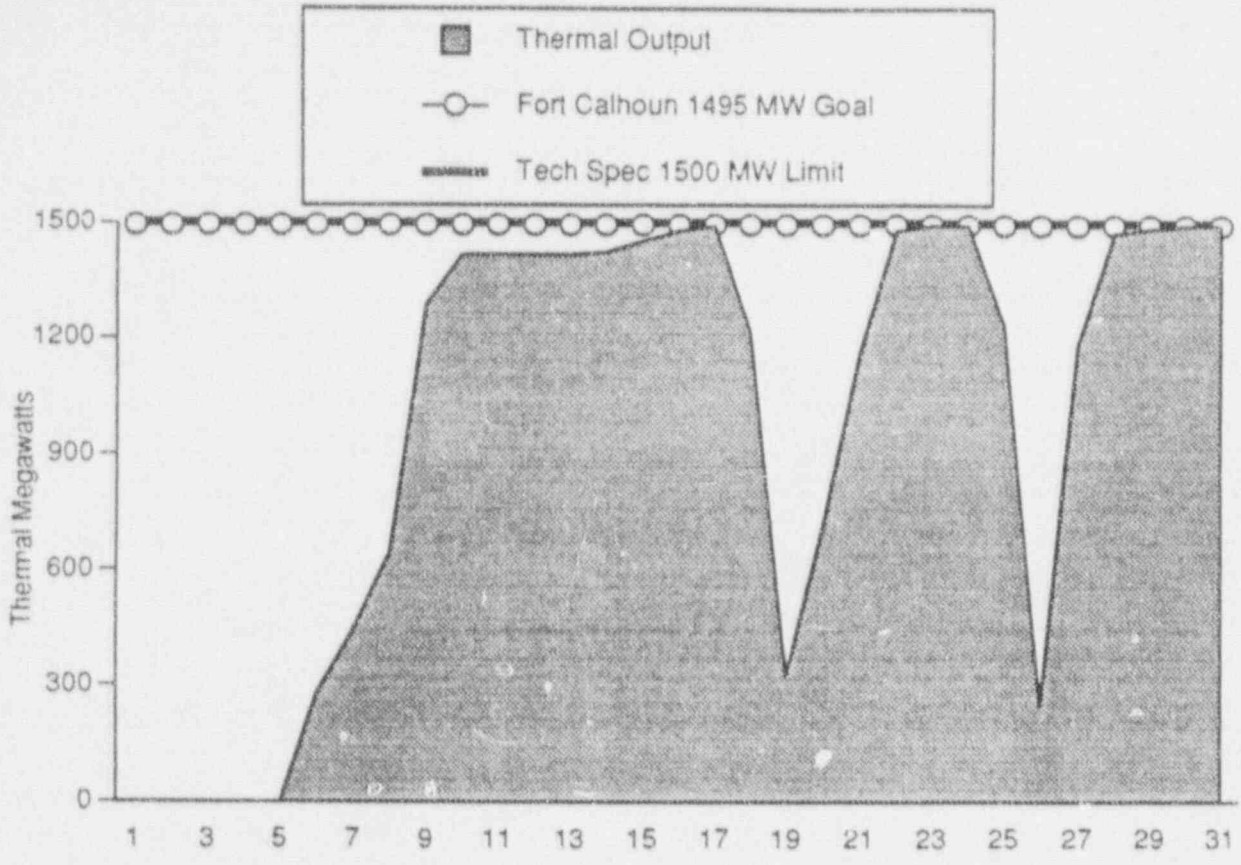
The industry upper ten percentile disabling injury/illness frequency rate is 0.

Year	Year-End Rate
1988	1.6
1989	0.4
1990	0.5

Data Source: Sorenson/Skaggs (Manager/Source)

Adverse Trend: None

SEP 25 & 26



DAILY THERMAL OUTPUT

The above thermal output graph displays the daily operating power level during October 1991, the 1500 thermal megawatt average technical specification limit, and the 1495 thermal megawatt Fort Calhoun goal.

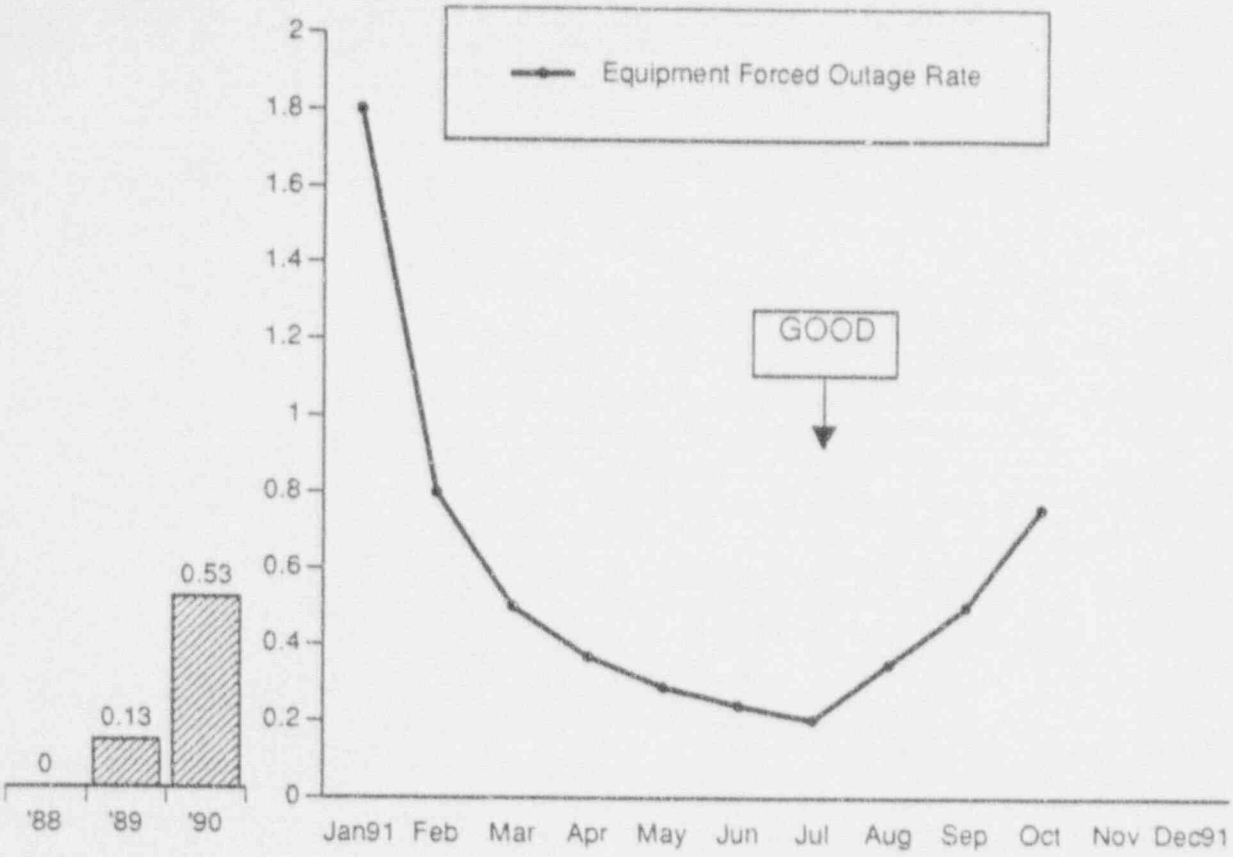
Thermal output was zero in early October due to a forced outage which occurred when the station batteries were declared inoperable. 100% power was attained on 10/17/91.

On 10/18/91 power was reduced to 10% due to a steam leak on a turbine control valve before seat drain line. On 10/22/91 100% power was attained. Again on 10/25/91 power was reduced to 10% due to a steam leak from an instrument tap on the high pressure turbine. 100% power was attained on 10/29/91.

Full power operation is anticipated thru January 31, 1992 to obtain the burnup window for Cycle 14 design parameters.

Data Source: Holthaus/Gray (Manager/Source)

Adverse Trend: None



EQUIPMENT FORCED OUTAGES PER 1000 CRITICAL HOURS

The equipment forced outage rate for the reporting month is 0.76.

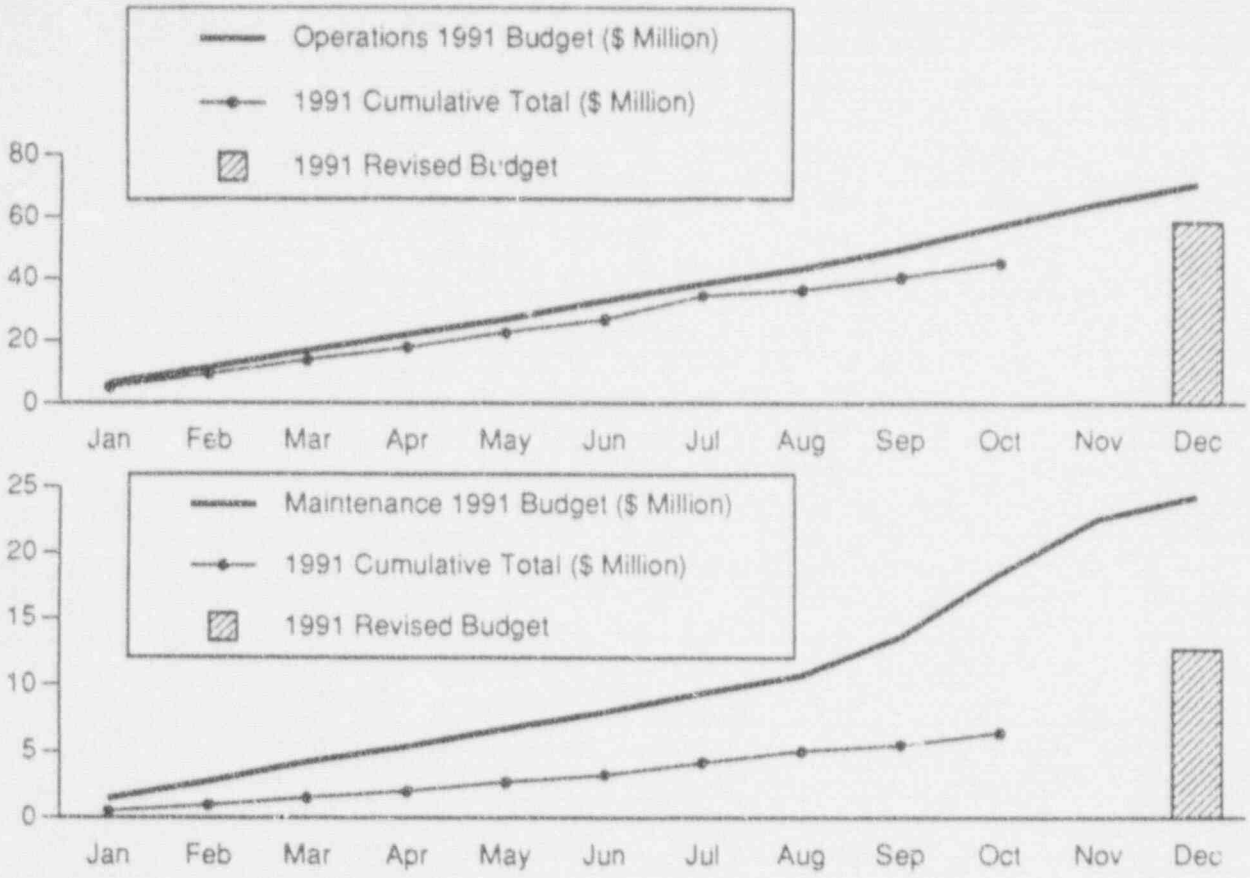
An equipment forced outage due to the station batteries being declared inoperable was Carried into October. In addition, two forced outages occurred during the month of October: on 10/18/91 the generator was taken off line due to a steam leak on a turbine control valve before seat drain line; on 10/25/91 the generator was taken off line due to a steam leak from an instrument tap on the high pressure turbine.

One equipment forced outage occurred during the month of August 1991. The outage was required to replace failed potential transformers (PTs). These PTs convert 345 KV to 120 V for use in the breaker synchronization circuit.

One equipment forced outage occurred in the month of January 1991 due to the December CEDM housing leak which carried outage time into January.

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

Adverse Trend: An adverse trend is indicated based on three consecutive months of declining performance.



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.

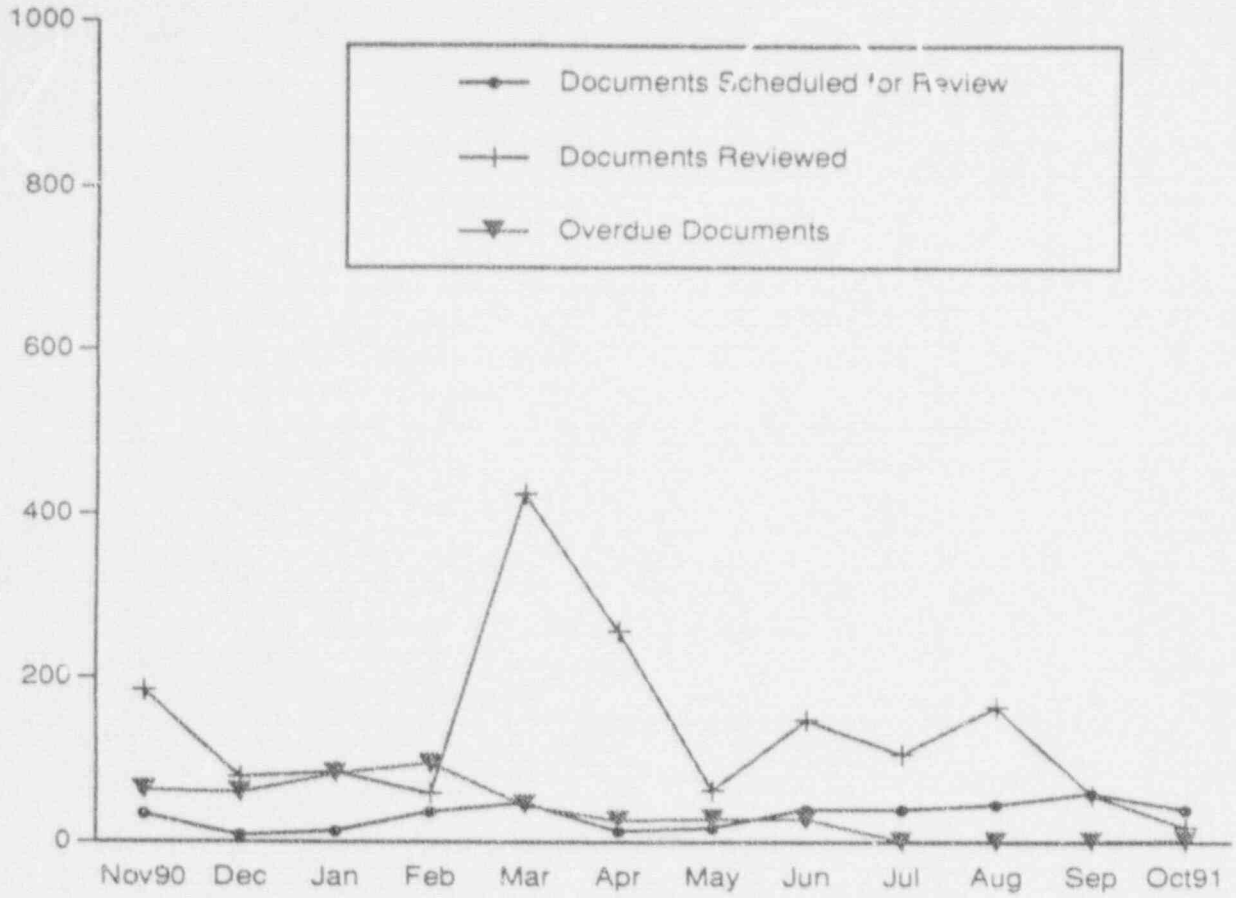
The December Bar Graph represents the revised year-end budget due to budget revisions primarily reflecting the refueling postponement for Cycle 13. The revised year-end budget for Operations was 58.3 million dollars. The revised year-end budget for Maintenance was 12.7 million dollars.

The budget year-to-date for Operations was 57.0 million dollars for October while the actual cumulative expenditures through October totaled 44.9 million dollars.

The budget year-to-date for Maintenance was 18.4 million dollars for October while the actual cumulative expenditures through October totaled 6.4 million dollars.

Data Source: Gleason/Parent (Manager/Source)

Adverse Trends: None



DOCUMENT REVIEW

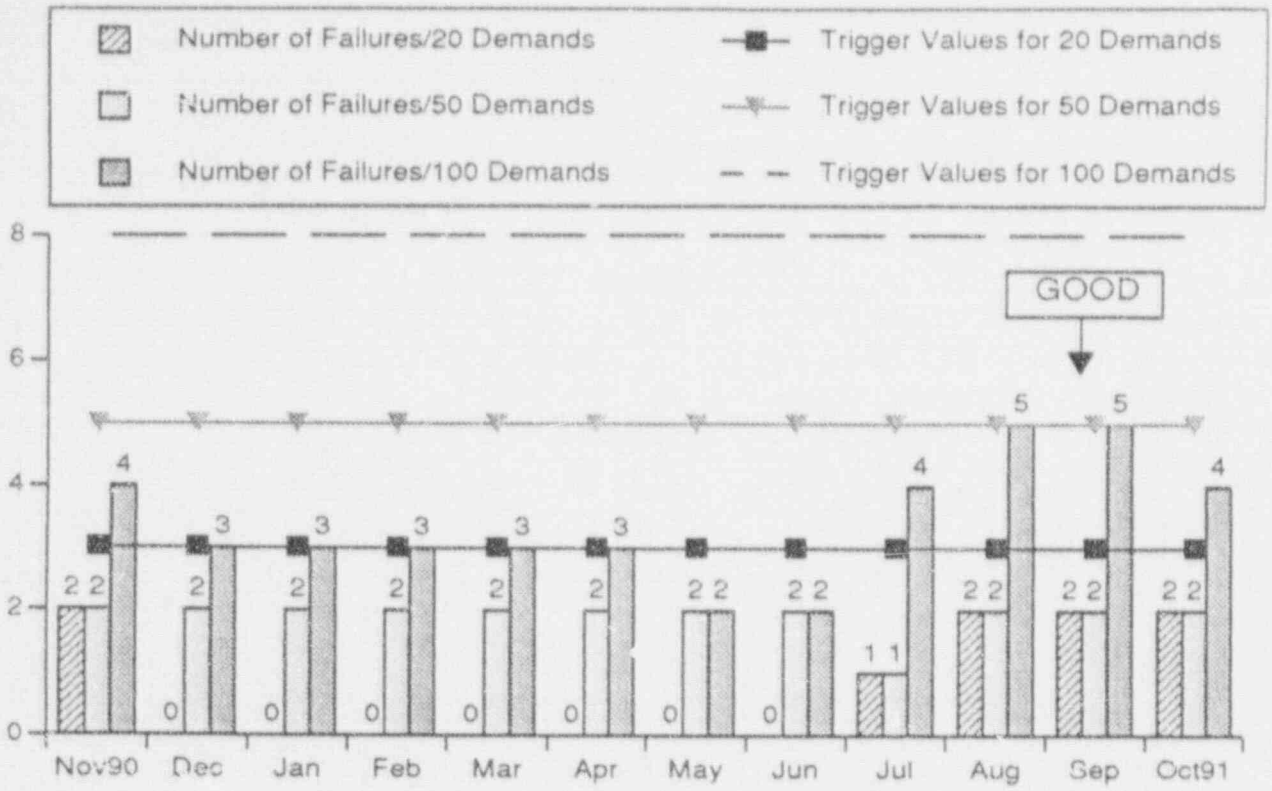
This indicator shows the number of completed, scheduled, and overdue (greater than 6 months past the scheduled due date) biennial reviews for the reporting month. These document reviews are performed in-house and include Special Procedures, the Site Security Plan, Maintenance Procedures, Preventive Maintenance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

During October there were 18 document reviews completed while 40 document reviews were scheduled. At the end of October, there were two document reviews overdue.

During the month of October there were 12 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

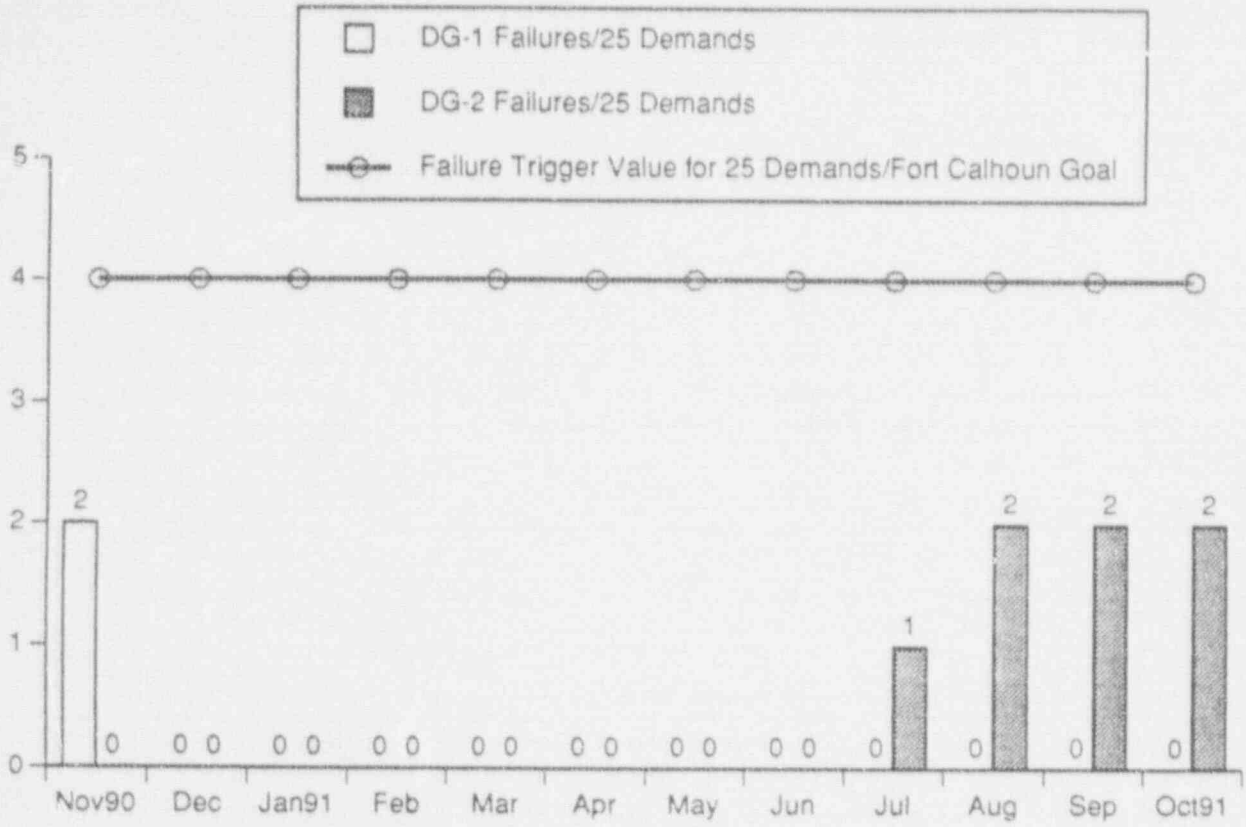
This bar graph shows three monthly indicators pertaining to the number of failures that were reported during the last 20, 50, and 100 emergency diesel generator demands at the Fort Calhoun Station. Also shown are trigger values which correspond to a high level of confidence that a unit's diesel generators 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).

The demand failure which occurred during the month of August for DG-2 was due to a seal failure on the jacket water pump.

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.

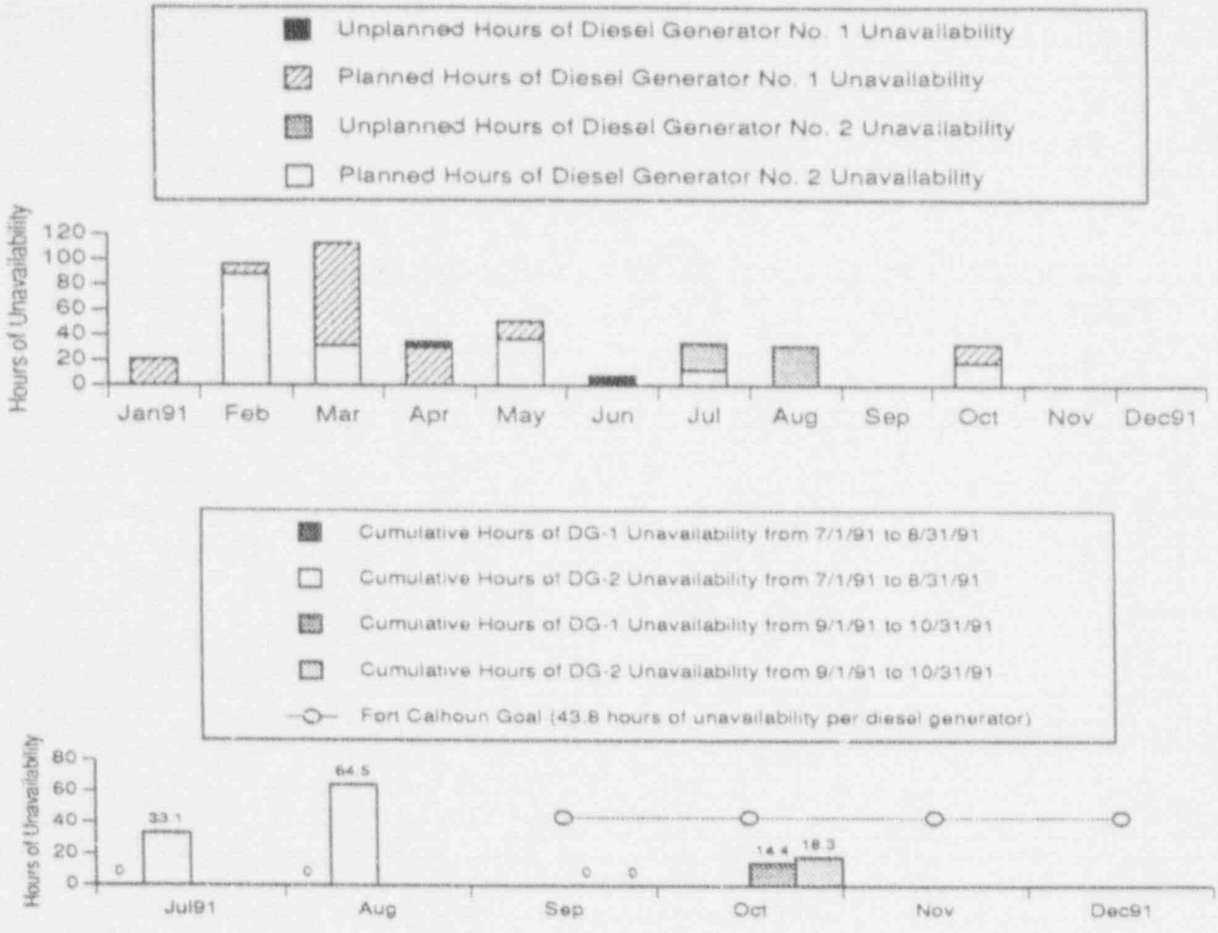
It must be emphasized that in accordance with NUMARC criteria, certain actions will take place in the event that any one emergency diesel generator experiences 4 or more failures within the last 25 demands on the unit. These actions are described in the Definition Section. A Standing Order has been drafted 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 experienced two failures during the last 25 demands on the unit. An air damper roll pin failure occurred in July 1991, and a seal failed on a jacket water pump in August 1991.

Data Source: Jaworski/Ronning (Manager/Source)

Adverse Trend: None



DIESEL GENERATOR UNAVAILABILITY

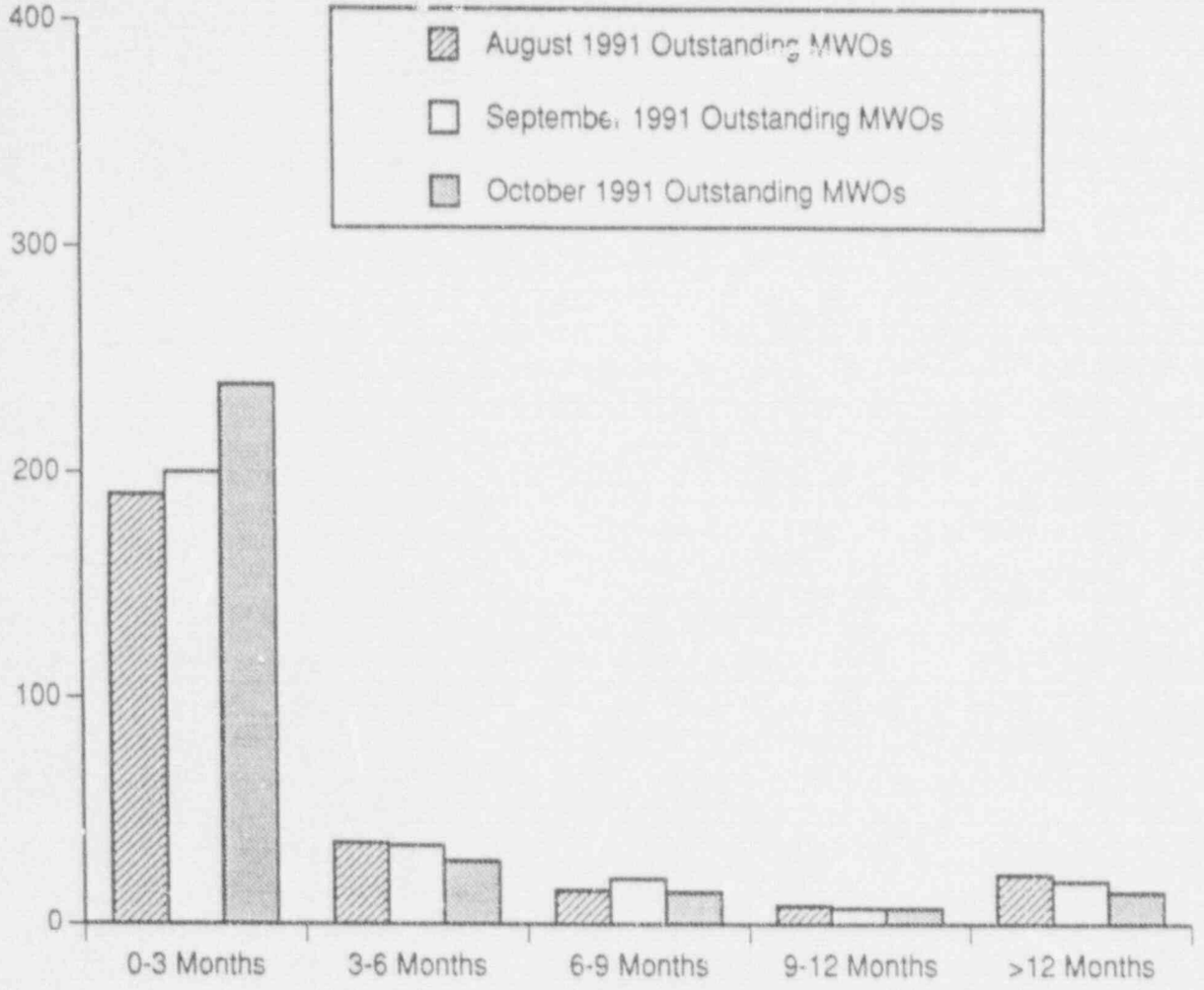
This indicator provides a monthly illustration of diesel generator unavailability for 1991. The top graph shows the diesel generator planned and unplanned unavailable hours for DG-1 and DG-2 for each month. The lower graph shows the cumulative hours of unavailability for each diesel generator from July through August and during September and October 1991.

The Fort Calhoun goal of 43.8 unavailable hours per DG for the last four months of 1991 is based on the 1990 INPO industry median va' ior diesel generator unavailable hours.

The 14.4 hours of DG-1 unavailability and 18.3 hours of DG-2 unavailability for the month of October were attributable to planned maintenance activities.

The 31.4 hours of unplanned DG-2 unavailability in August were the result of two separate events. On August 7, during surveillance testing, DG-2 failed to crank on the first attempt. On August 26 - 27, DG-2 was inoperable due to the failure of a jacket water pump seal.

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

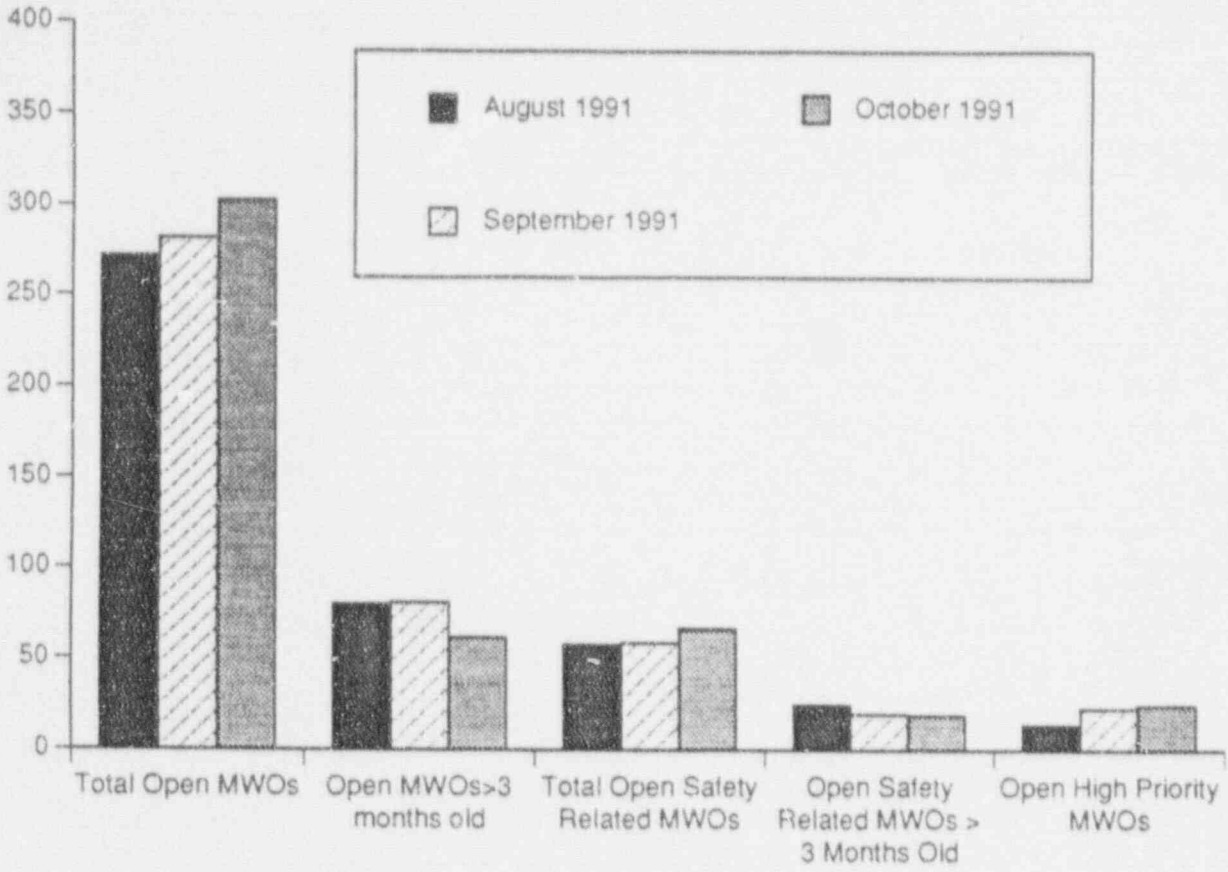


AGE OF OUTSTANDING MAINTENANCE WORK ORDERS (CORRECTIVE NON-OUTAGE)

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None



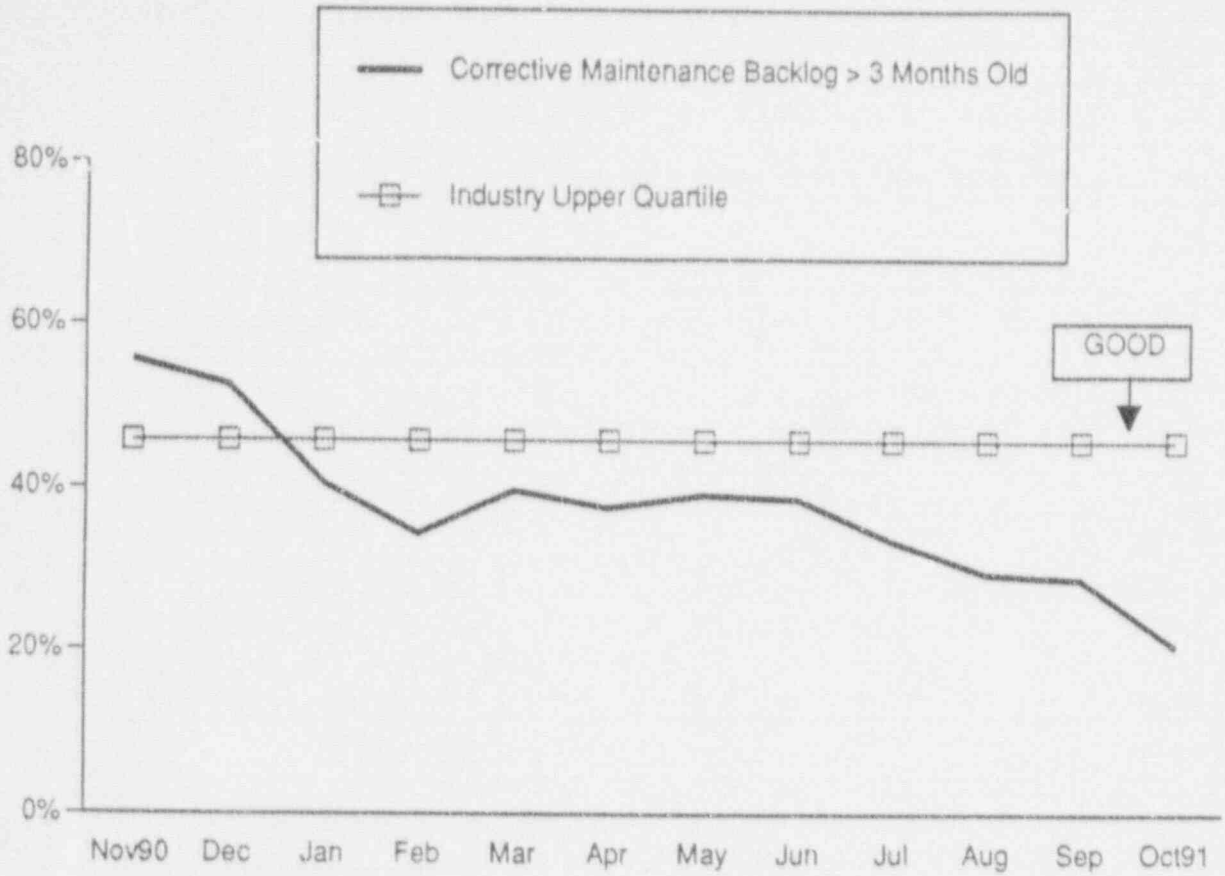
MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE)

This indicator shows the total number of corrective non-outage MWOs 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)

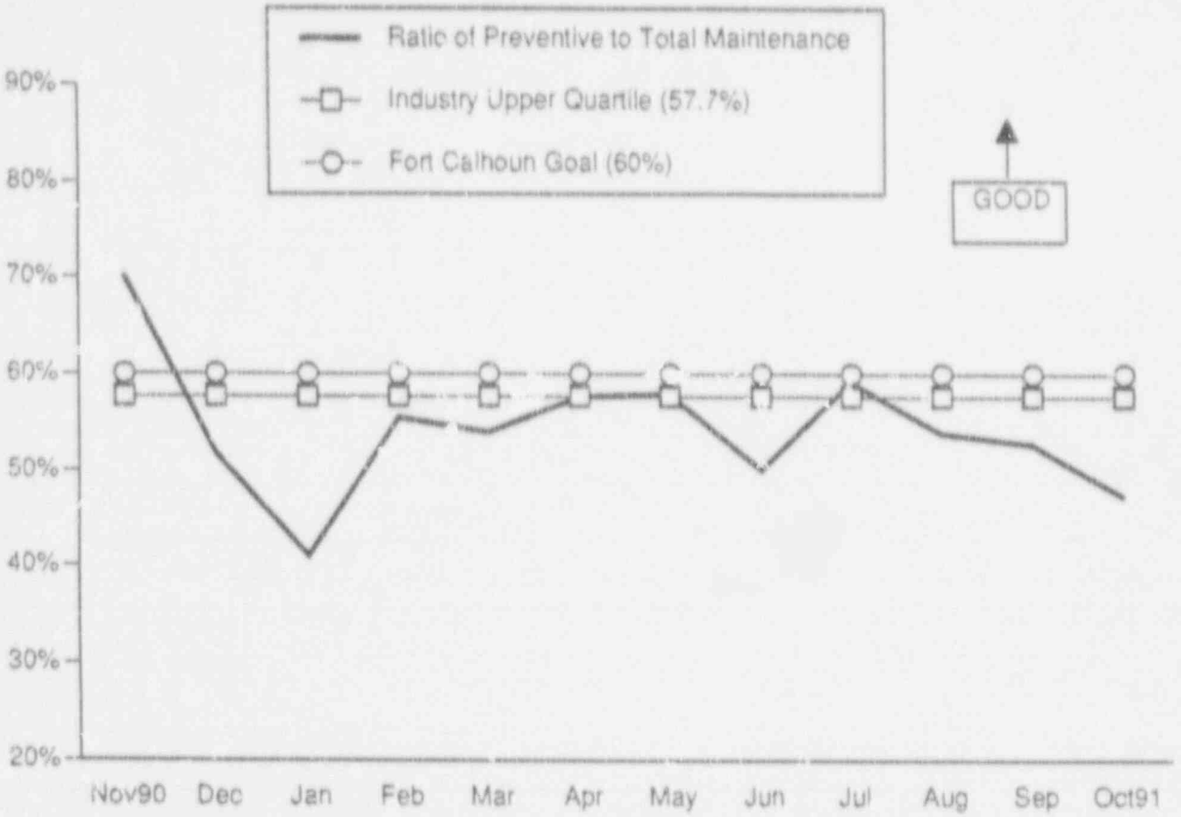
This indicator shows the percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of the reporting month.

The percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of October was reported as 20.5%.

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)

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

The ratio of preventive to total maintenance was 47.3% in October. The values for this indicator have decreased during September and October 1991 due to a greater emphasis being placed on completion of MWO work (see p. 21 for the "Corrective Maintenance Backlog Greater Than 3 Months Old" indicator) during the battery outage.

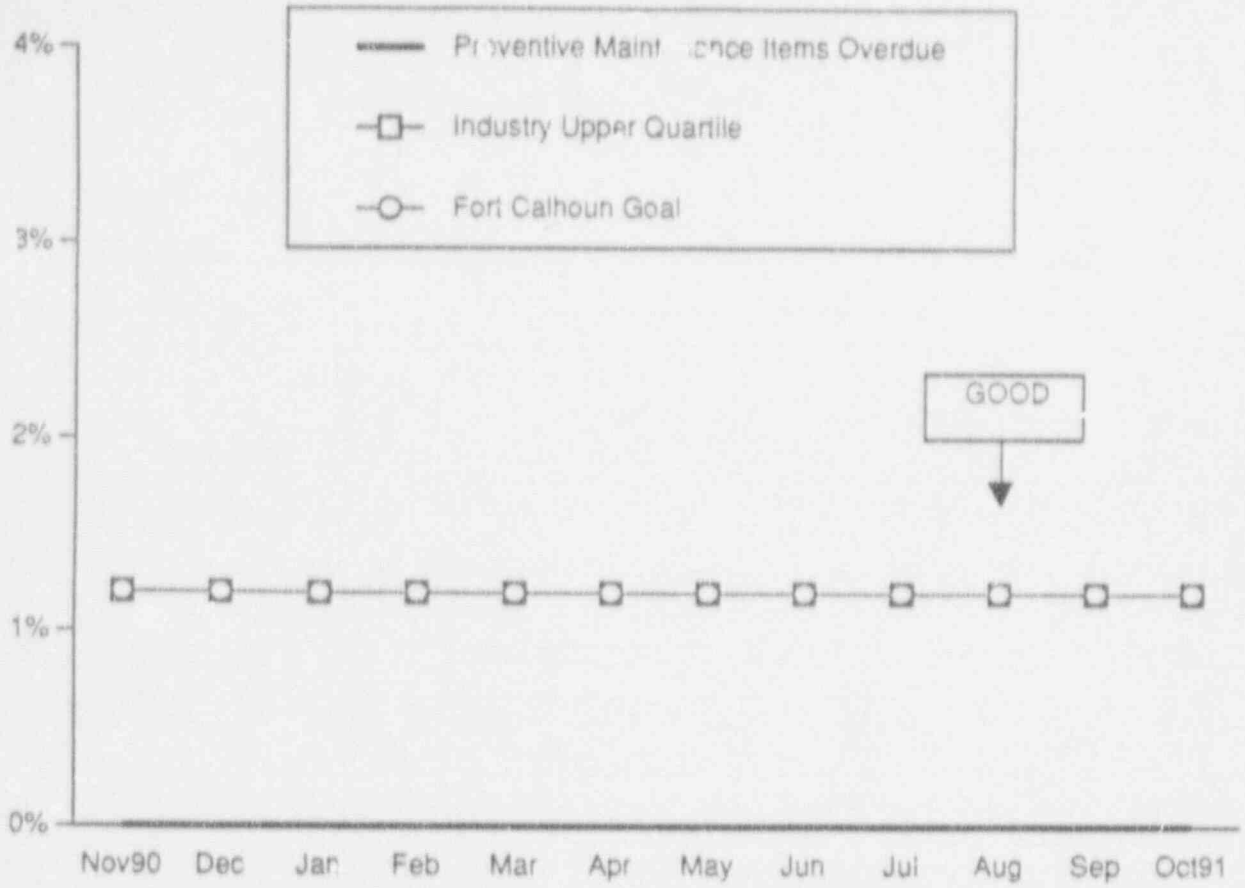
The Fort Calhoun goal is to attain a ratio of preventive to total maintenance greater than 60%.

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: Based on three consecutive months of declining performance, an adverse trend is indicated.

SEP 41



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.

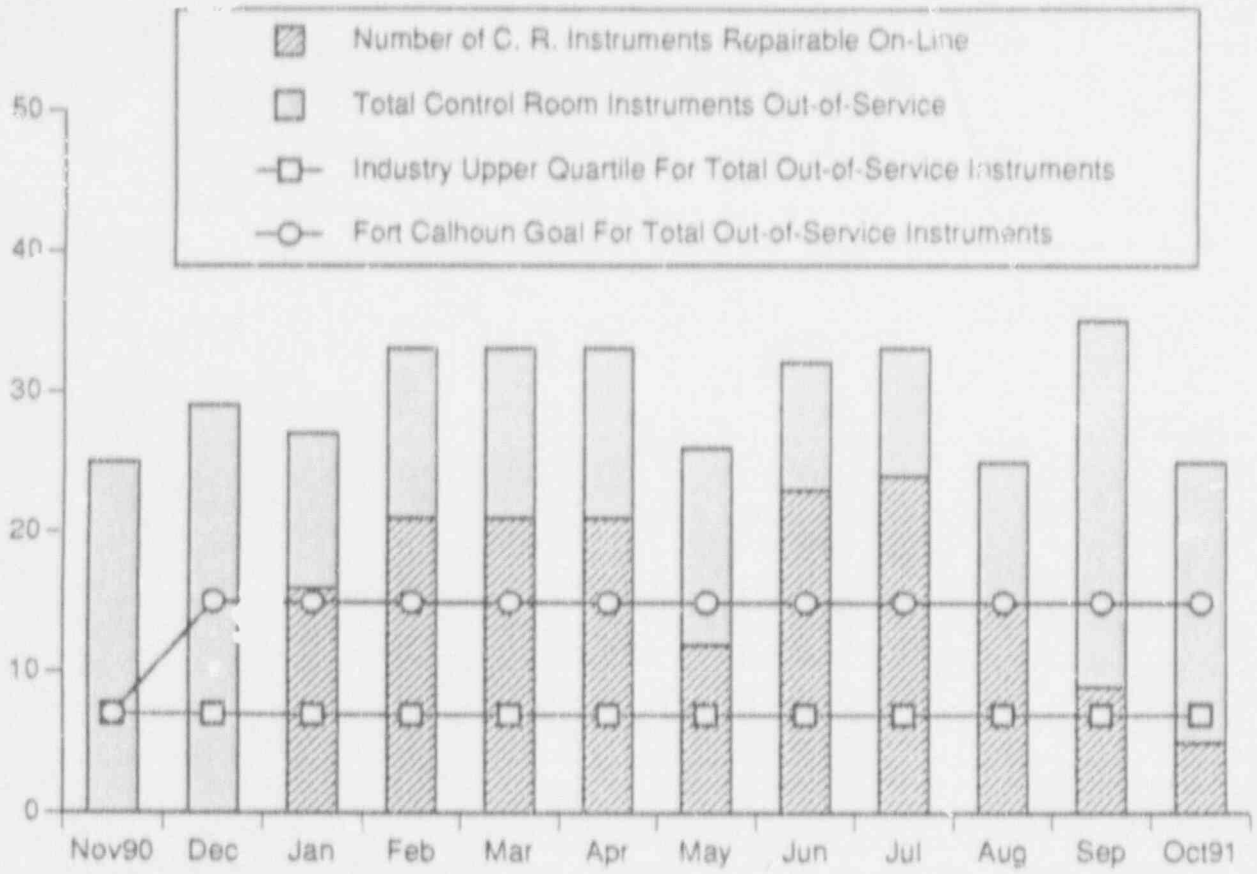
During October 1991, 1599 PM items were completed. All PMs were completed within the allowable grace period.

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



NUMBER OF OUT-OF-SERVICE CONTROL ROOM INSTRUMENTS

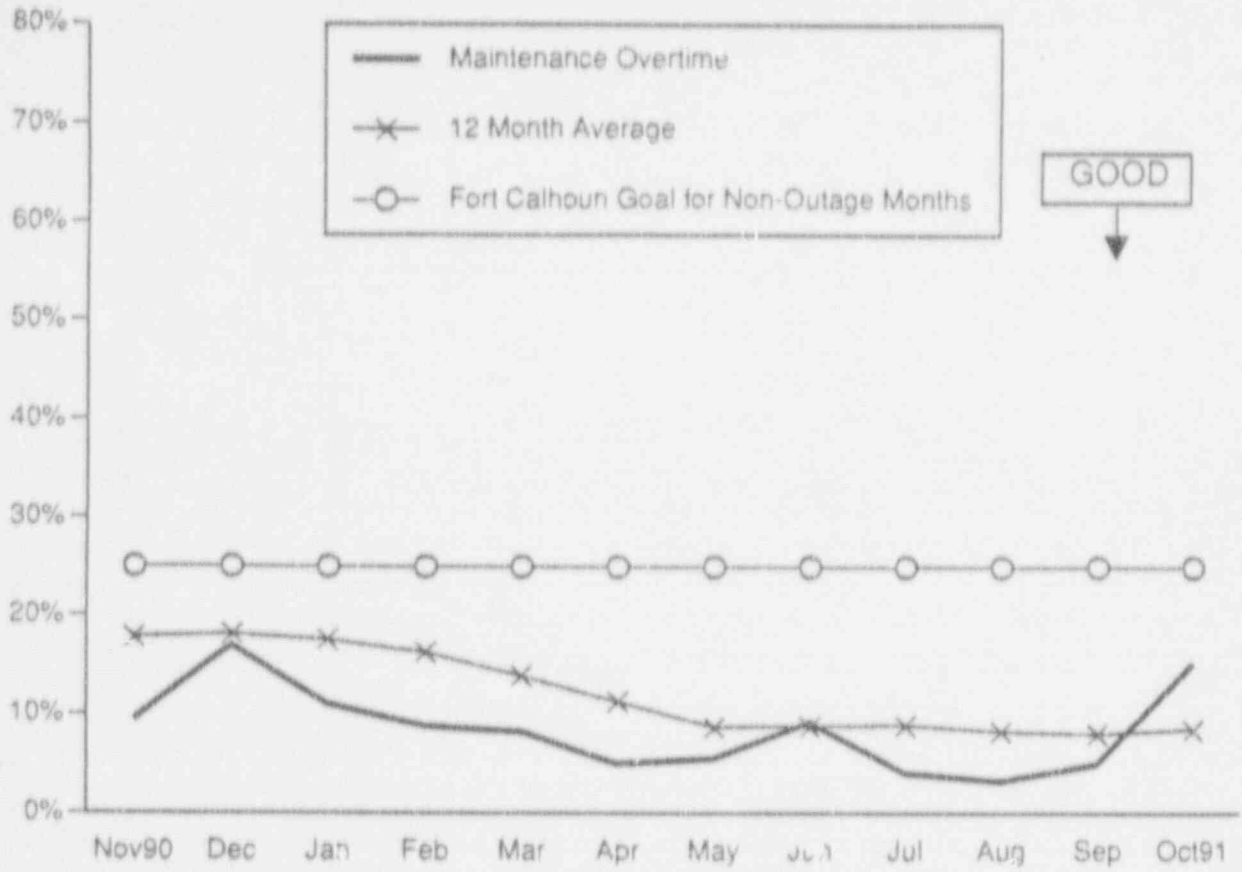
This indicator shows the number of out-of-service control room instruments, the number of instruments repairable during plant operations (on-line), the industry upper quartile for this indicator, and the Fort Calhoun goal.

There was a total of 25 out-of-service control room instruments at the end of October. A plant outage is required to repair 5 of these 25 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

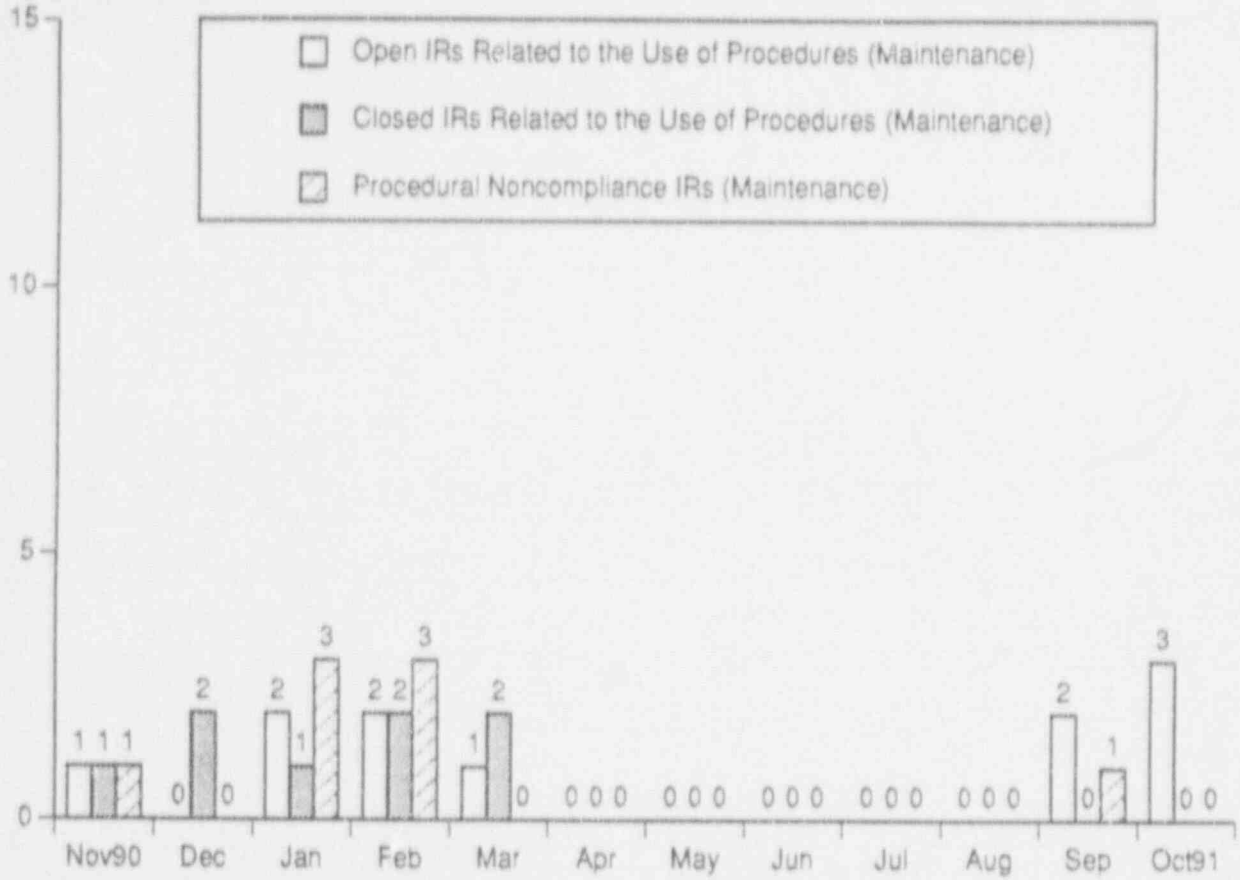
The Maintenance Overtime Indicator monitors the ability to perform the desired maintenance activities with the allotted resources. Excessive overtime indicates insufficient resource allocation and can lead to errors due to fatigue.

The percent of overtime hours with respect to normal hours was reported as 15.2% during the month of October 1991. The 12 month average percentage of overtime hours with respect to normal hours was reported as 8.5%.

The Fort Calhoun goal for the percentage 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



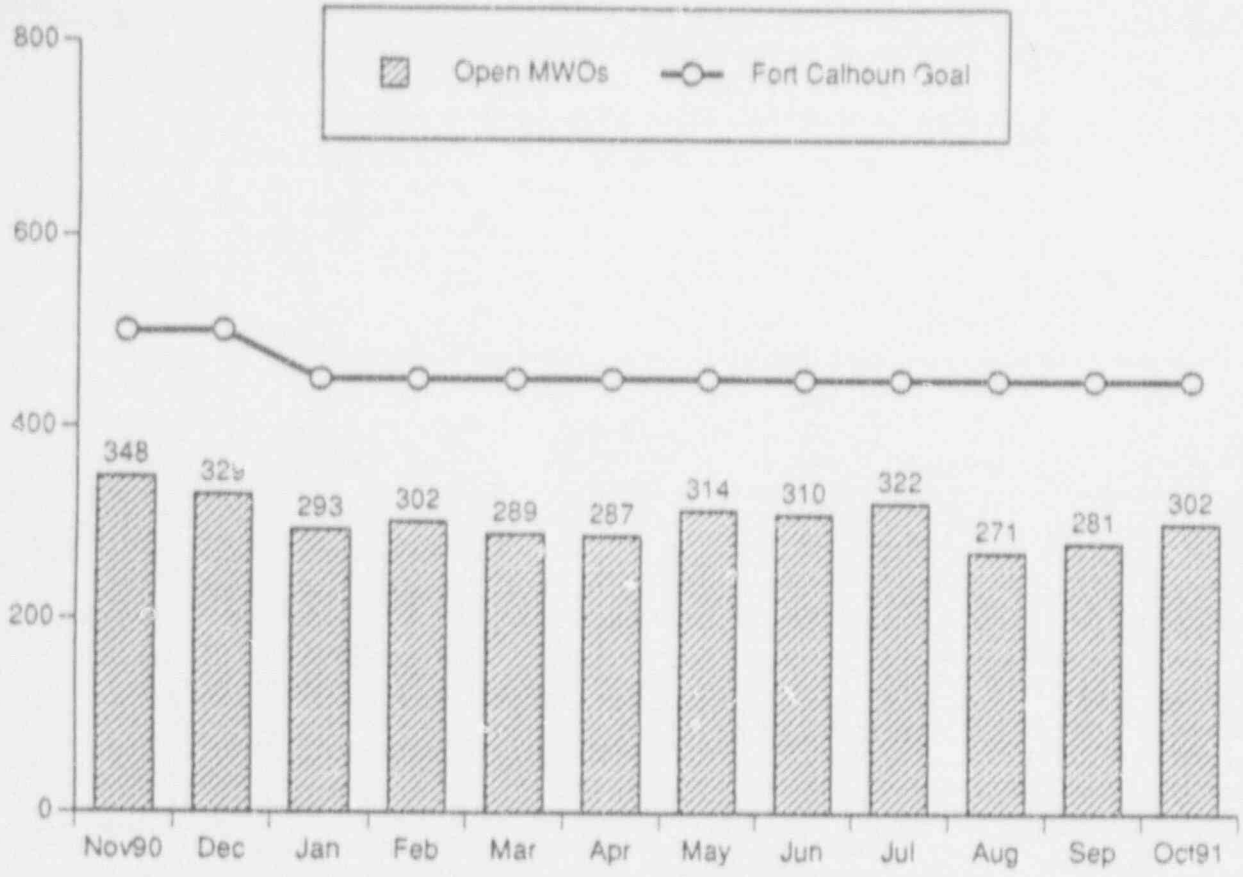
PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

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

Data Source: Patterson/McKay (Manager/Source)

Adverse Trend: None

SEP 15, 41 & 44



MAINTENANCE WORK ORDER BACKLOG
(CORRECTIVE NON-OUTAGE MAINTENANCE)

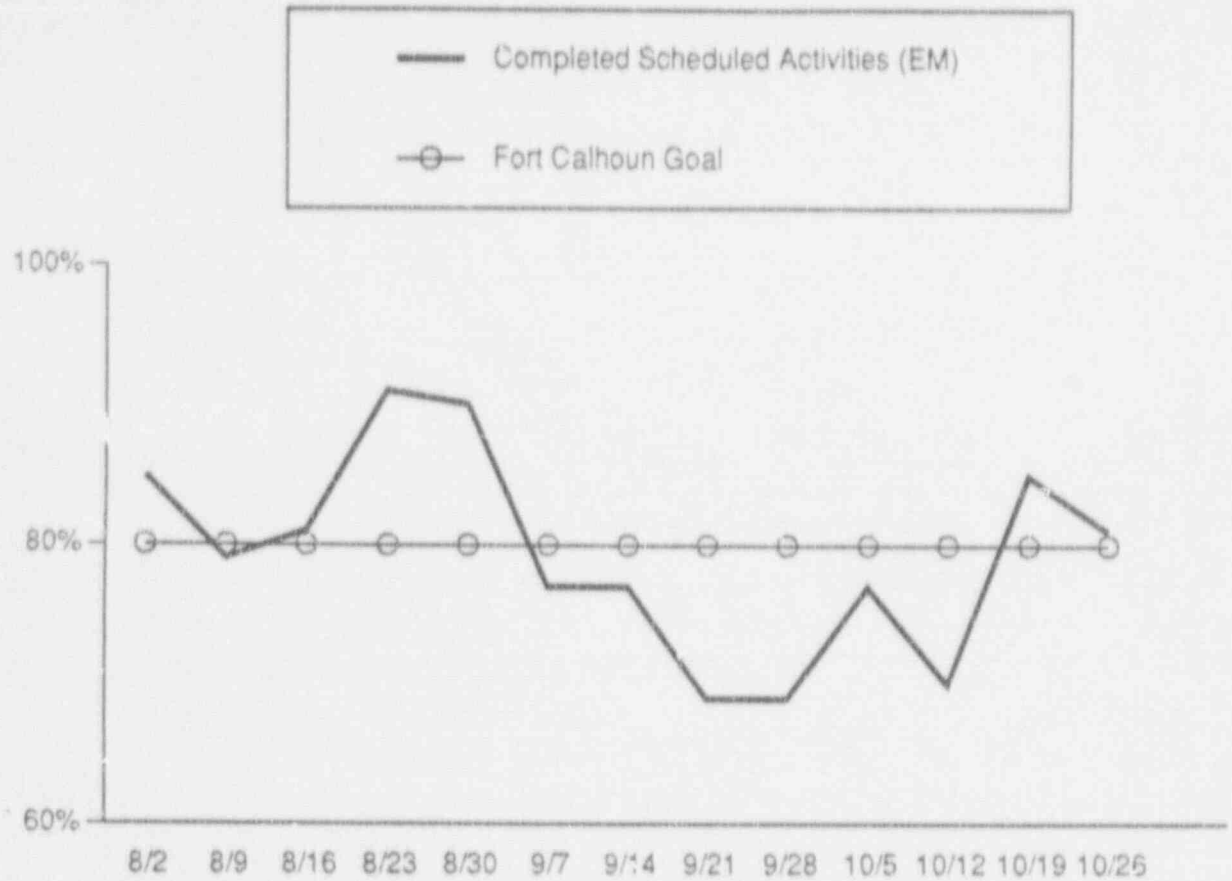
This indicator shows the number of corrective non-outage Maintenance Work Orders (MWOs) that were open at the end of the reporting month.

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 MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

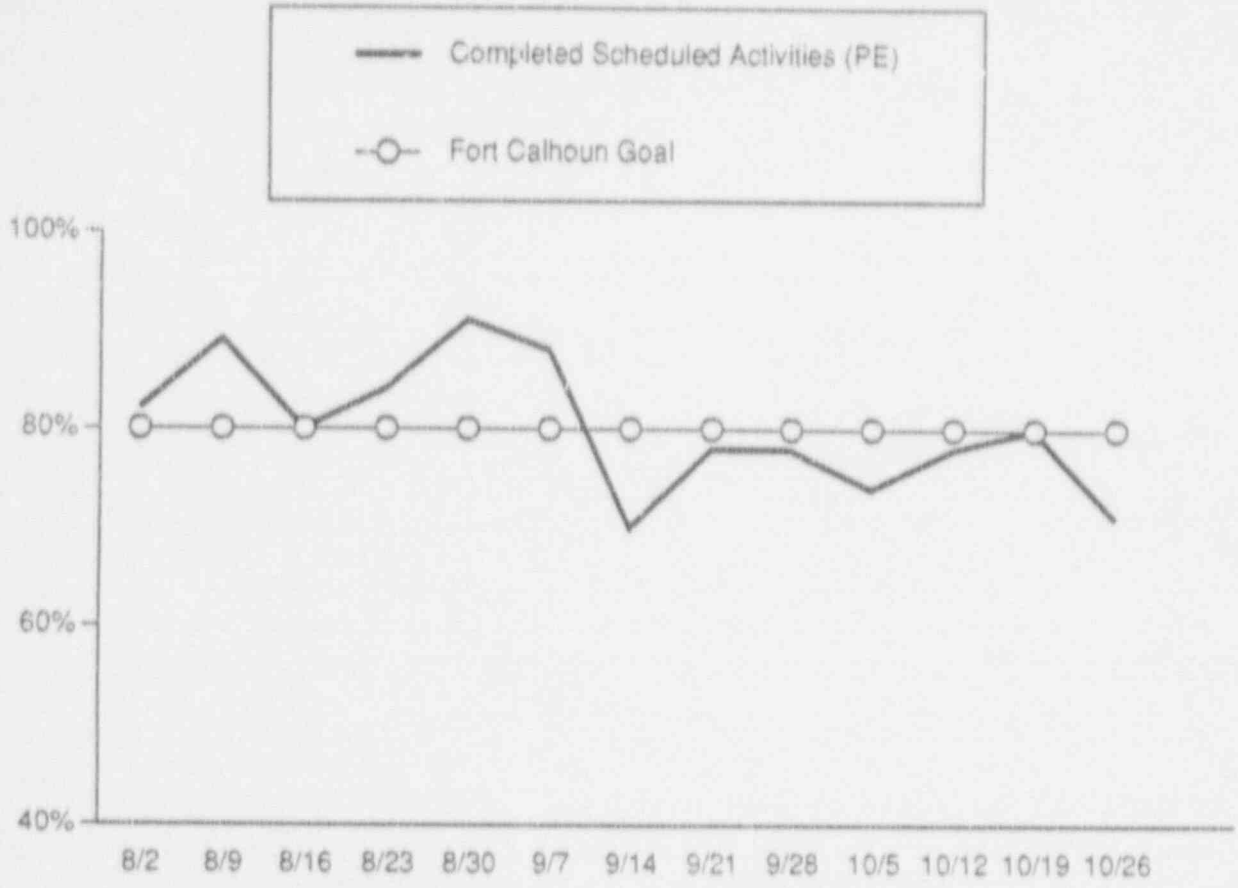
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	77%
Week 2	70%
Week 3	85%
Week 4	81%

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 MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

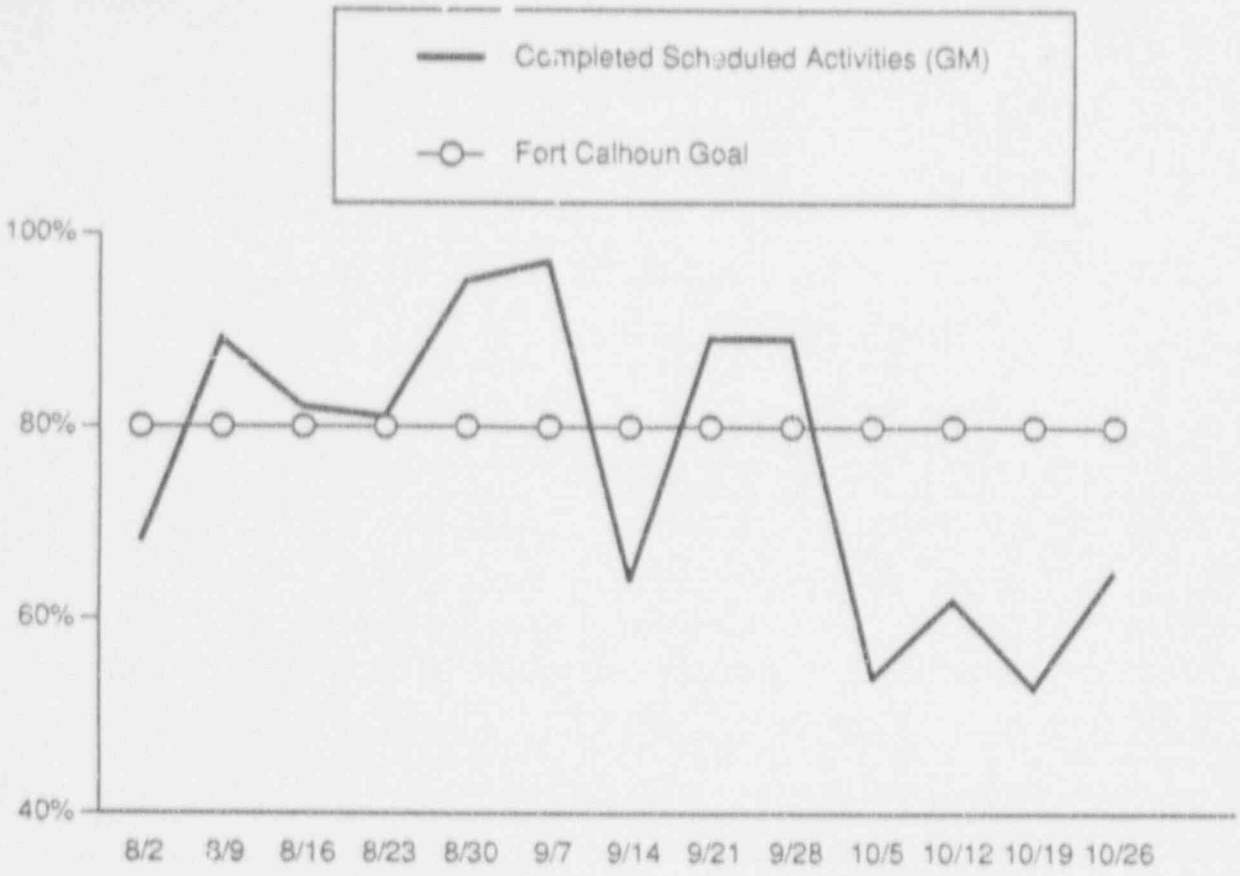
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	74%
Week 2	78%
Week 3	80%
Week 4	71%

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

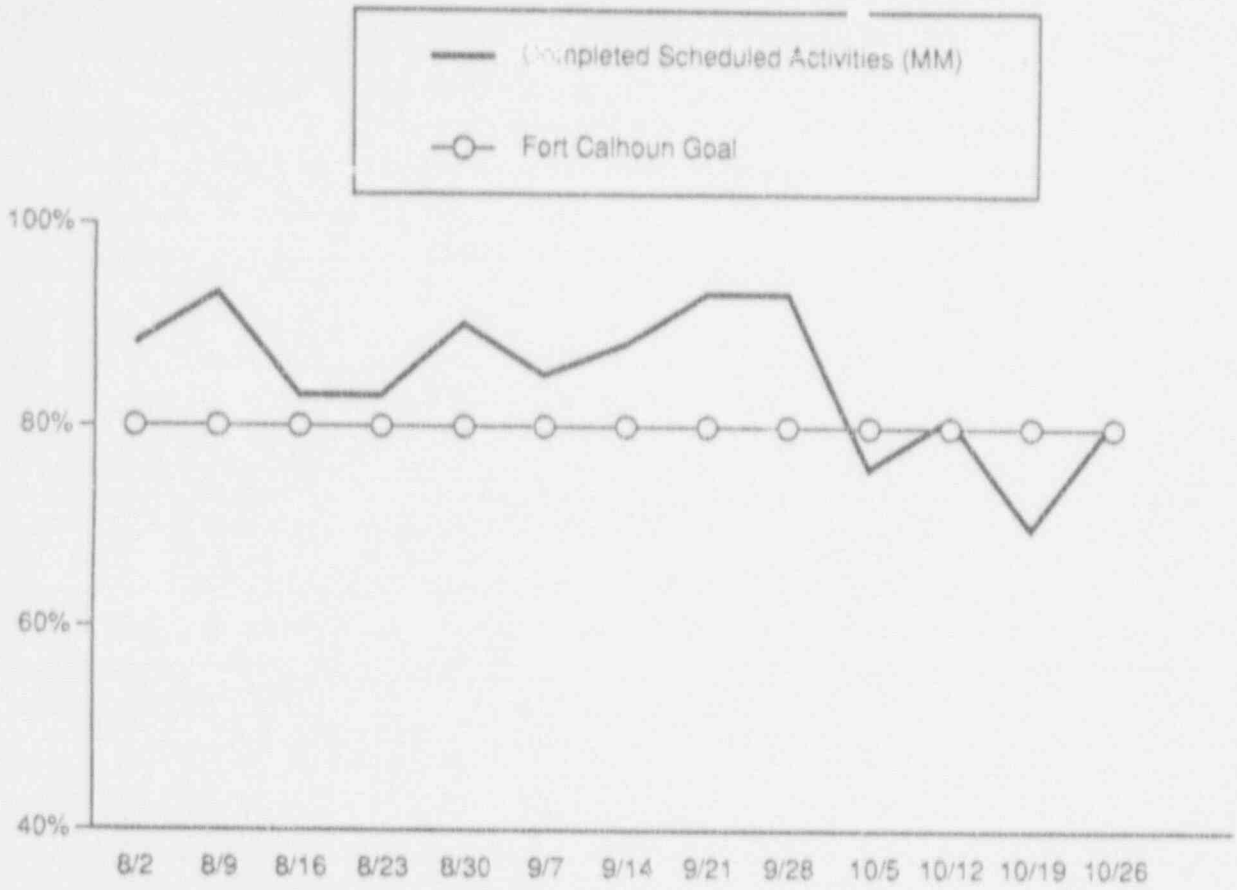
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	54%
Week 2	62%
Week 3	53%
Week 4	65%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES (MECHANICAL MAINTENANCE)

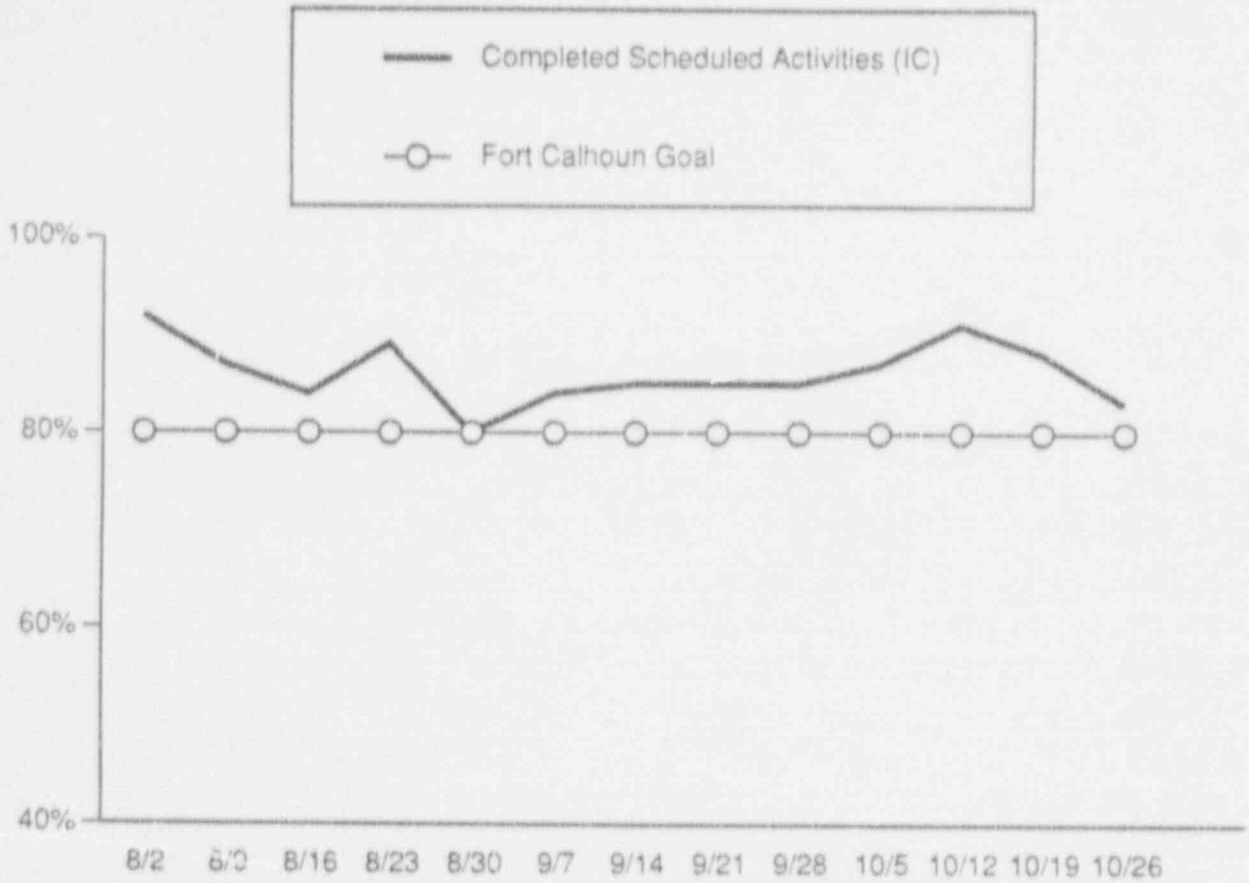
This indicator shows the percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities concerning Mechanical Maintenance. Maintenance activities include MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

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

Reporting Month	Completed Scheduled Activities
Week 1	76%
Week 2	81%
Week 3	70%
Week 4	81%

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 MWRs, MWOs, STs, PMOs, calibrations, and miscellaneous maintenance activities.

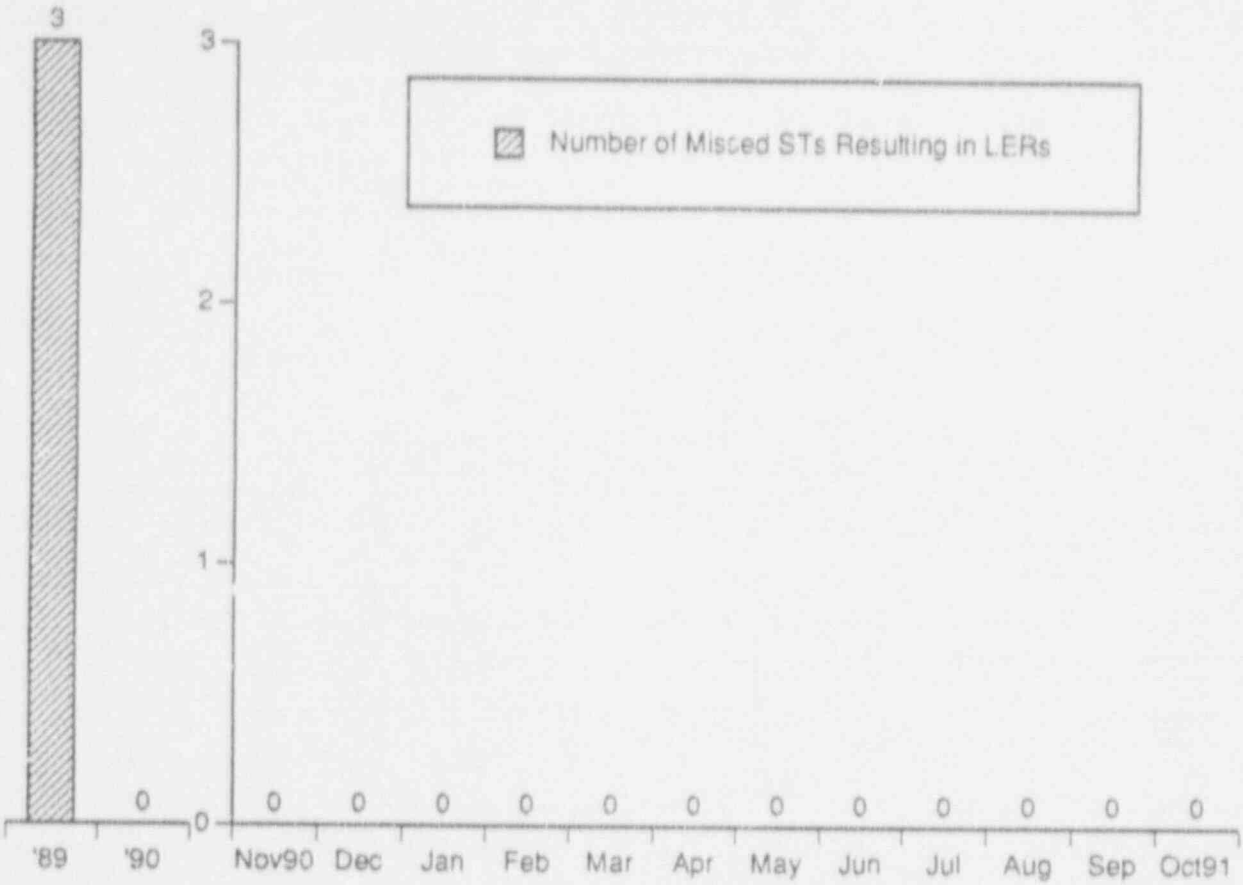
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	87%
Week 2	91%
Week 3	88%
Week 4	83%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



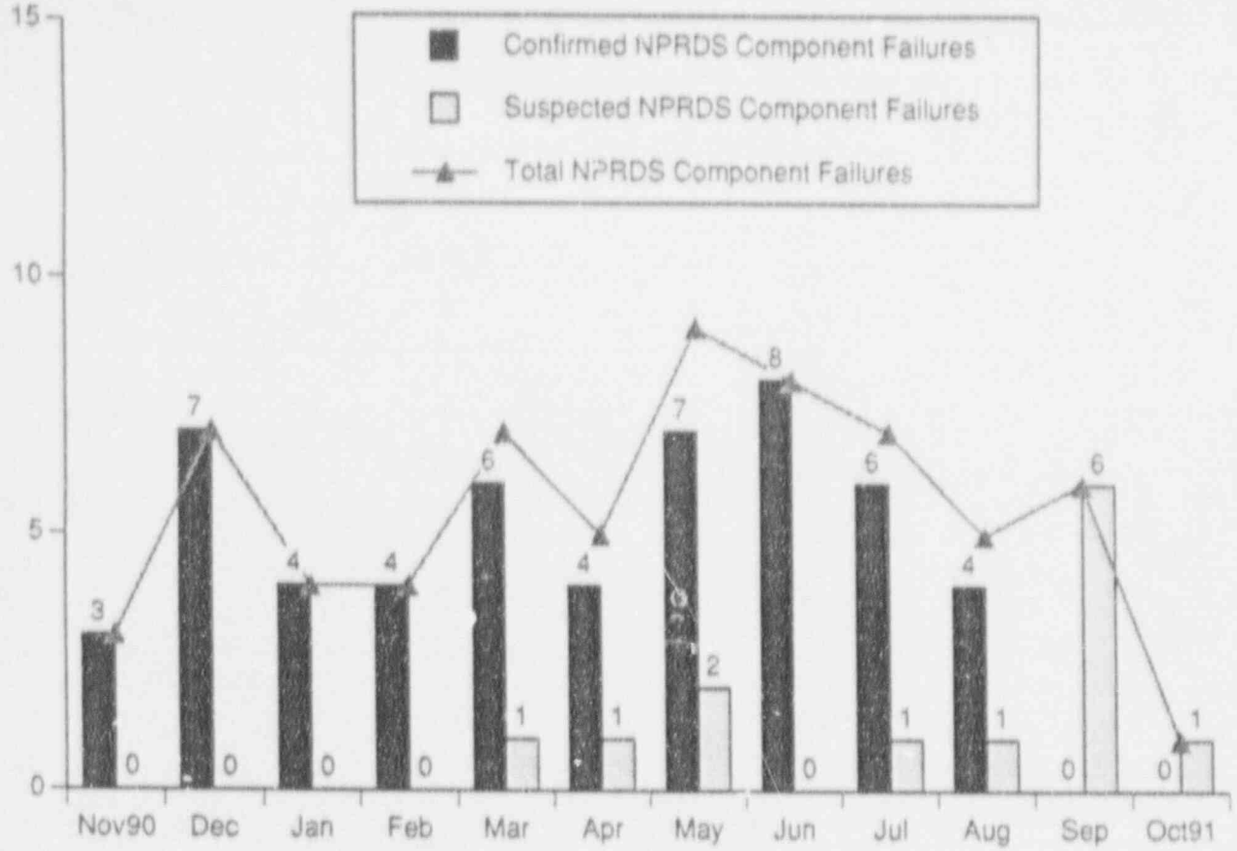
NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS

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

During the month of October 1991, there were no missed STs that resulted in LERs.

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

Adverse Trend: None SEP 60 & 61



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

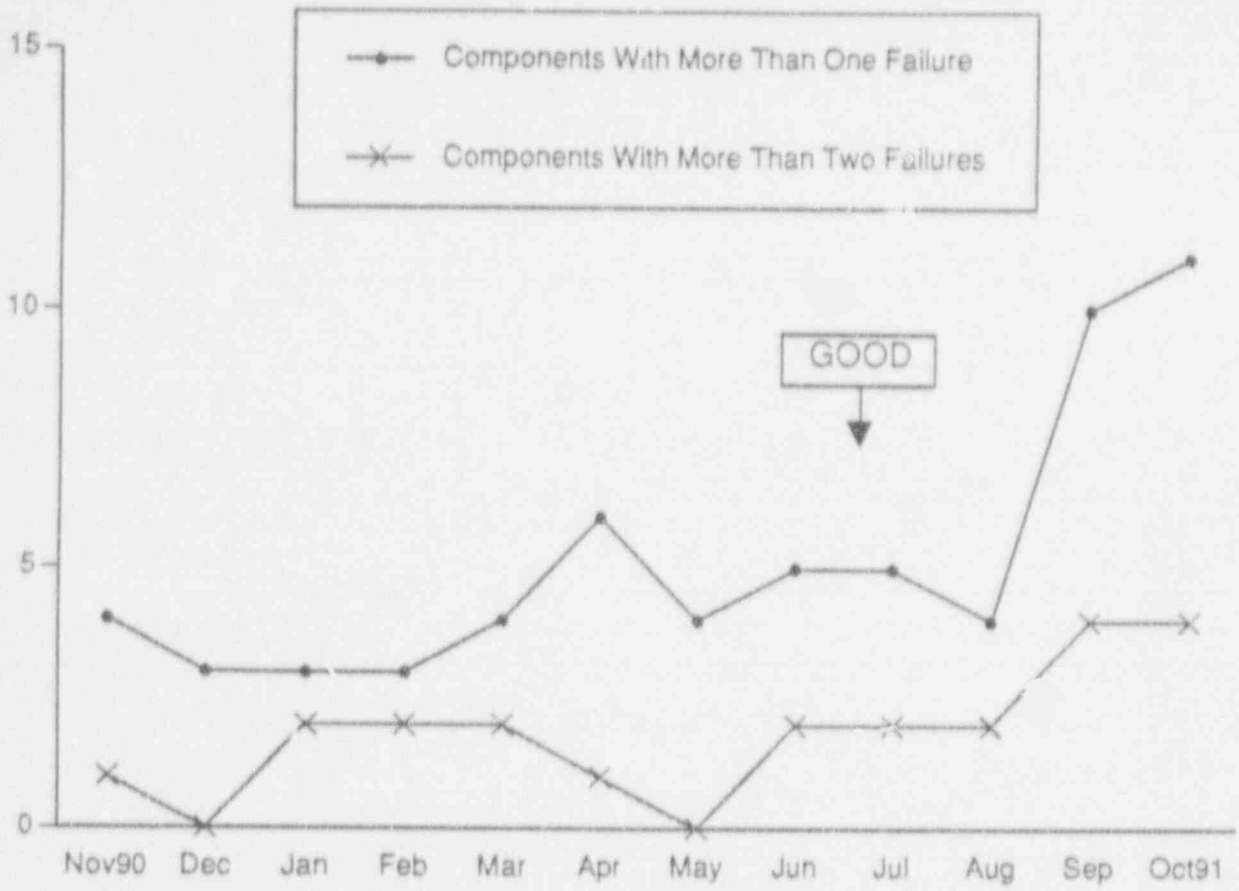
This indicator shows the total number of NPRDS component failures and the number of confirmed NPRDS component failures. The total number of NPRDS component failures is based upon the number of failure reports sent to INPO. The number of confirmed NPRDS component failures is based upon the number of failure 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 October 1991, there were no (0) confirmed NPRDS component failures.

The industry average for confirmed NPRDS component failures is 10 per month.

Data Source: Jaworski/Dowdy (Manager/Source)

Adverse Trend: None



MAINTENANCE EFFECTIVENESS

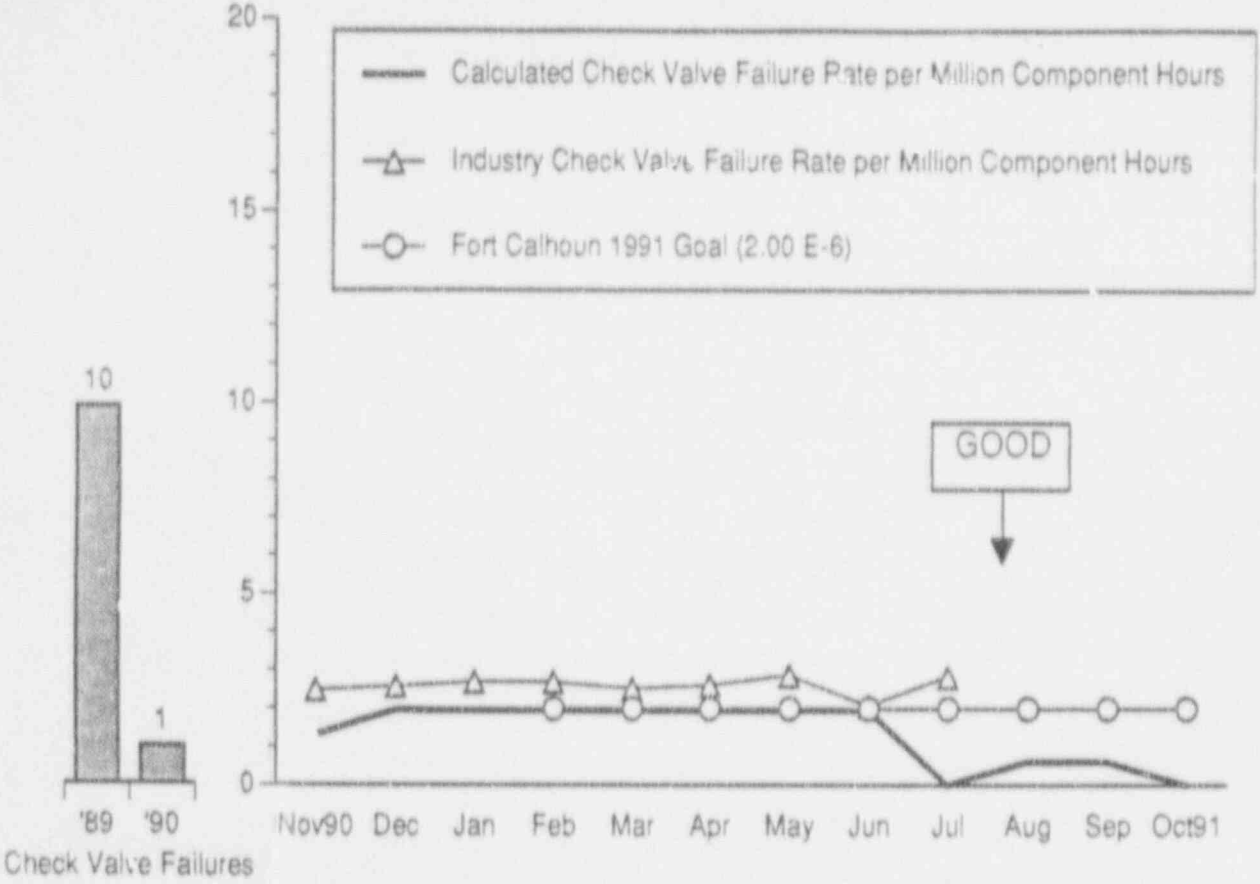
The Maintenance Effectiveness Indicator was developed following guidelines set forth by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data (NRC/AEOD). The NRC/AEOD is currently developing and verifying a maintenance effectiveness indicator using the Nuclear Plant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

This indicator has been revised to show the number of NPRDS components with more than one failure during the last eighteen months and the number of NPRDS components with more than two failures during the last eighteen months. The number of NPRDS components with more than two failures in an eighteen month period should indicate the effectiveness of plant maintenance. (This change applies only to the September and October 1991 data. The data for September 1990 through August 1991 is based on a twelve month interval.)

During the last 18 reporting months there were 11 NPRDS components with more than 1 failure. 4 of the 11 had more than two failures. The tag numbers of these components are CH-1A, CH-1B, CH-1C and RC-4.

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.

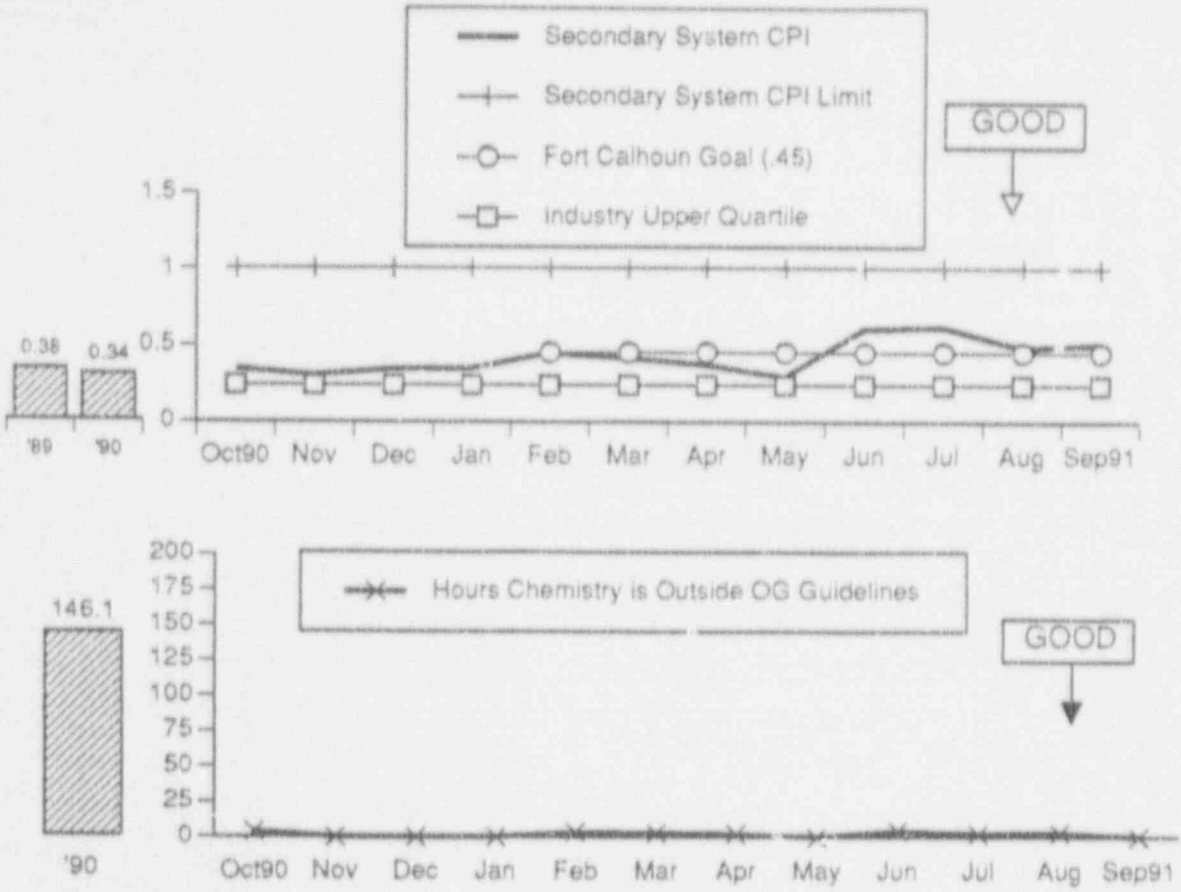
For July 1991, the Fort Calhoun Station reported an actual check valve failure rate of 6.14 E-7 while the industry reported an actual failure rate of 2.85 E-6. At the end of October, the Fort Calhoun Station reported a calculated check valve failure rate of zero.

The Fort Calhoun goal for this indicator is a failure rate of 2.00 E-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.

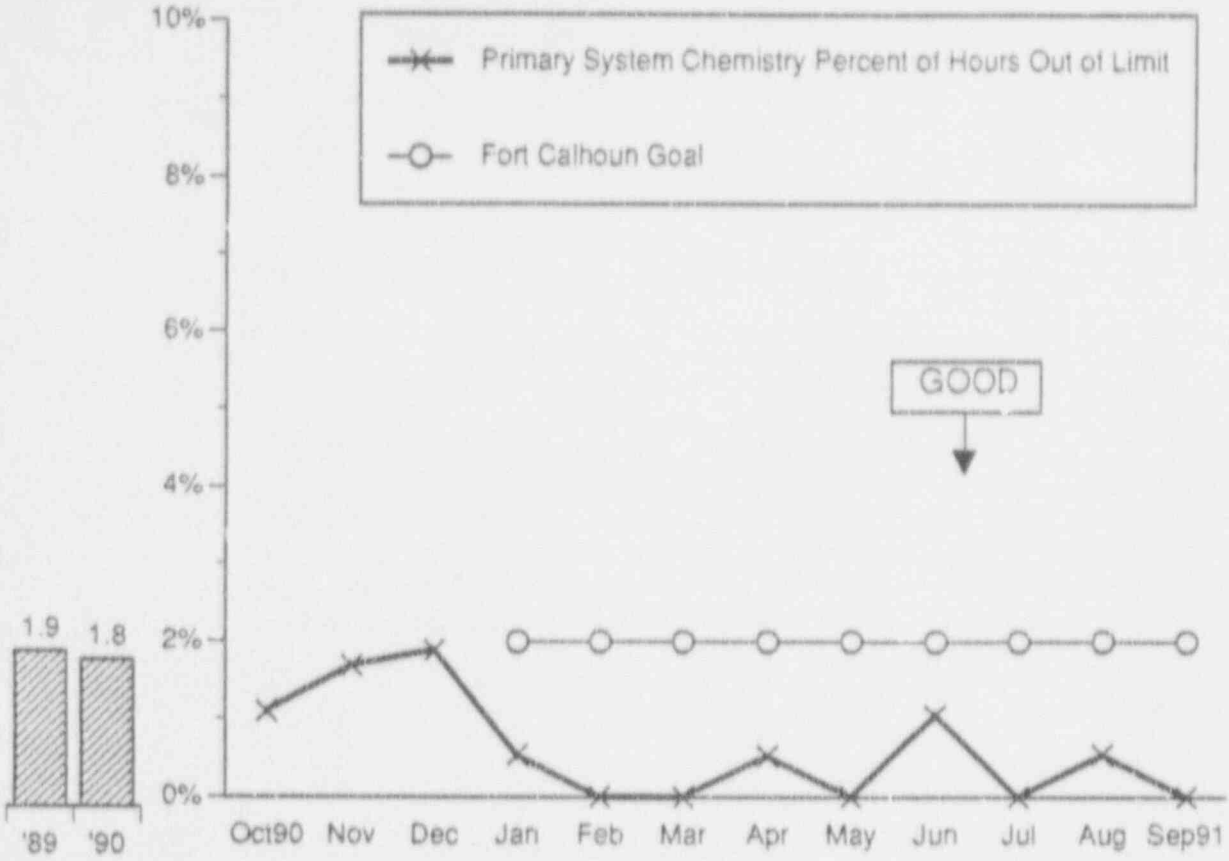
The Fort Calhoun goal for the CPI is 0.45. The CPI was reported as 0.506 for the month of September. The industry upper quartile value for this indicator was 0.16 for August 1989 through Dec. 1989. The CPI industry value then changed to 0.24 for 1990.

The number of hours outside the OG guidelines was reported as zero hours for the month of September.

The above two chemistry indicators are one month behind the reporting month due to the time needed for 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.

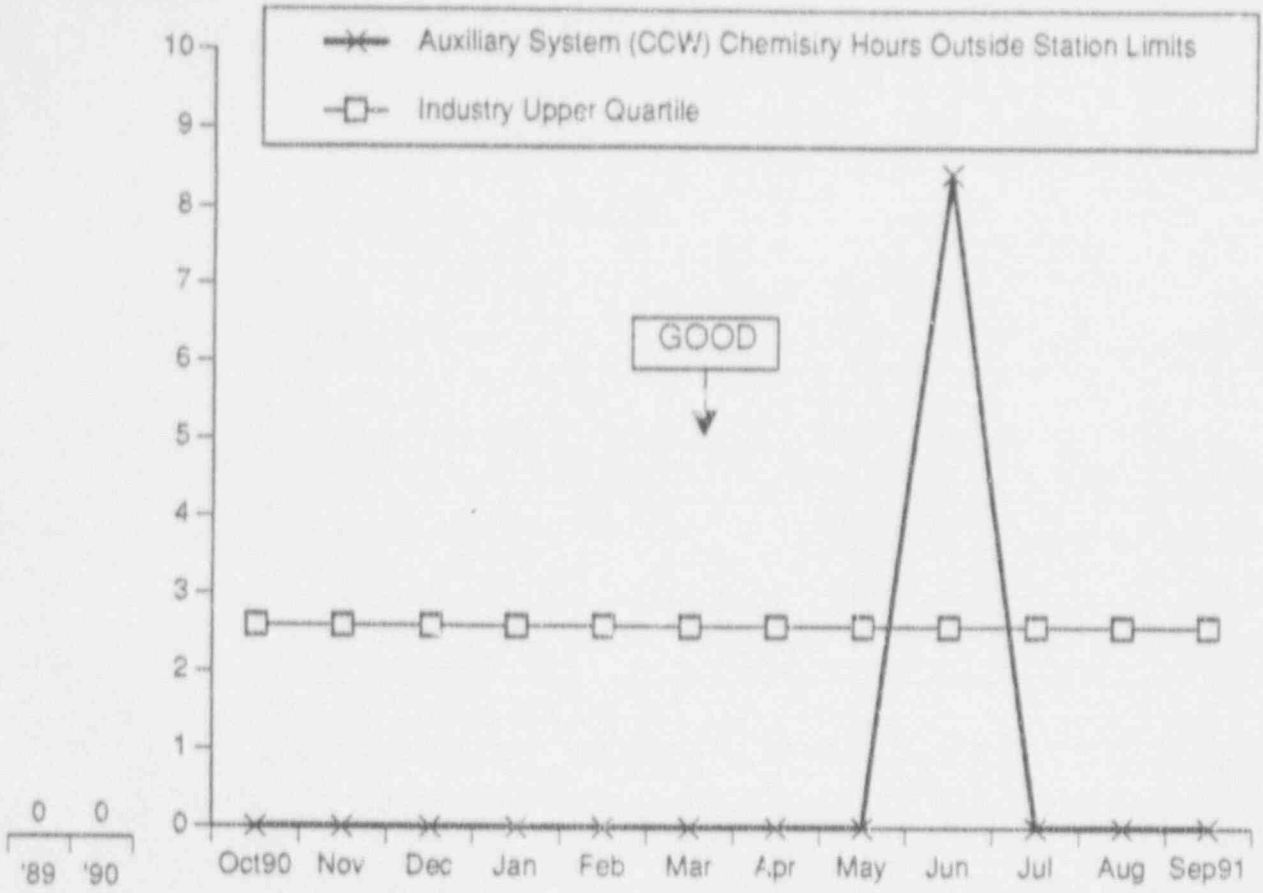
The Fort Calhoun goal for this indicator is 2%.

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

A plant shutdown and start-up in September 1990 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

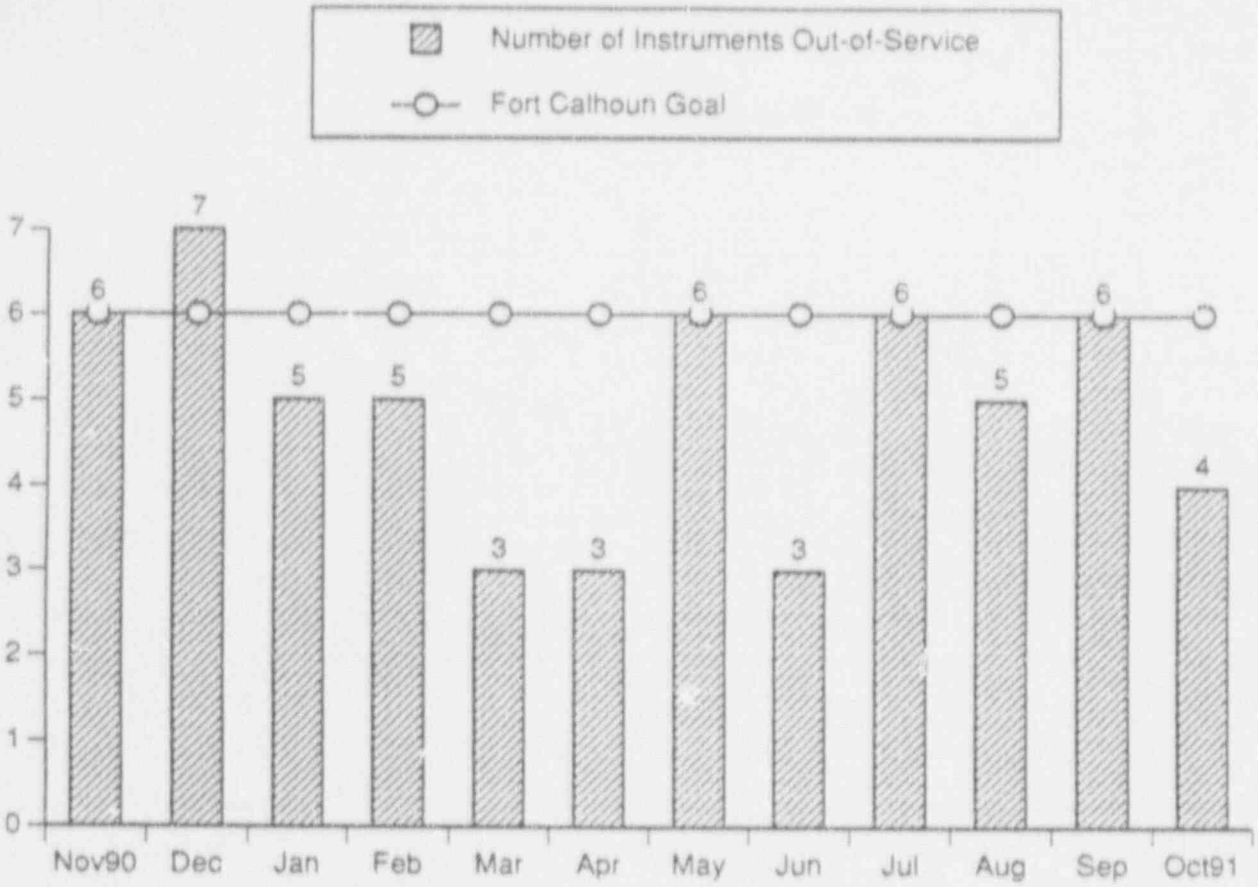
The Auxiliary System Chemistry Hours Outside Station Limits indicator tracks the monthly hours that the Component Cooling Water (CCW) system is outside the station chemistry limit. The above chemistry indicator is one month behind the reporting month due to the time needed for data collection and evaluation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

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

The industry upper quartile value for auxiliary systems chemistry hours outside station limits is 2.6 hours.

Data Source: Franco/Glantz (Manager/Source)

Adverse Trend: None



IN-LINE CHEMISTRY INSTRUMENTS OUT-OF-SERVICE

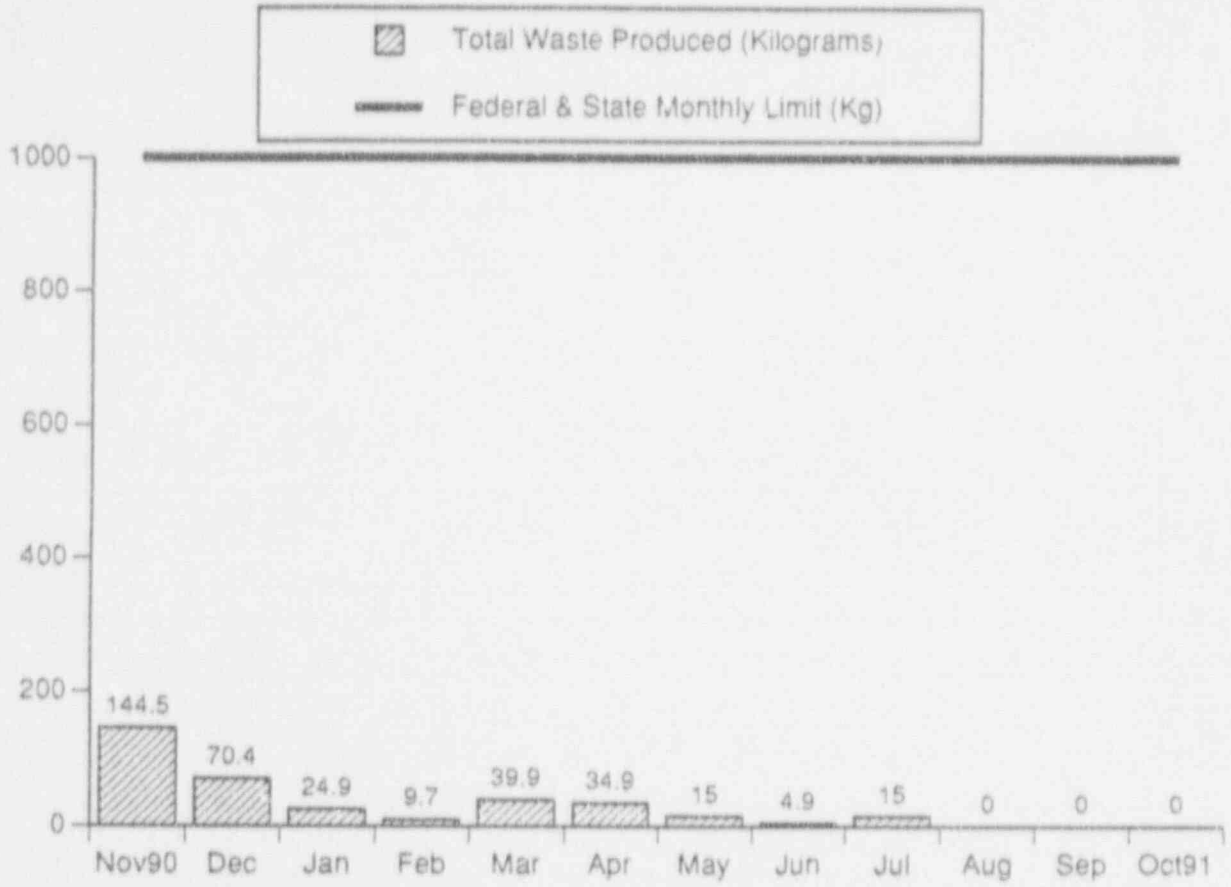
This indicator shows the total number of in-line chemistry system instruments that are out-of-service at the end of the reporting month. The chemistry systems involved in this indicator include the Secondary System and the Post Accident Sampling System (PASS).

At the end of October there was a total of 4 in-line chemistry instruments that were out-of-service. Of these 4 instruments, 2 were 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 that are counted for this indicator.

Data Source: Patterson/Renaud (Manager/Source)

Adverse Trend: None



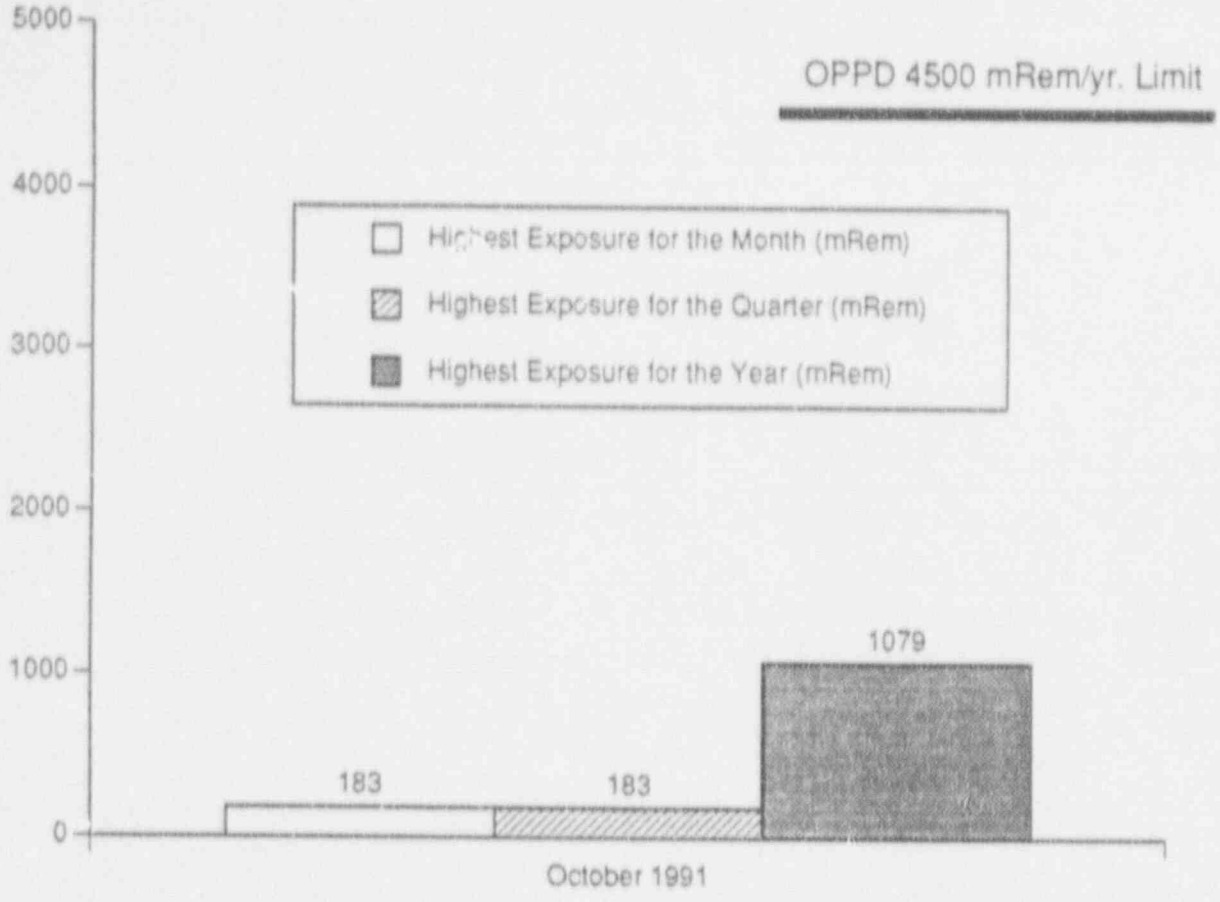
HAZARDOUS WASTE PRODUCED

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 October, 0.0 kilograms of non-halogenated hazardous waste was produced, 0.0 kilograms of halogenated hazardous waste was produced, and 0.0 kilograms of other hazardous waste was produced.

Date Source: Patterson/Henning (Manager/Source)

Adverse Trend: None



MAXIMUM INDIVIDUAL RADIATION EXPOSURE

During October 1991, an individual accumulated 183 mRem which was the highest individual exposure for the month.

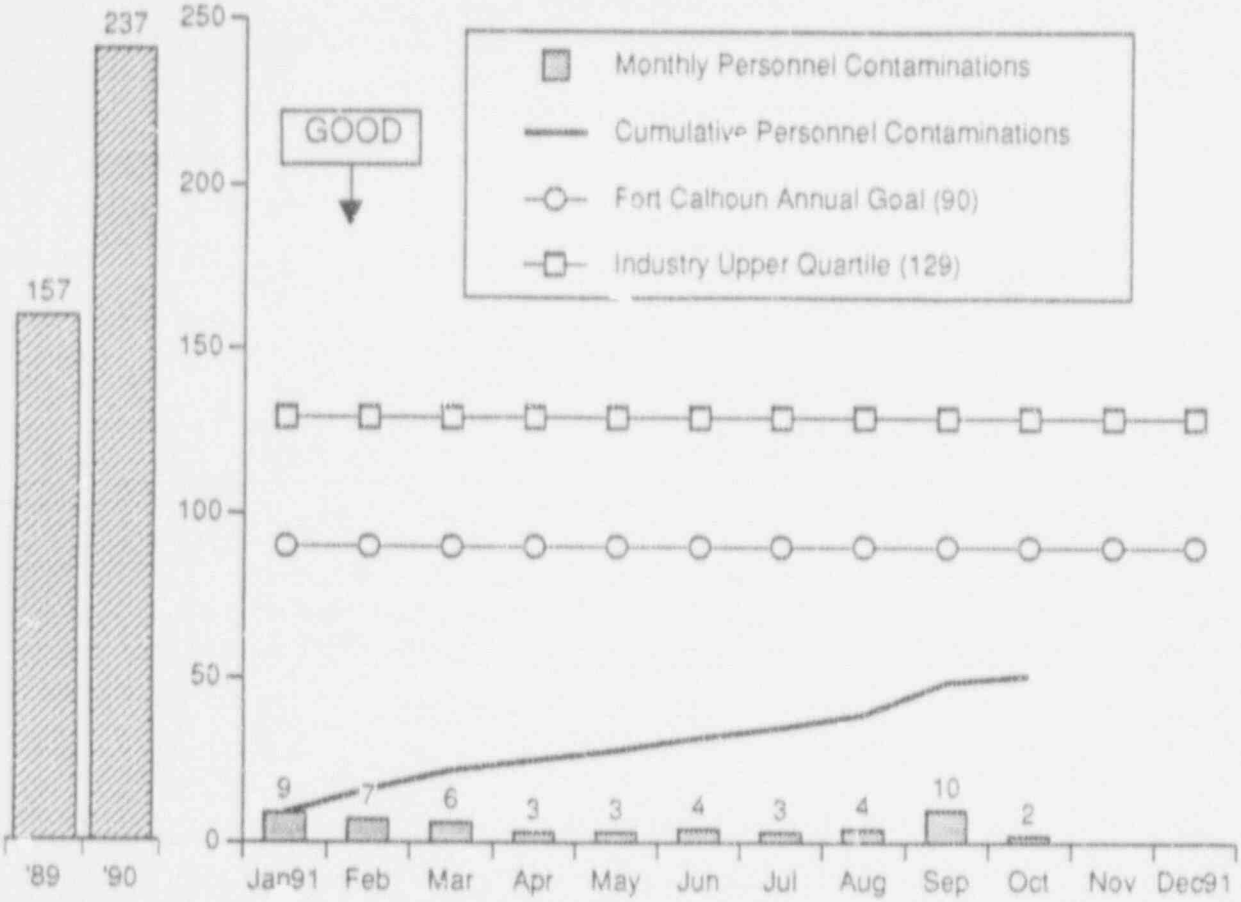
The maximum individual exposure to date for the fourth quarter of 1991 has been 183 mRem.

The maximum individual exposure reported to date for 1991 has been 1,079 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 51 contaminations have occurred during 1991.

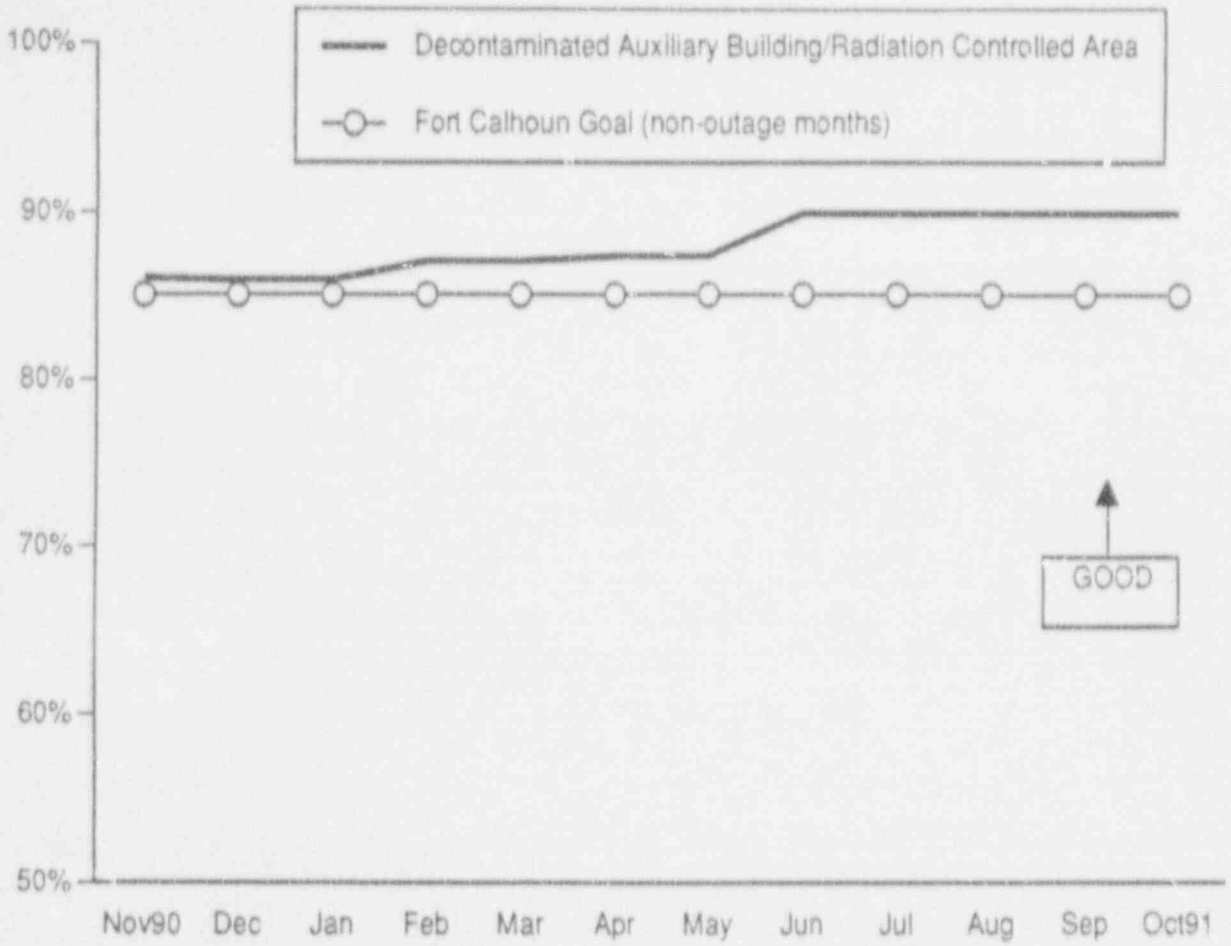
There was a total of 237 skin and clothing contaminations in 1990.

The 1991 goal for skin and clothing contaminations is 90.

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



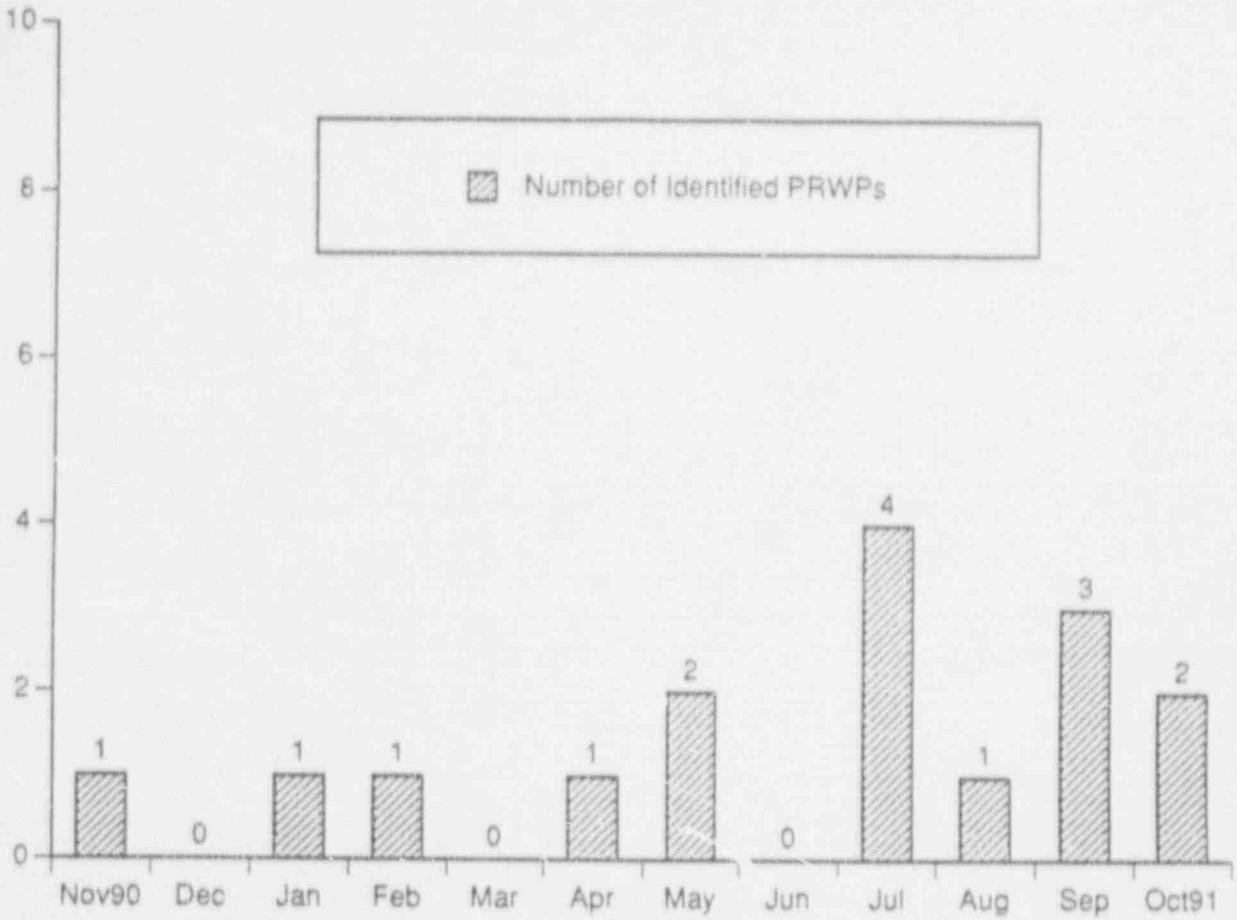
DECONTAMINATED RADIATION CONTROLLED AREA

This indicator (formerly titled "Decontaminated Auxiliary Building") was revised in June 1991 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 that is decontaminated (clean) based on the total square footage, a Fort Calhoun goal of 85% decontaminated auxiliary building (non-outage months) and a goal of 75% decontaminated auxiliary building (outage months).

At 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 Program Indicator shows the number of Poor Radiological Work Practices (PRWPs) which were identified during the reporting month. The PRWPs are identified through a review of the monthly Radiological Occurrence Reports and Personnel Contamination Reports.

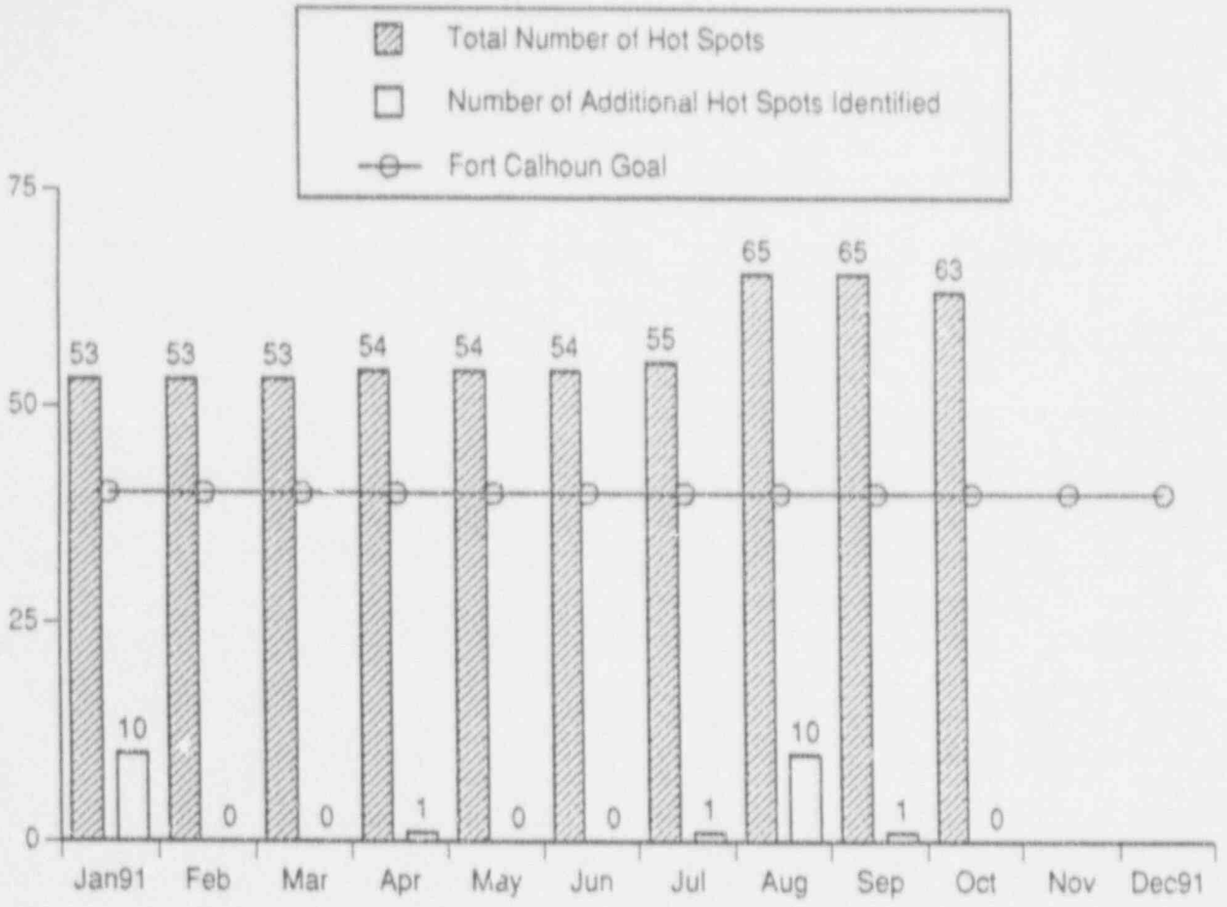
The number of PRWPs which are identified each month should indirectly provide a means to qualitatively assess supervisor accountability for their workers' radiological performance.

During the month of October 1991, two PRWPs were identified.

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None

SEP 52



NUMBER OF HOT SPOTS

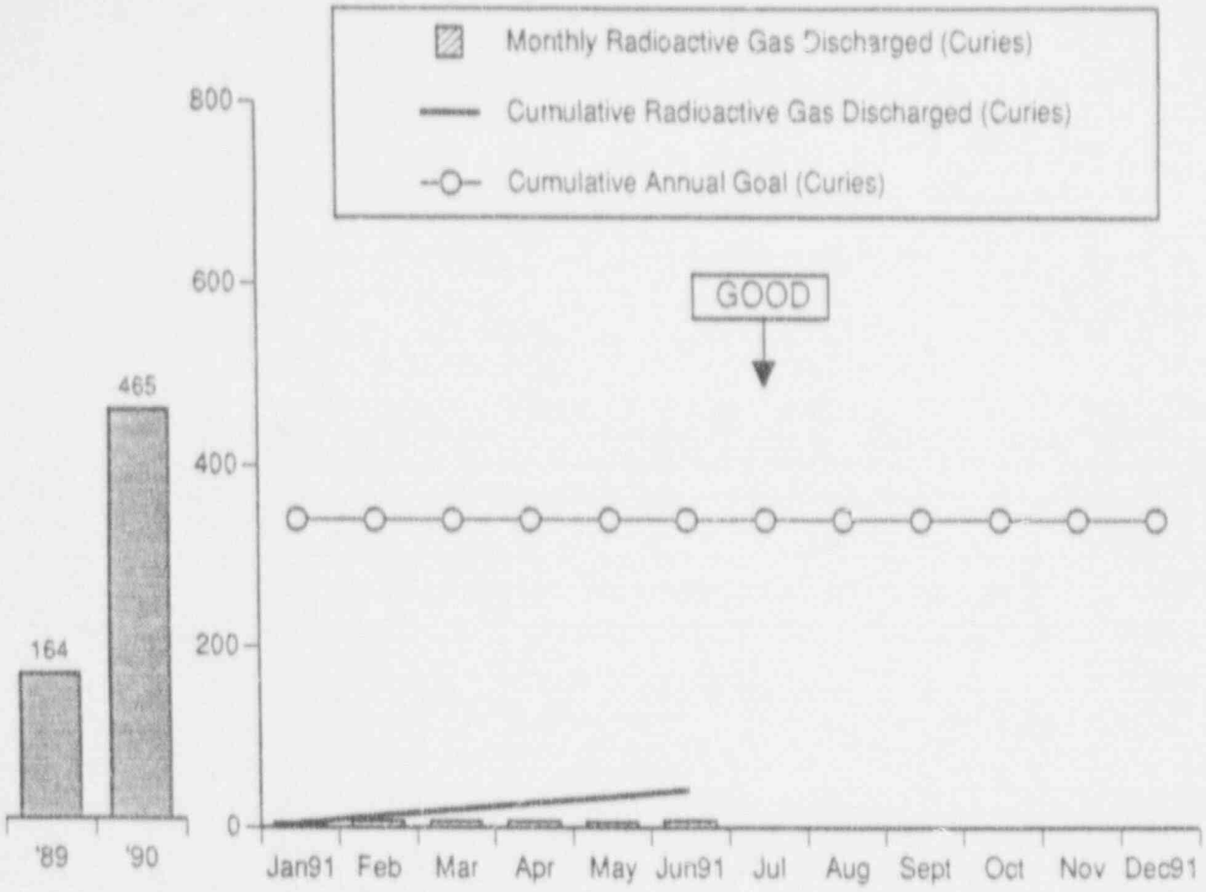
This indicator shows the total number of hot spots which have been identified to exist in the Fort Calhoun Station and have been documented through the use of a hot spot identification sheet. A hot spot is defined as a small localized source of high radiation. A hot spot occurs when the contact dose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

ALARA personnel conducted an in-depth survey of the entire auxiliary building during the month of August. During October two hot spots were eliminated and no new hot spots were identified .

The Fort Calhoun goal for this indicator is 40.

Date Source: Patterson/Williams (Manager/Source)

Adverse Trends: None



GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT.

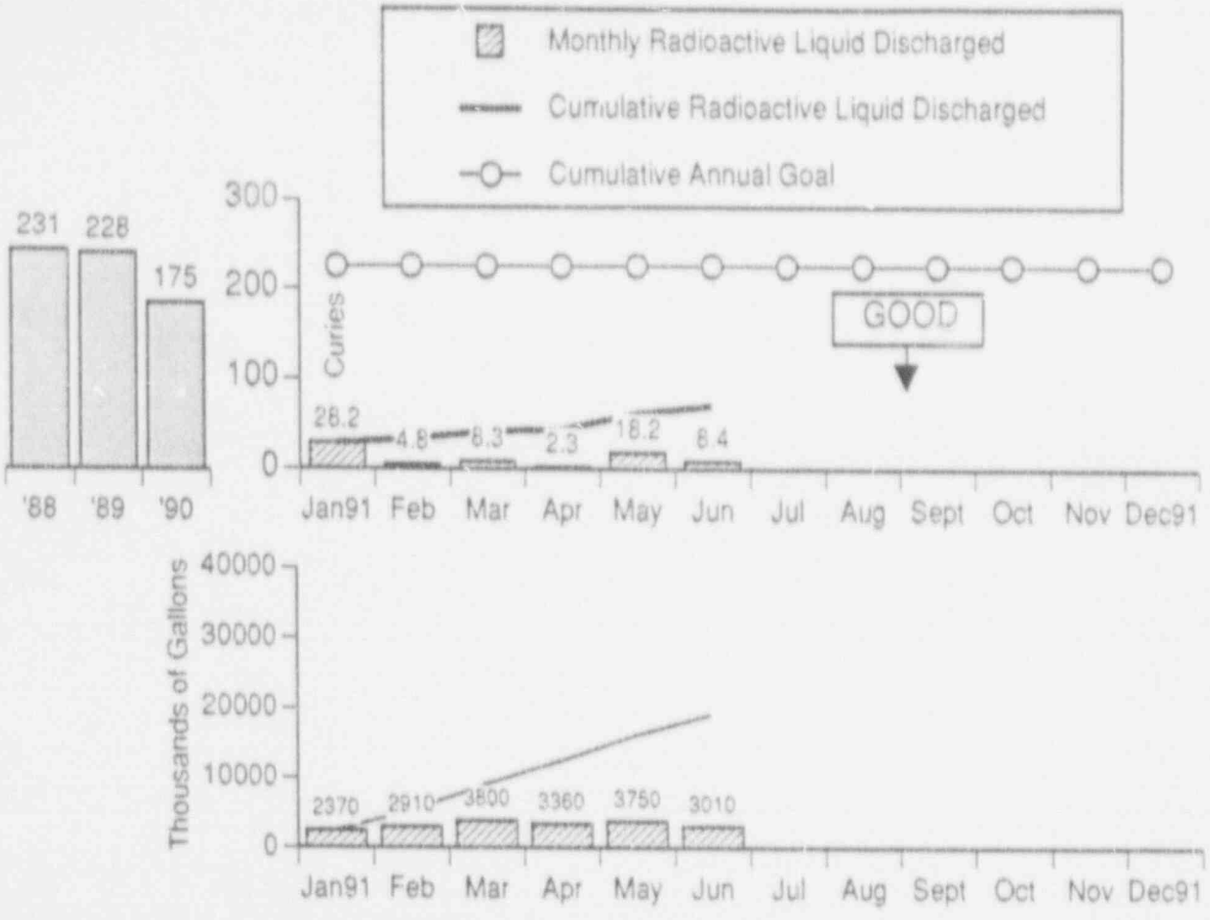
The gaseous radioactive waste being discharged to the environment is shown for January 1, 1991 through June 30, 1991. A total of 42.2 curies have been released to the environment during this time.

The Fort Calhoun Station cumulative annual goal for 1991 is 340 curies for this indicator.

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

Data Source: Franco/Krist (Manager/Source)

Adverse Trend: None



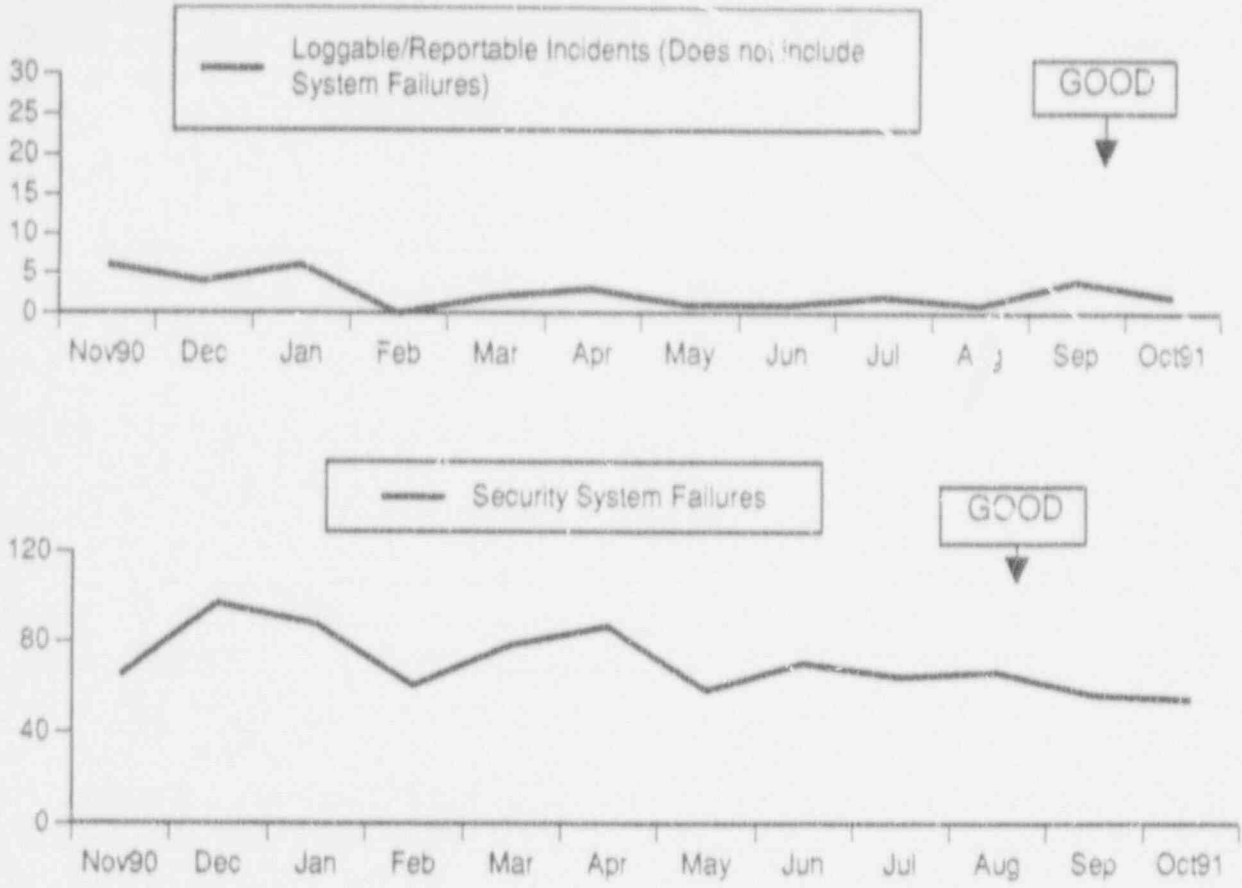
LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

The liquid radioactive waste being discharged to the environment is shown for January 1, 1991 through June 30, 1991. The liquid radioactive waste that was discharged to the environment from all sources totaled 70.3 curies during this time. The Fort Calhoun Station cumulative annual goal for 1991 is 225 curies.

The bottom graph shows the volume of liquid radioactive waste that has been released from 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 19.2 million gallons from January through June 1991. 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)

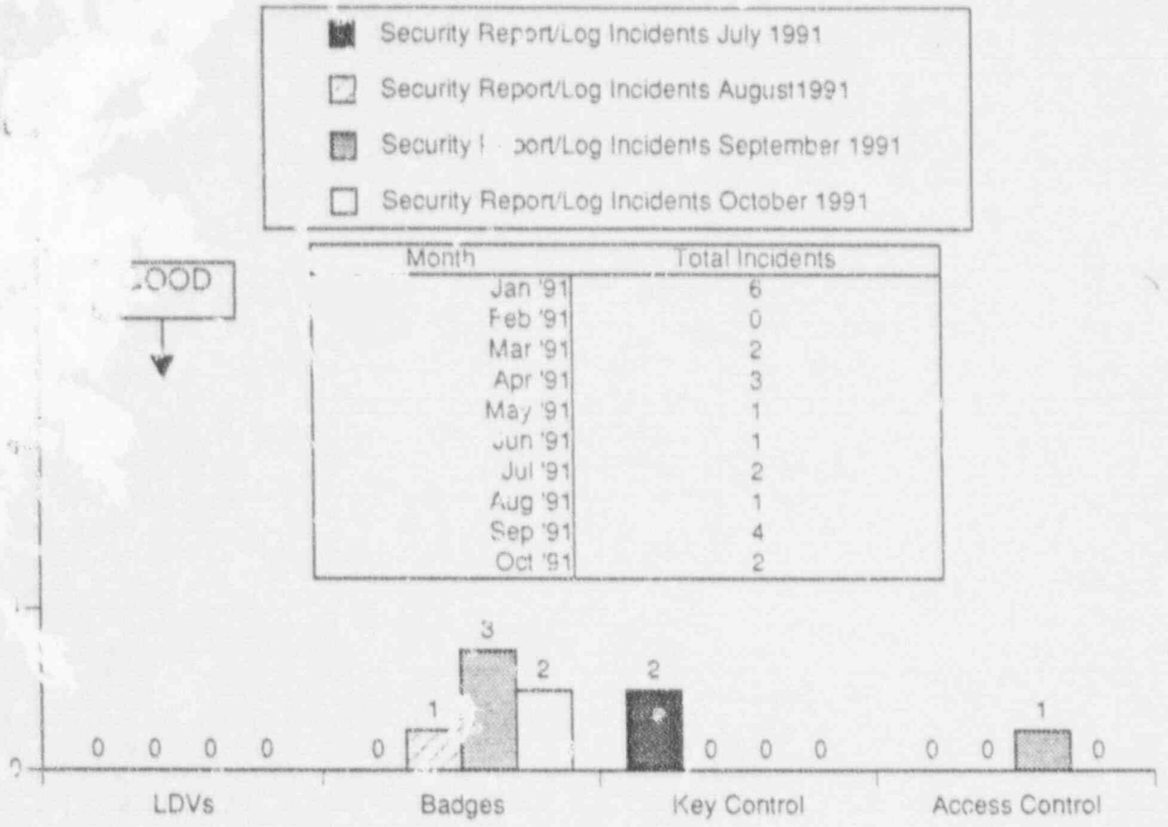
The Loggable/Reportable Incidents (Security) Indicator is depicted in two separate graphs. The first chart depicts the total number of loggable/reportable incidents concerning Licensee Designated Vehicles (LDVs); Security Badges; Security Key Control; and Access Control and Authorization which occurred 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 October 1991, there were 55 loggable/reportable incidents identified. System failures accounted for 53 (96%) of the loggable/reportable incidents, and 35 (66%) of these were environmental failures. The two loggable security incidents involved two lost/unattended security badges. The increase in environmental failures was primarily due to poor weather conditions during the last week of the reporting period.

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None

SEP 58

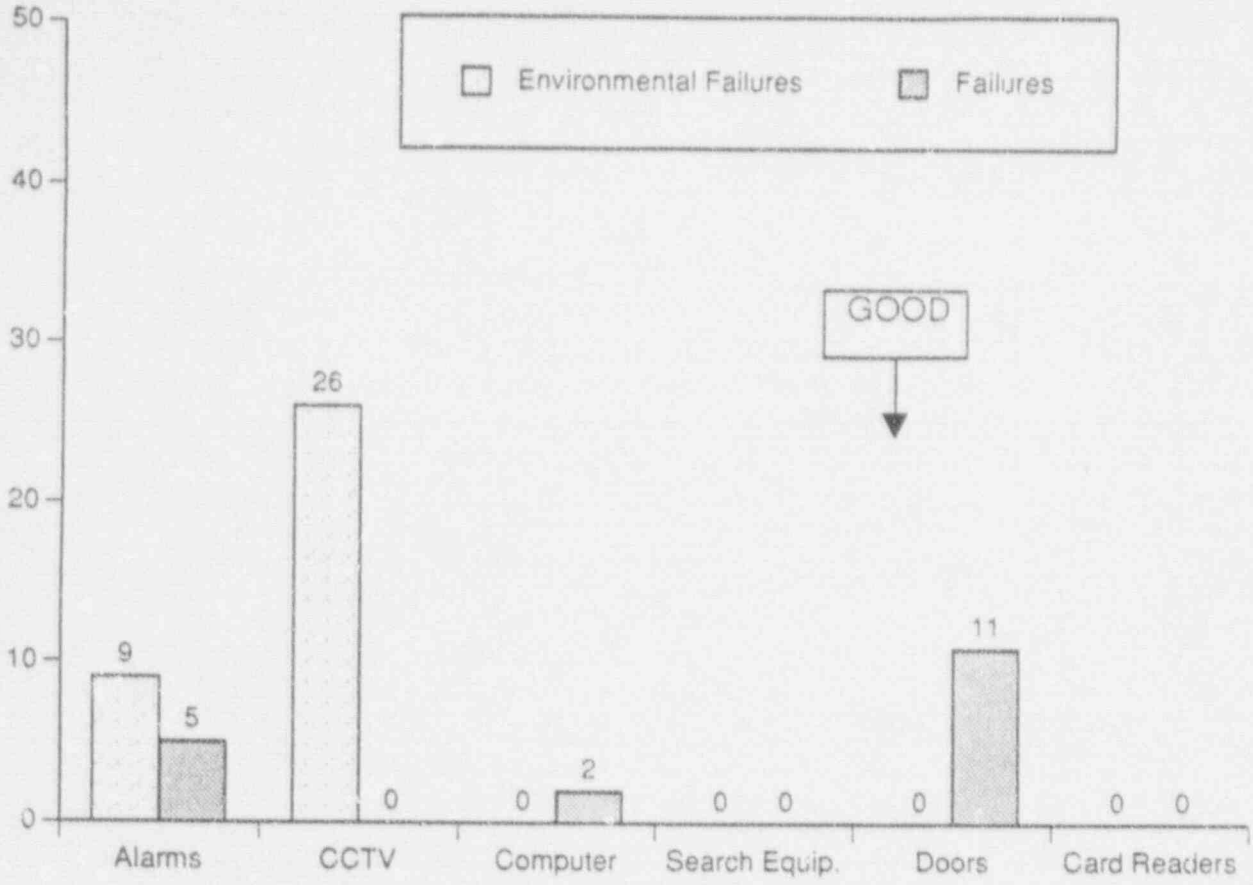


SECURITY INCIDENT BREAKDOWN

This indicator now 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

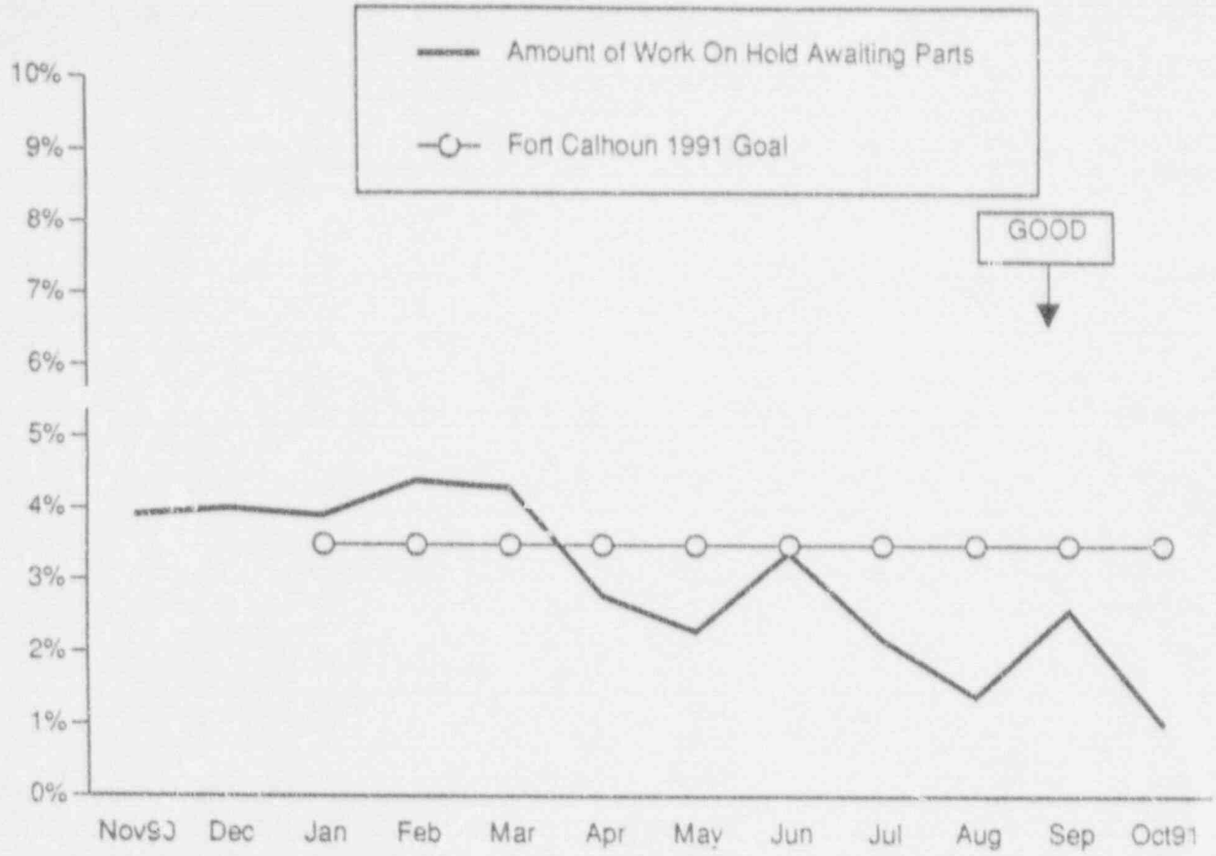
This indicator shows the number of incidents concerning the following items for the reporting month: Alarm System Failures, CCTV failures, Security Computer Failures, Search Equipment Failures, Door Hardware Failures, and Card Reader Failures. Alarm systems and CCTV failures are now divided into two categories: environmental failures and failures as defined in the performance indicator definitions.

Number of Incidents:	September '91		October '91	
System Failures	Env. Failures	Failures	Env. Failures	Failures
Alarms	7	9	9	5
CCTV	18	1	26	0
Computer	N/A	3	N/A	2
Search Equipment	N/A	3	N/A	0
Door Hardware	N/A	11	N/A	11
Card Reader	N/A	0	N/A	0
Totals	25	28	35	18

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None

SEP 58



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

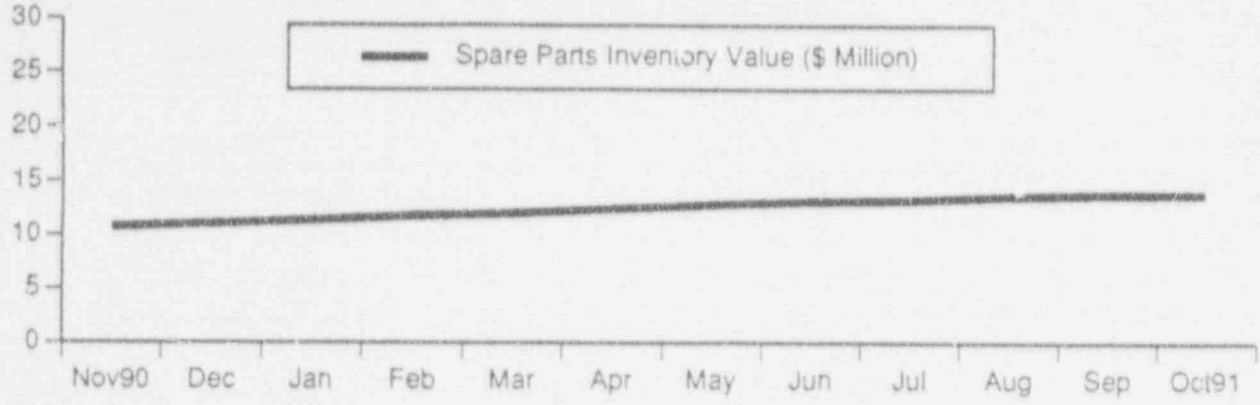
This procurement indicator displays the percentage of open, non-outage maintenance items that are on hold awaiting parts, to the total amount of open, non-outage maintenance items.

There was a total of 780 open, non-outage maintenance work orders (MWOs) with 8 of these MWOs on hold awaiting parts at the end of the reporting month.

The 1991 Fort Calhoun Goal for this indicator is 3.5% of the total number of open, non outage MWOs awaiting parts.

Data Source: Willrett/CHAMPS (Manager/Source)

Adverse Trend: None

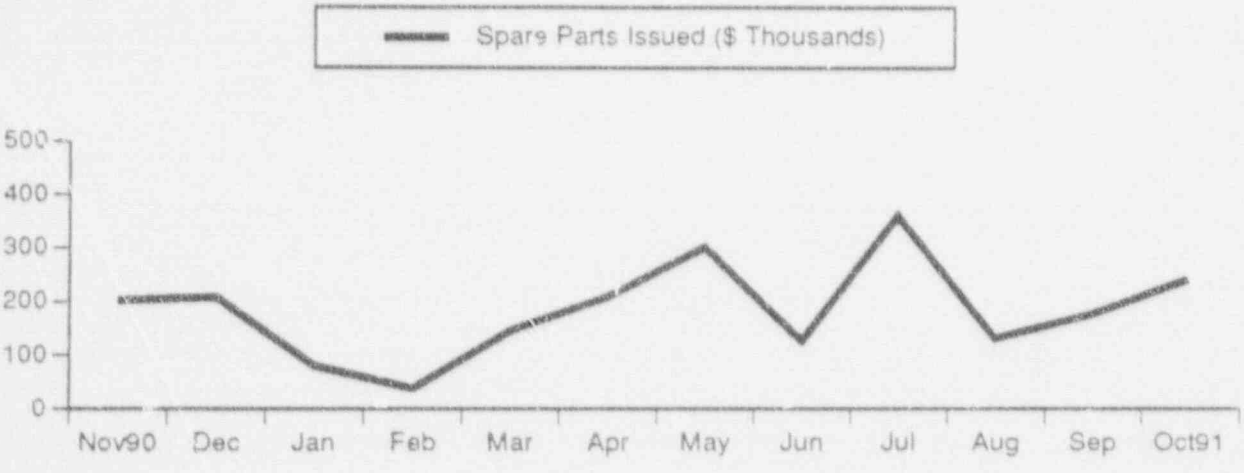


SPARE PARTS INVENTORY VALUE

The spare parts inventory value at the Fort Calhoun Station at the end of October was reported as $13,805,326.

Data Source: Steele/Huliska (Manager/Source)

Adverse Trend: None

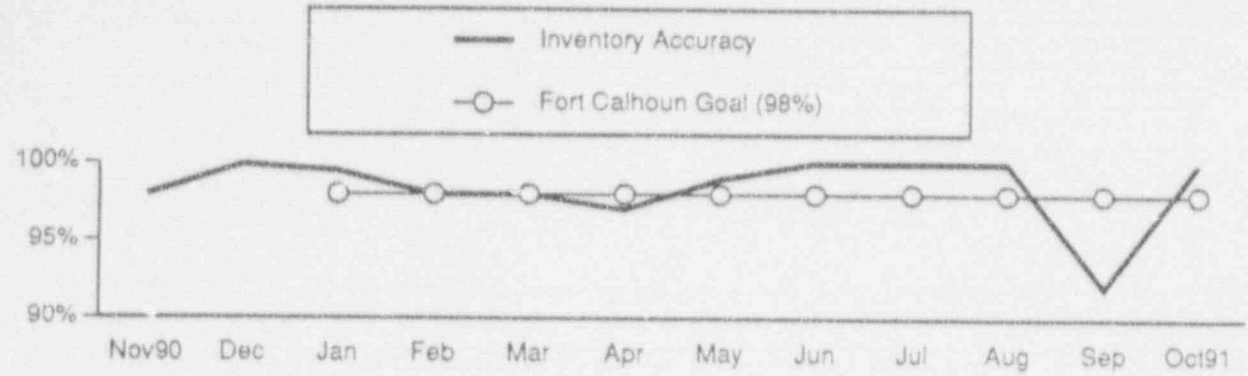


SPARE PARTS ISSUED

The value of the spare parts issued during October totaled $242,735.

Data Source: Steele/Miser (Manager/Source)

Adverse Trend: None

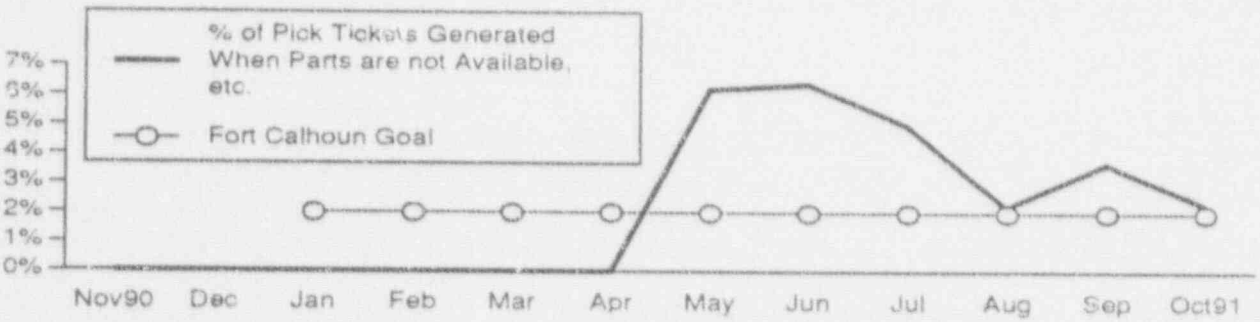


INVENTORY ACCURACY

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 October 1991, 1112 different line items were counted in the warehouse. Of the 1112 line items counted, 4 items needed count adjustments. The inventory accuracy for the month of September was reported as 100%. The Fort Calhoun 1991 goal for this indicator is 98%.

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



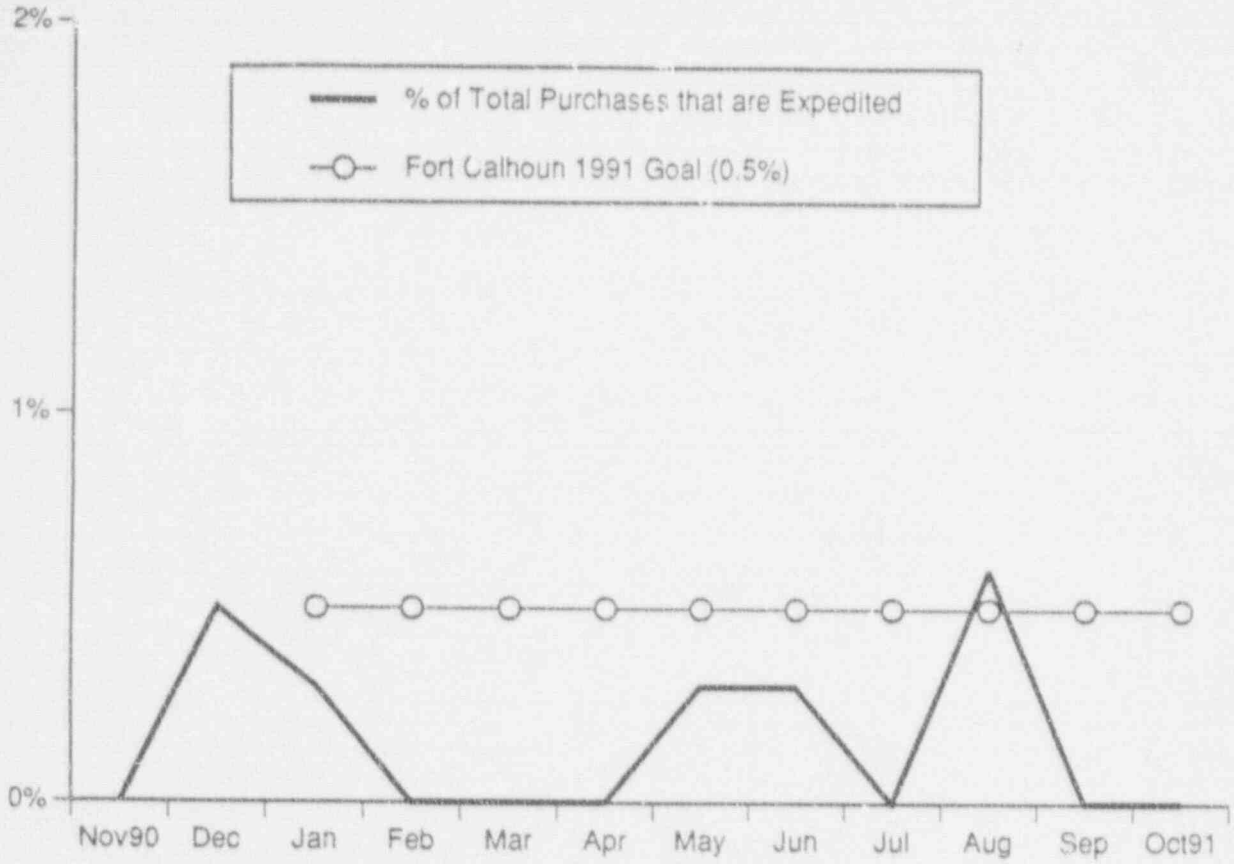
STOCKOUT RATE

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

During October, a total of 1452 Pick Tickets were generated. Of the 1452 Pick Tickets generated, 34 Pick Tickets (2.3%) were generated when the amount of parts requested was equal to or less than the minimum stocking level and parts were not available.

The Fort Calhoun 1991 goal for this indicator is 2%.

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



EXPEDITED PURCHASES

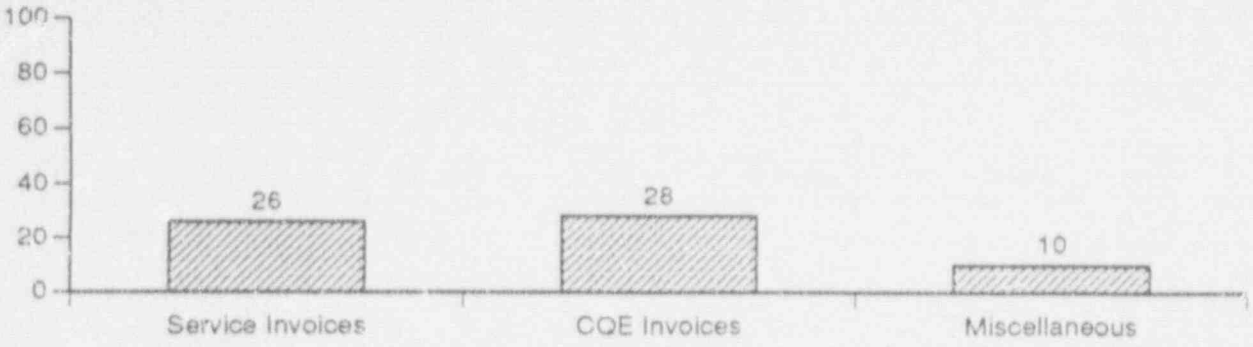
This indicator shows the percentage of expedited purchases compared to the total number of purchase orders generated during the reporting month.

During October, there was a total of 326 purchase orders generated. Of the 326 purchase orders generated, none (0) were expedited purchases.

The Fort Calhoun 1991 goal for this indicator is 0.5%.

Date Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None

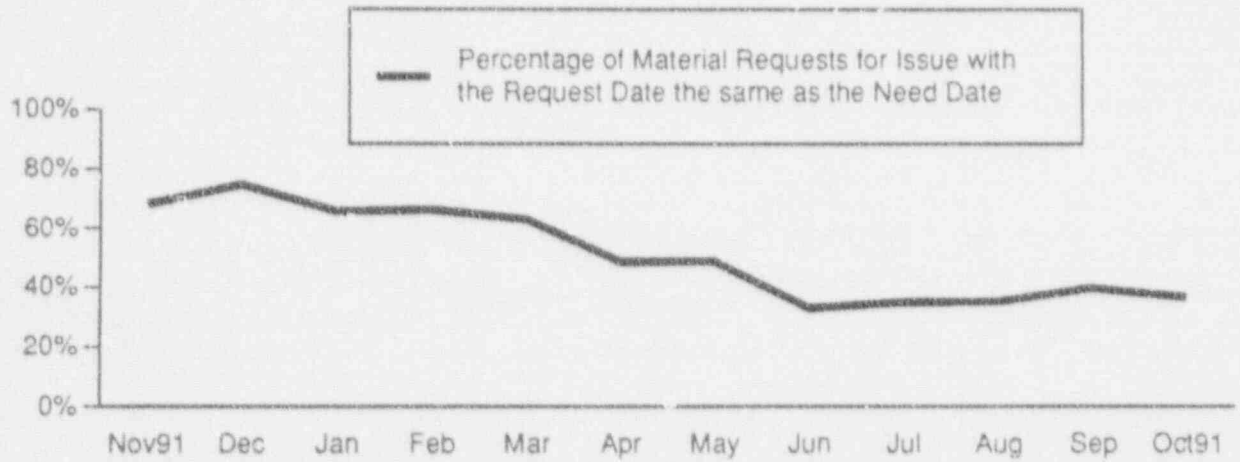


INVOICE BREAKDOWN

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

Date Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None



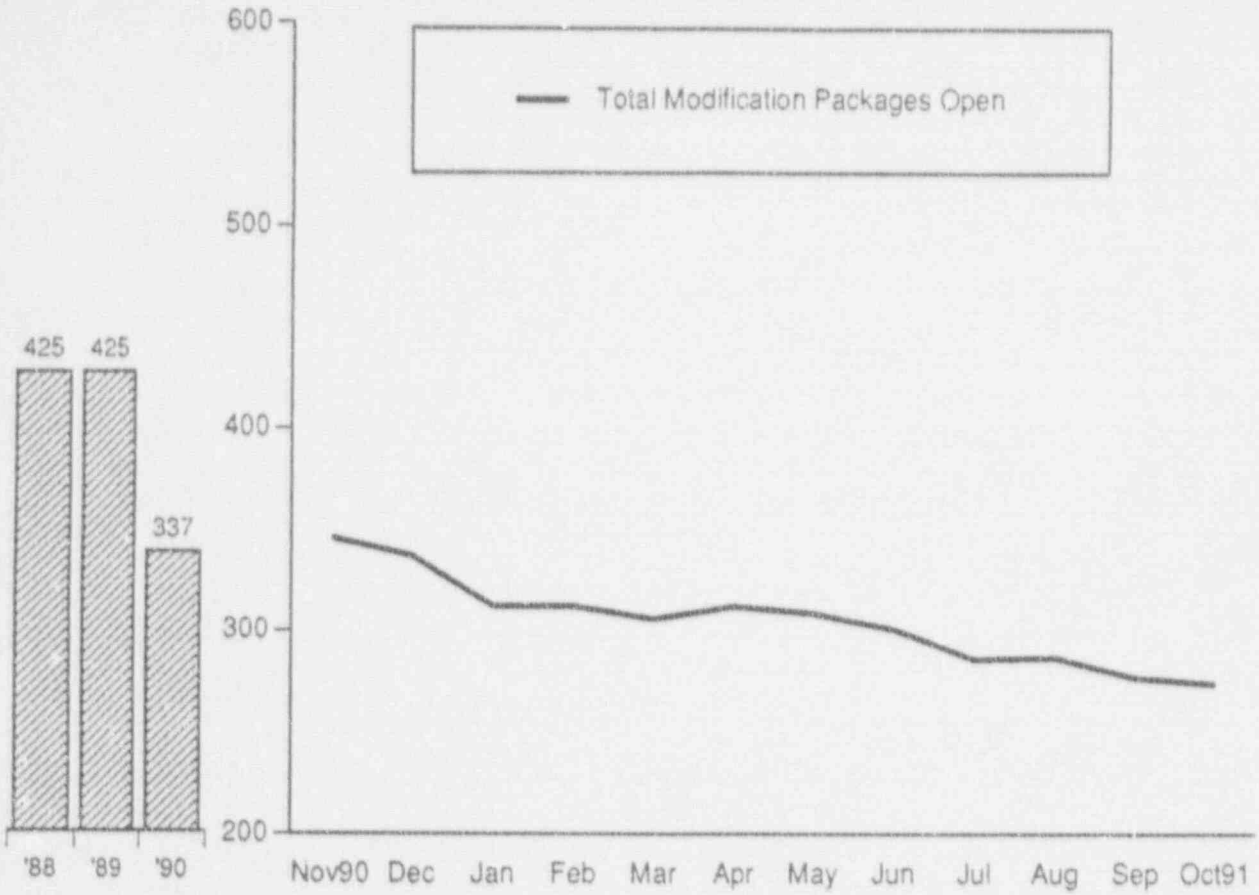
MATERIAL REQUEST PLANNING

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

During the month of October, a total of 1452 MRs were received by the warehouse. Of the 1452 total MRs received by the warehouse, 534 MRs (36.8% of the 1452) were for issue with their request date the same as their need date.

Data Source: Willrett/McCormick (Manager/Source)

Adverse Trend: None



OUTSTANDING MODIFICATIONS

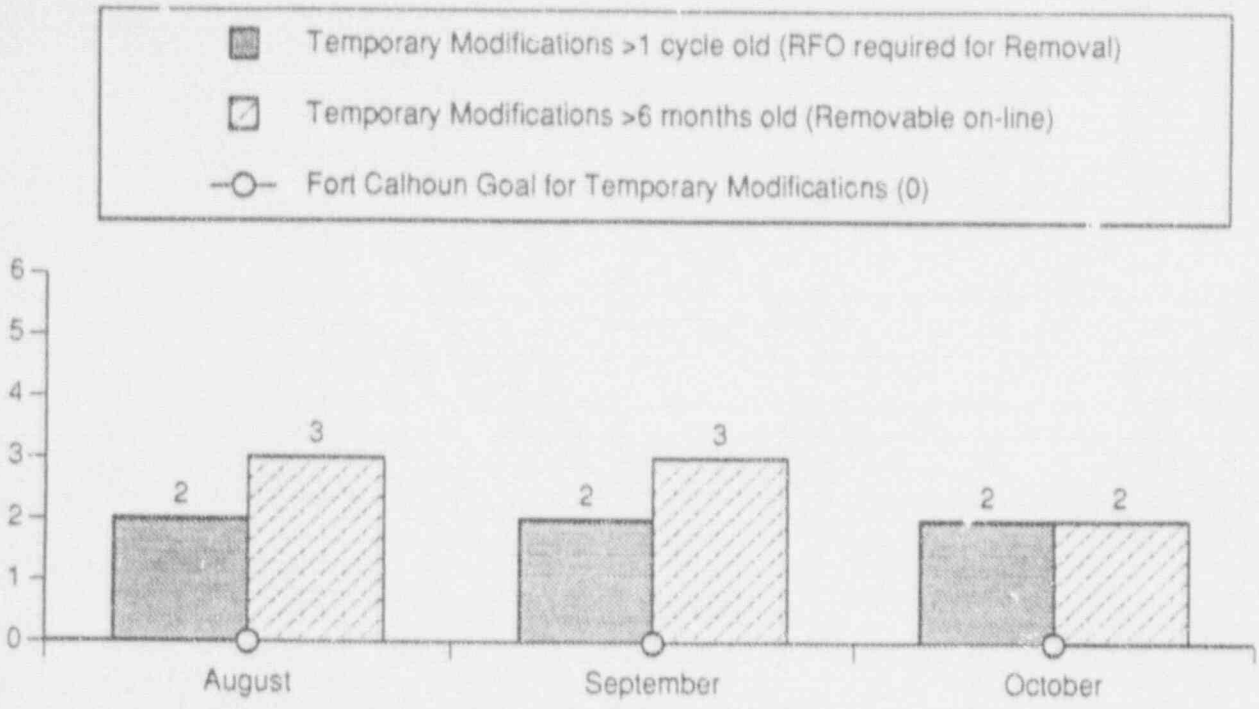
This indicator shows the total number of outstanding modifications (excluding outstanding modifications which are proposed to be cancelled).

Category	Reporting Month
Form FC-1133 Backlog/In Progress	17
Mod. Requests Being Reviewed	88
Design Engr. Backlog/In Progress	94
Construction Backlog/In Progress	44
Design Engr. Update Backlog/In Progress	31
Total	274

At the end of October, 40 additional modification requests had been issued this year and 25 modification requests had been cancelled. The Nuclear Projects Review Committee (NPRC) had completed 155 backlog modification request reviews this year. The Nuclear Projects Committee (NPC) had completed 141 backlog modification request reviews this year.

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

Adverse Trend: None



TEMPORARY MODIFICATIONS (EXCLUDING SCAFFOLDING)

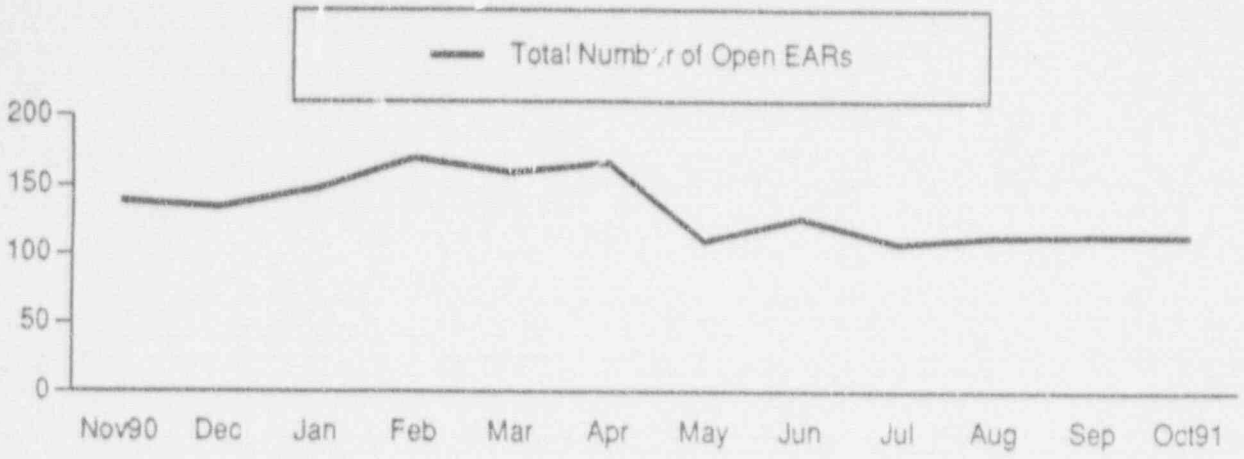
This indicator provides information on the number of temporary modifications greater than one fuel cycle old requiring a refueling outage (RFO) for removal and the number of temporary modifications removable on-line that are greater than six months old. Also provided is the Fort Calhoun goal for temporary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

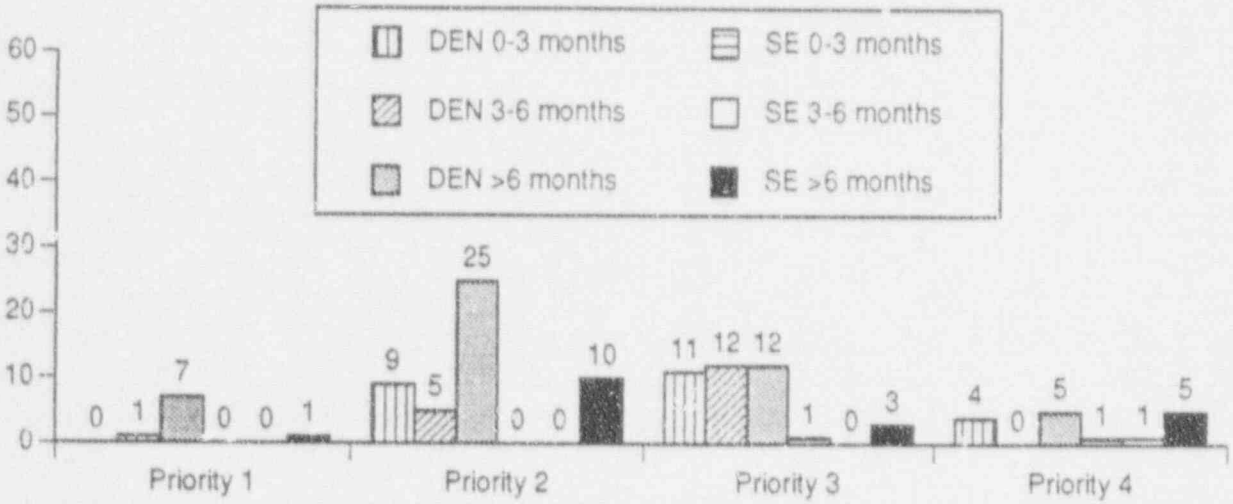
The goal for this indicator was changed in August 1991 to be more indicative of Fort Calhoun's control and management of temporary modifications. There are currently 2 temporary modifications that are greater than one fuel cycle old. Both of these modifications are 100% ready to be removed during the 1992 refueling outage. These are: AI-198 power supply failure alarm, and pressure indication for RW/CCW HXs. In addition, at the end of October there were 2 temporary modifications installed that were greater than six months old that can be removed on-line. These were: handjack close of CCW/RW valves, which is awaiting an engineering evaluation currently scheduled for 12/6/91; and replacement of AC-191/192 valves which is awaiting valve receipt inspection (MWOs 91295 and 91296, scheduled for 1/6/92).

At the end of October, there was a total of 25 TMs installed in the Fort Calhoun Station. 14 of the 25 installed TMs require an outage for removal and 11 are removable on-line. In 1991 a total of 41 temporary modifications have been installed and all but 14 of those have been removed.

Data Source: Jaworski/Turner (Manager/Source)

Adverse Trend: None SEP 62 & 71





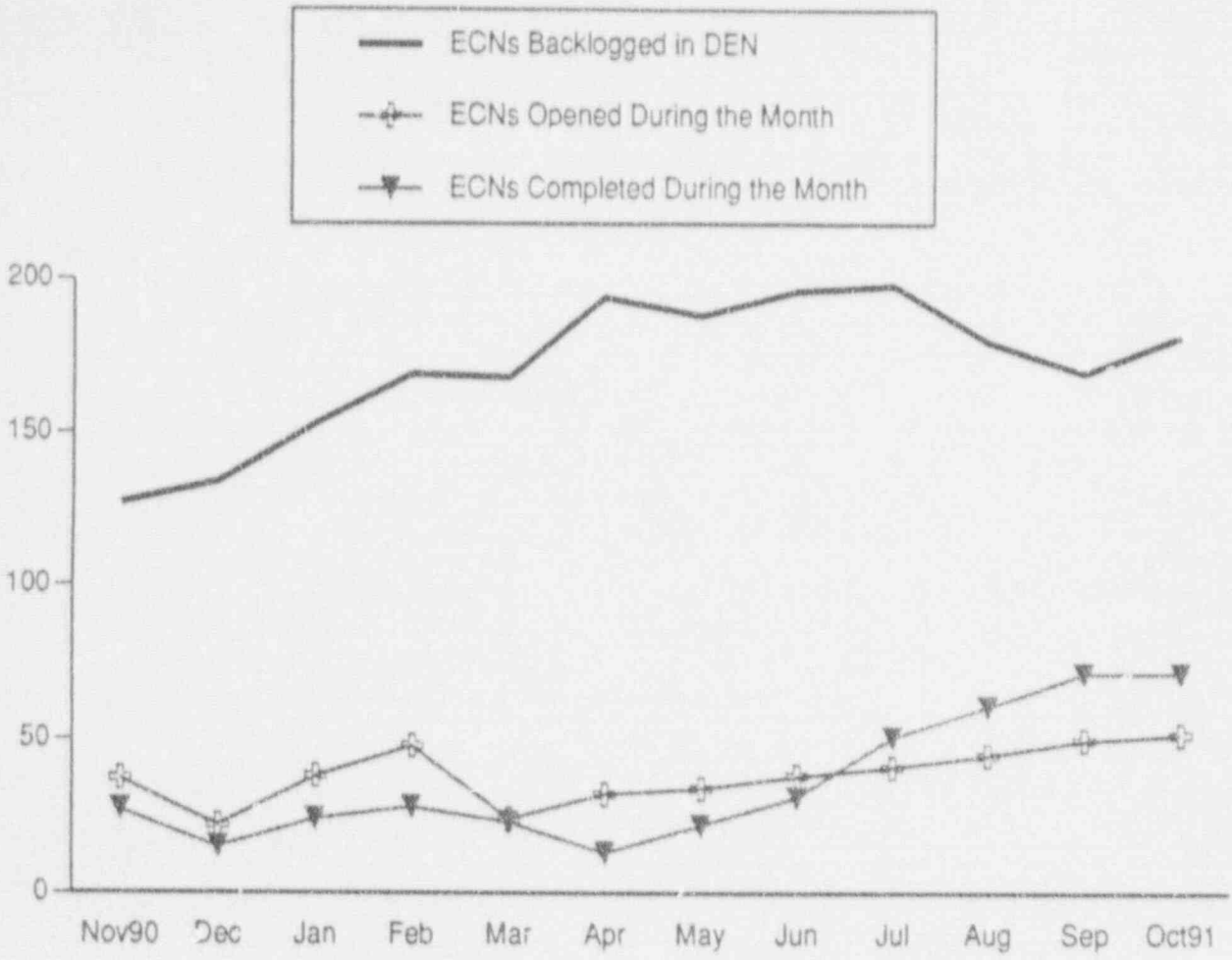
OUTSTANDING ENGINEERING ASSISTANCE REQUESTS (EARs)

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

There was a total of 113 open EARs at the end of October. Of the 113 total open EARs, 88 were Design Engineering Nuclear's responsibility, 22 were System Engineering's responsibility, and 3 were Nuclear Projects' responsibility.

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

Adverse Trend: None SEP 62



ENGINEERING CHANGE NOTICE STATUS

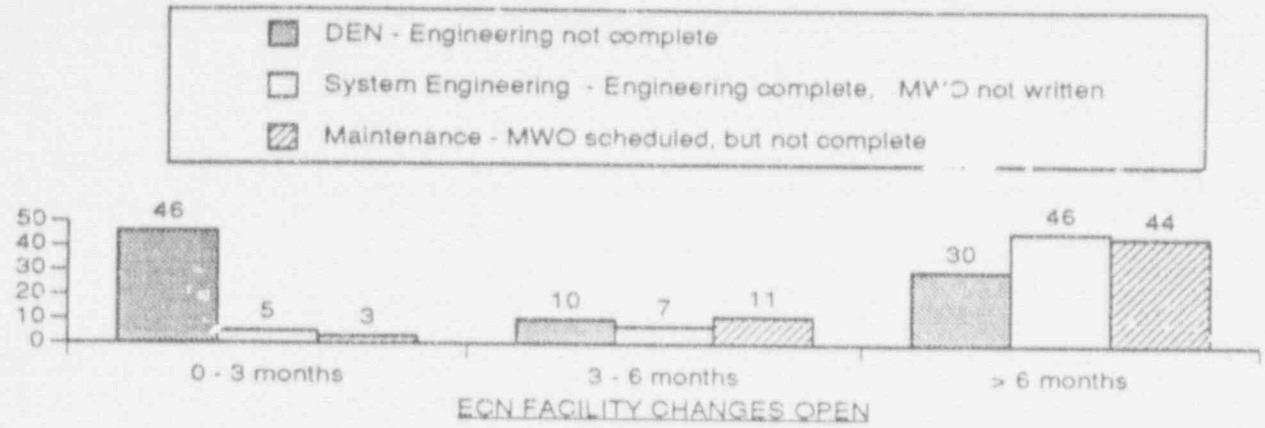
This indicator shows the number of Engineering Change Notices (ECNs) awaiting completion by DEN, the number of ECNs opened during the reporting month, and the number of ECNs completed by DEN during the reporting month.

At the end of October 1991, there was a total of 182 DEN backlogged open ECNs. There were 52 ECNs opened, and 72 ECNs completed during the month.

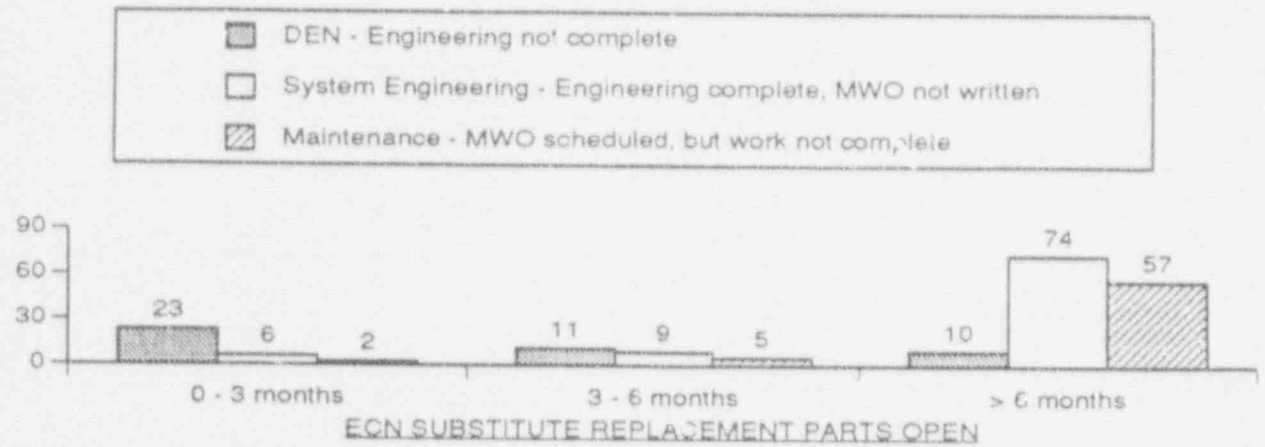
Although the number of open ECNs is currently high, activities are in progress to reduce the backlog of open ECNs. It is expected that the number of open ECNs will continue to decrease.

Data Source: Phelps/Pulverenti (Manager/Source)

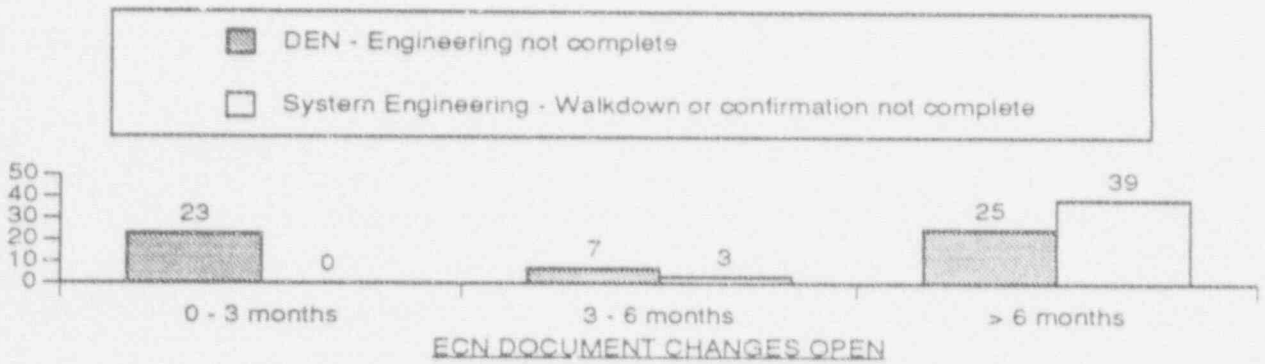
Adverse Trend: None SEP 62



ECN FACILITY CHANGES OPEN



ECN SUBSTITUTE REPLACEMENT PARTS OPEN



ECN DOCUMENT CHANGES OPEN

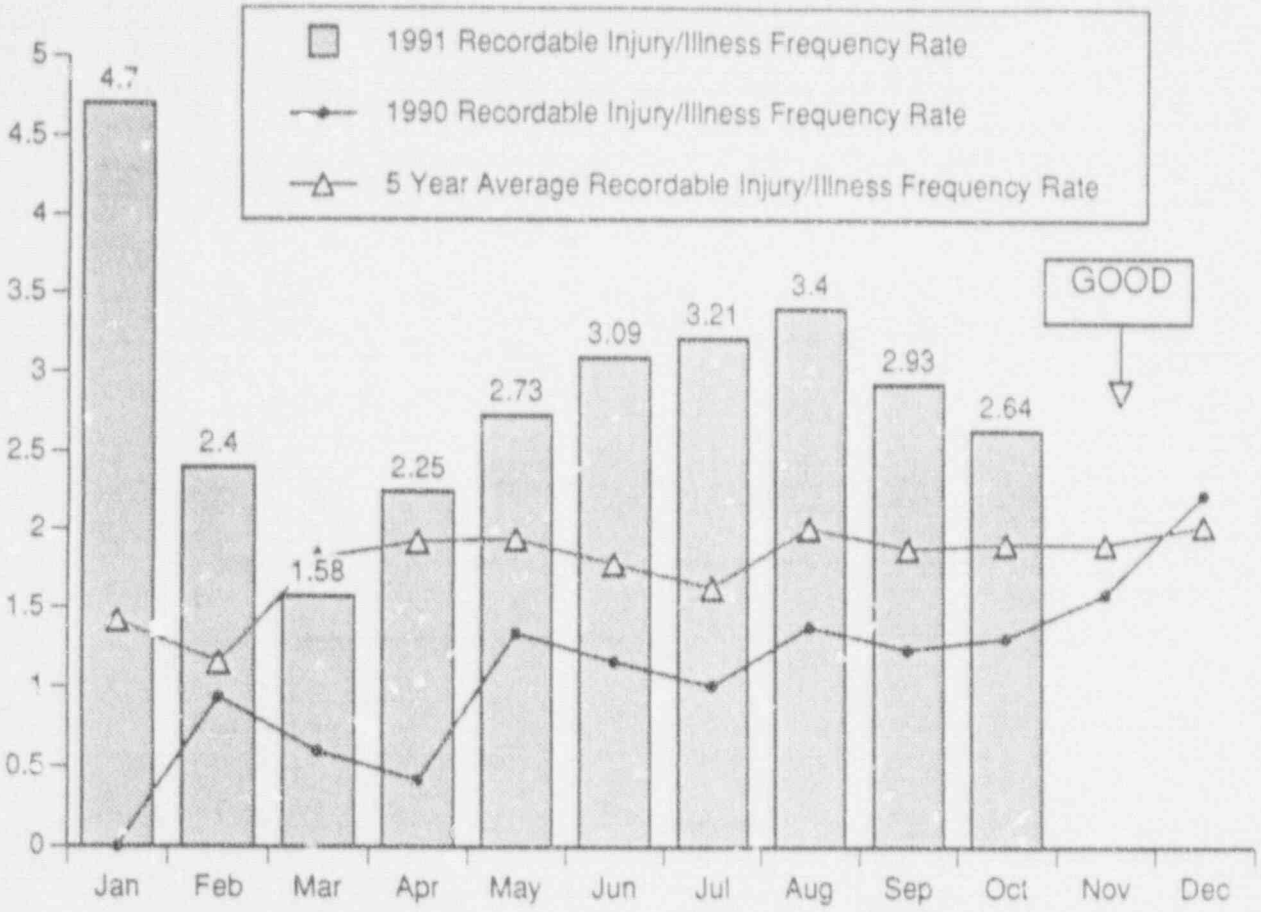
ENGINEERING CHANGE NOTICE BREAKDOWN

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

Data Source: Phelps/Puiverenti (Manager/Source)

Adverse Trend: None

SEP 62



RECORDABLE INJURY/ILLNESS CASES FREQUENCY RATE

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

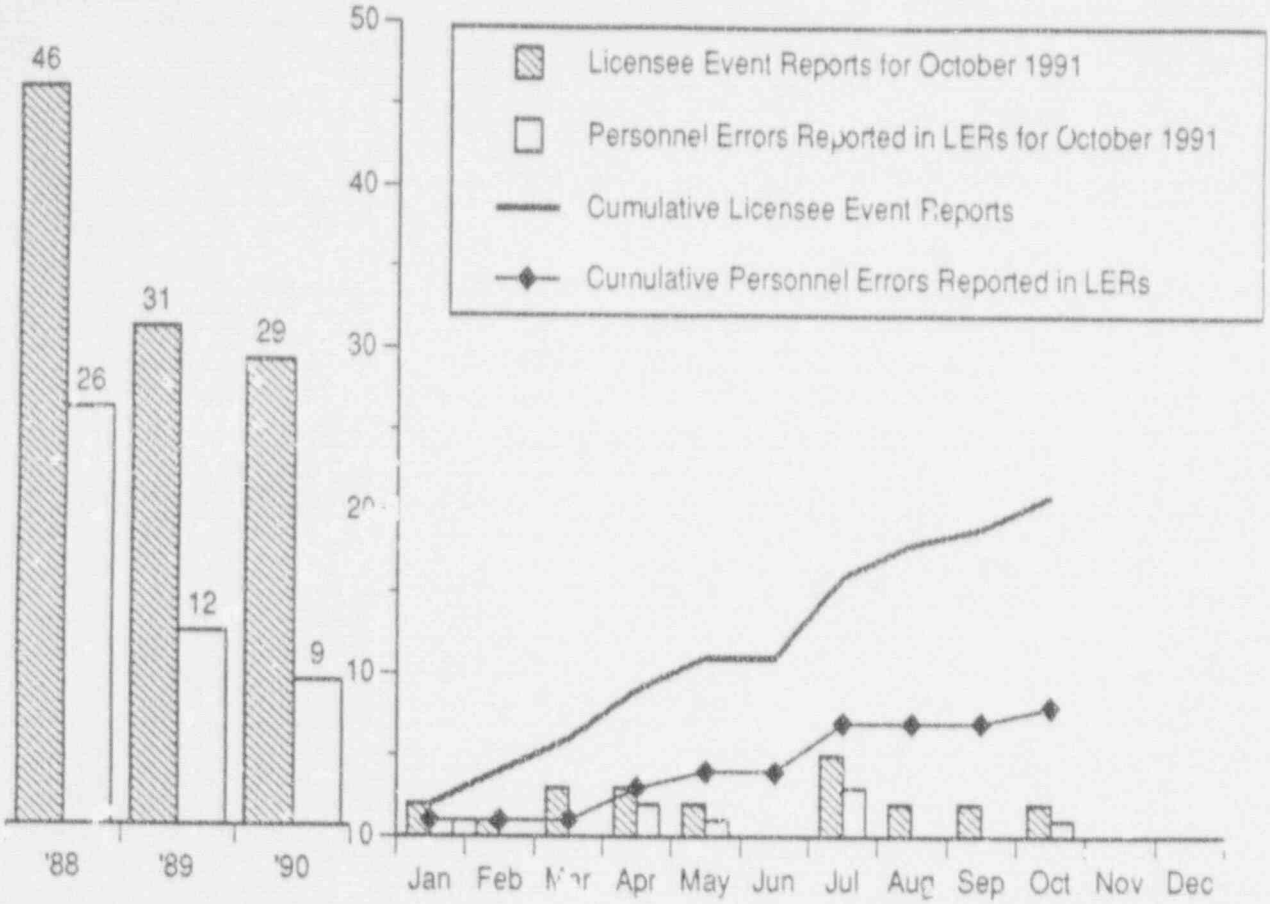
A recordable injury/illness case is reported if Nuclear Operations Division personnel are injured on the job and require corrective medical treatment beyond first aid. The recordable cases frequency rate is computed on a year-to-date basis.

There were no (zero) recordable injury/illness cases reported during the month of October. There has been a total of 12 recordable injury/illness cases 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 LERS

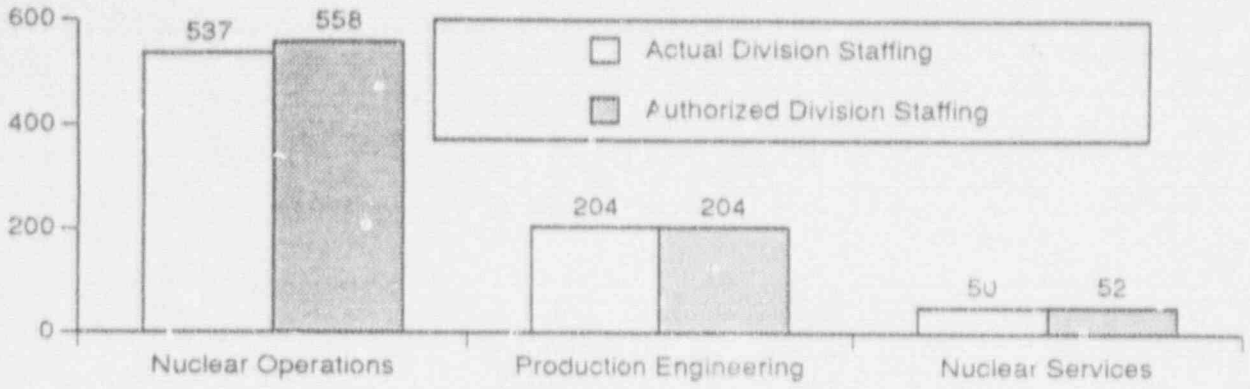
This indicator shows the number of Licensee Event Reports (LERs) with event dates during the reporting month, the LERs attributed to personnel errors, and the cumulative total of both The year-end totals for the three previous years are also shown.

In October 1991, there were two LERs reported. One of these LERs was attributable to personnel error.

There have been 21 LERs reported so far in 1991 and 8 of these LERs have been attributable to personnel error.

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None SEP 15



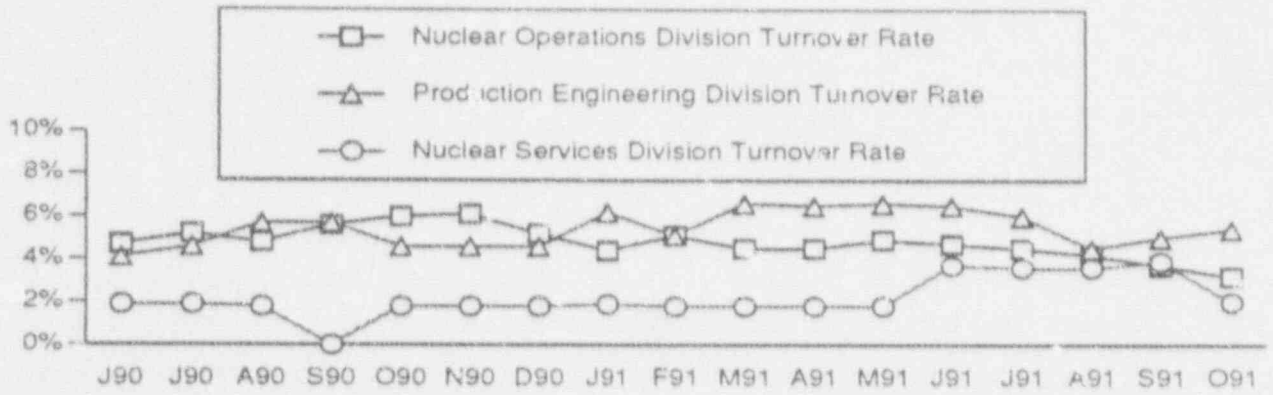
STAFFING LEVEL

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

Data Source: Sorenson/Burke (Manager/Source)

Adverse Trend: None

SEP 24



PERSONNEL TURNOVER RATE

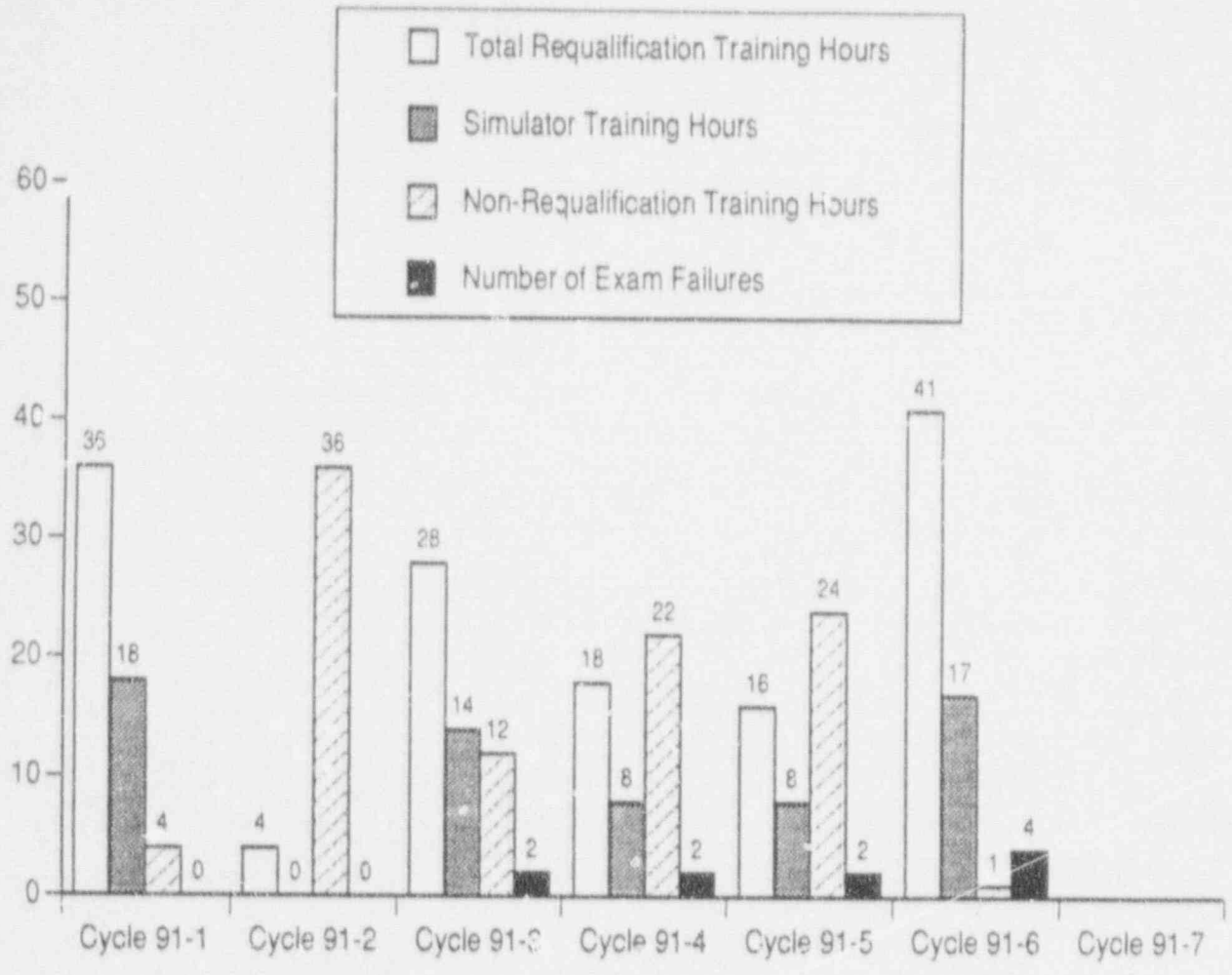
The turnover rates for the three Divisions are calculated using only resignations from OPPD.

Division	Turnover Rate
NOD	3.2%
PED	5.4%
NSD	2.0%

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



LICENSED OPERATOR REQUALIFICATION TRAINING

This indicator, formerly titled "SRO and RO License Examination Pass Ratio", was revised in August 1991 to more accurately reflect training department procedures.

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

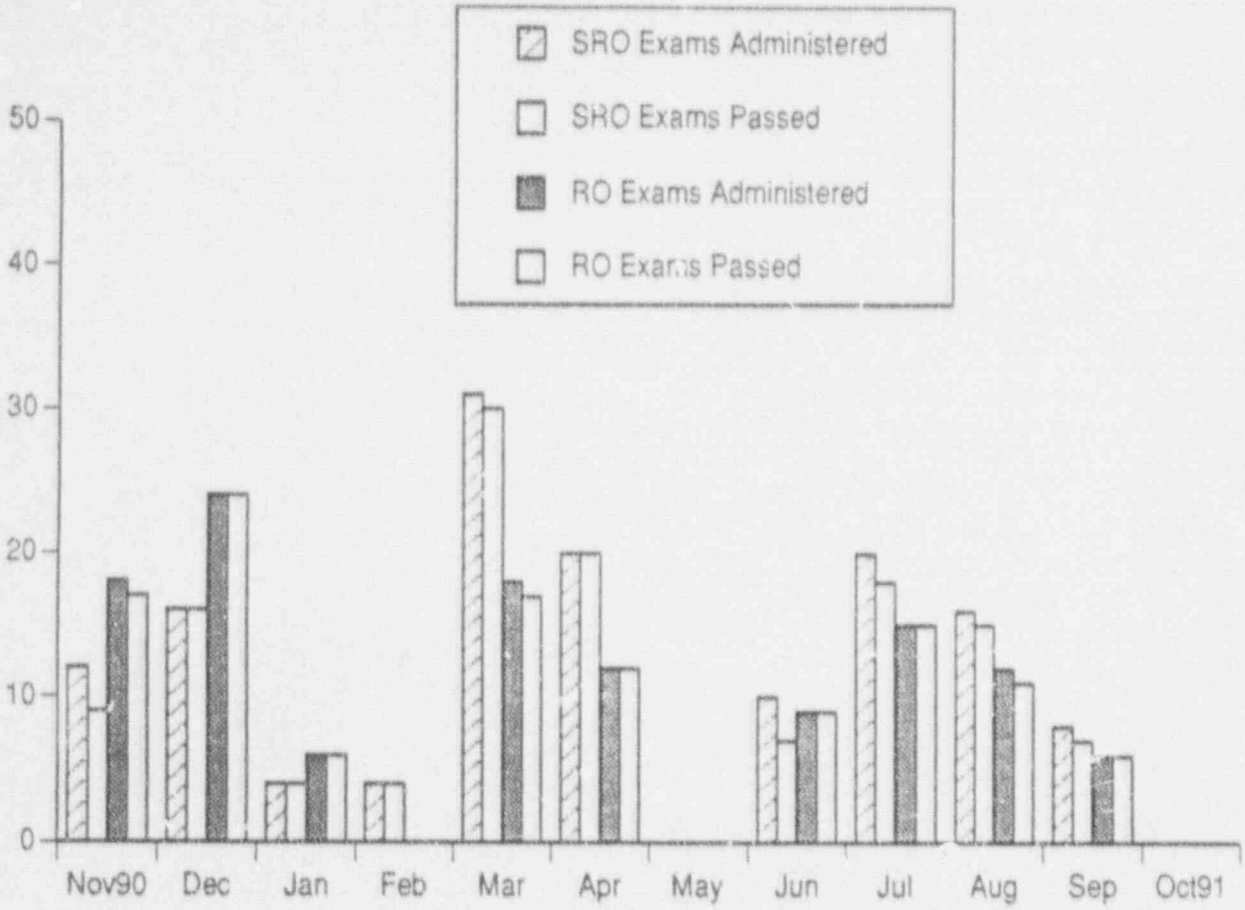
Exam failures are defined as failures in the written, simulator, and Job Performance Measures (JPMs) segments of the Licensed Operator Requalification Training.

All of the twelve candidates passed the NRC Licensed Operator Requalification examinations.

Data Source: Gasper/Herman (Manager/Source)

Adverse Trend: None

SEP 68



LICENSE CANDIDATE EXAMS

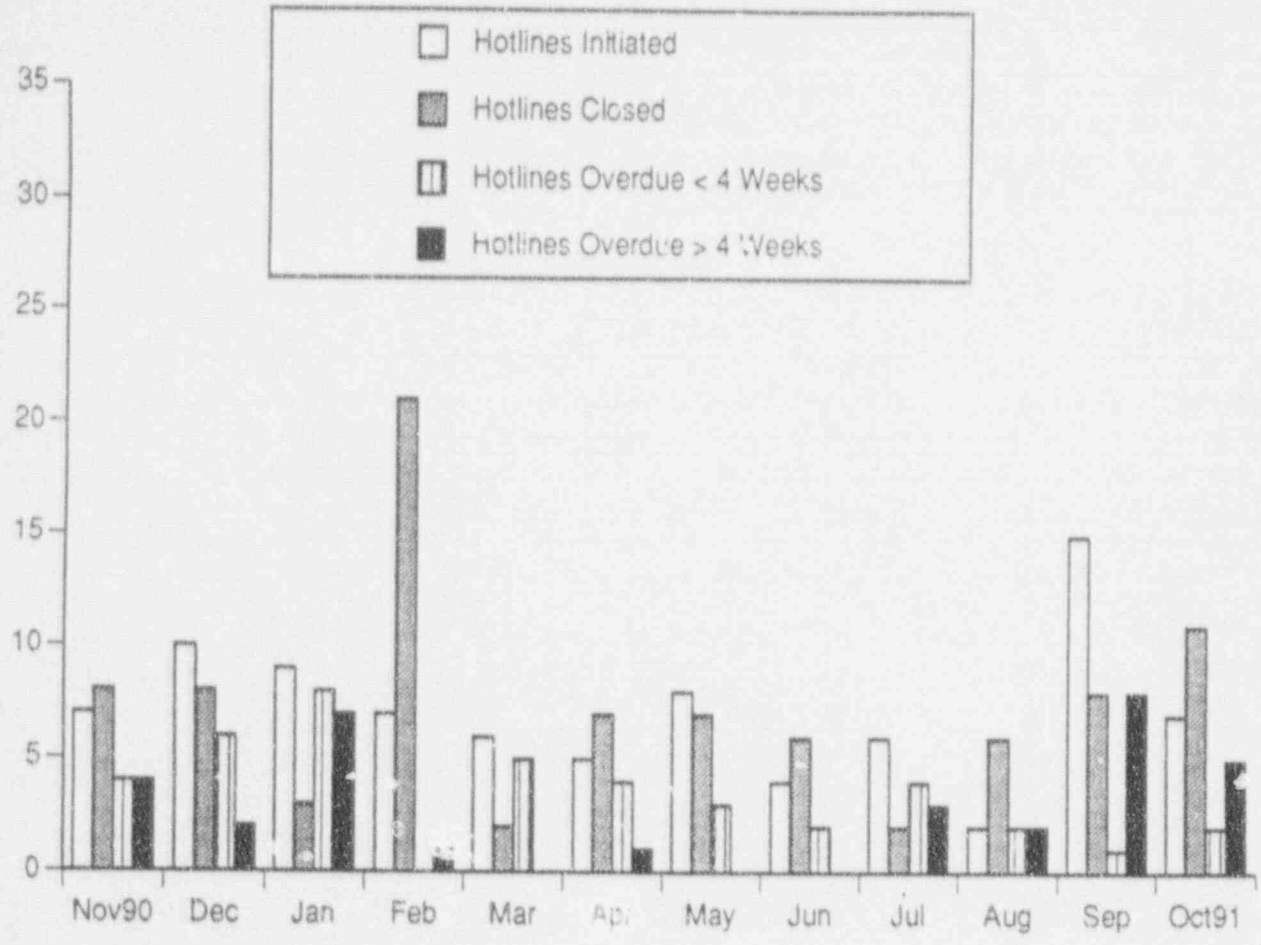
This indicator shows the number of Senior Reactor Operator (SRO) and Reactor Operator (RO) quizzes and exams taken and passed each month. These internally administered quizzes and exams are used to plot the SRO and RO candidates' monthly progress.

During the month of October 1991, there were no internally administered SRO or RO exams taken.

Also during the month of October 1991, seven NRC administered SRO exams were taken and, unofficially, seven of these exams were passed. In addition, seven NRC administered RO exams were taken and, unofficially, all of these exams were passed.

Data Source: Gasper/Herman (Manager/Source)

Adverse Trend: None SEP 68



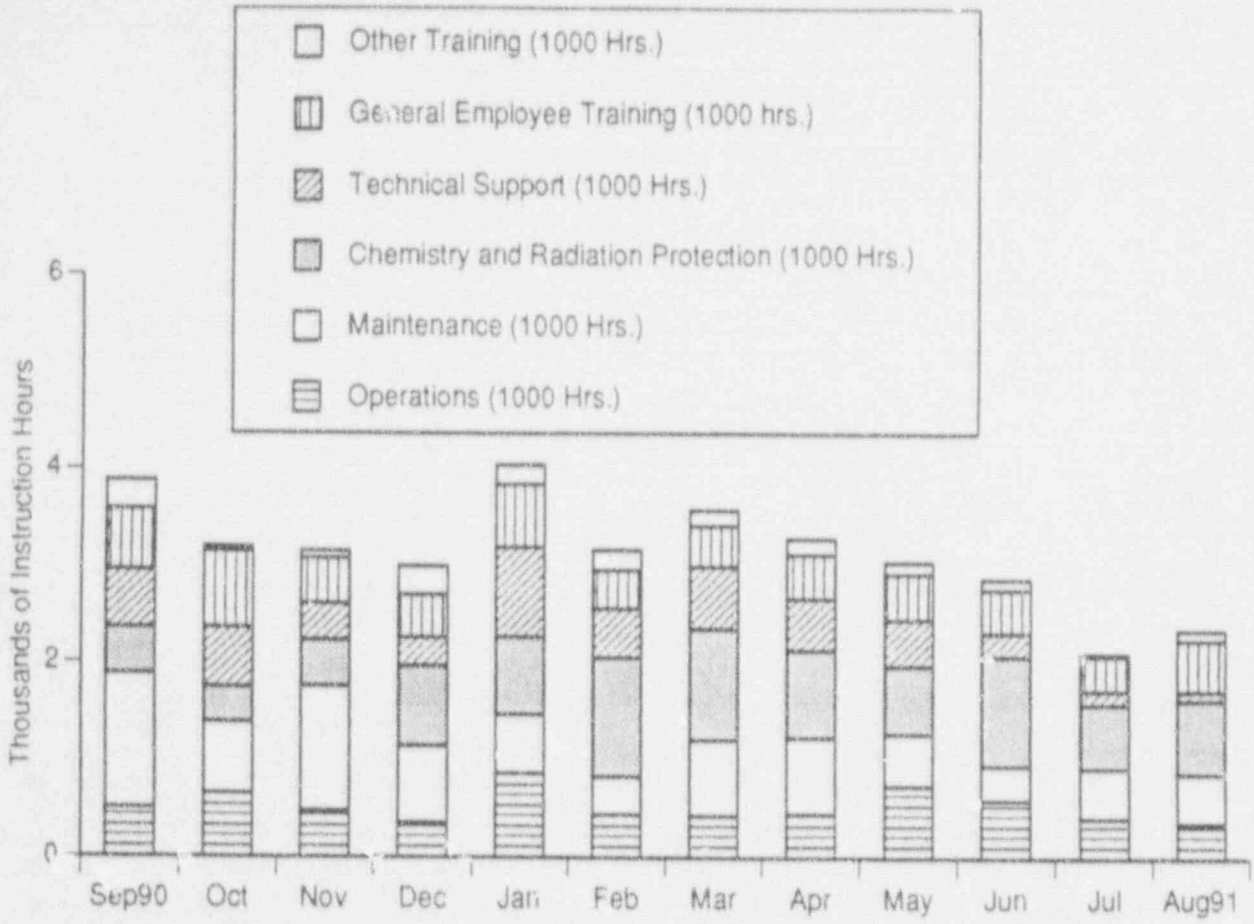
HOTLINE TRAINING MEMOS

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.

	October 1991
Initiated Hotlines	7
Closed Hotlines	11
Hotlines Overdue < 4 wks.	2
Hotlines Overdue > 4 wks.	5

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



TOTAL INSTRUCTION HOURS

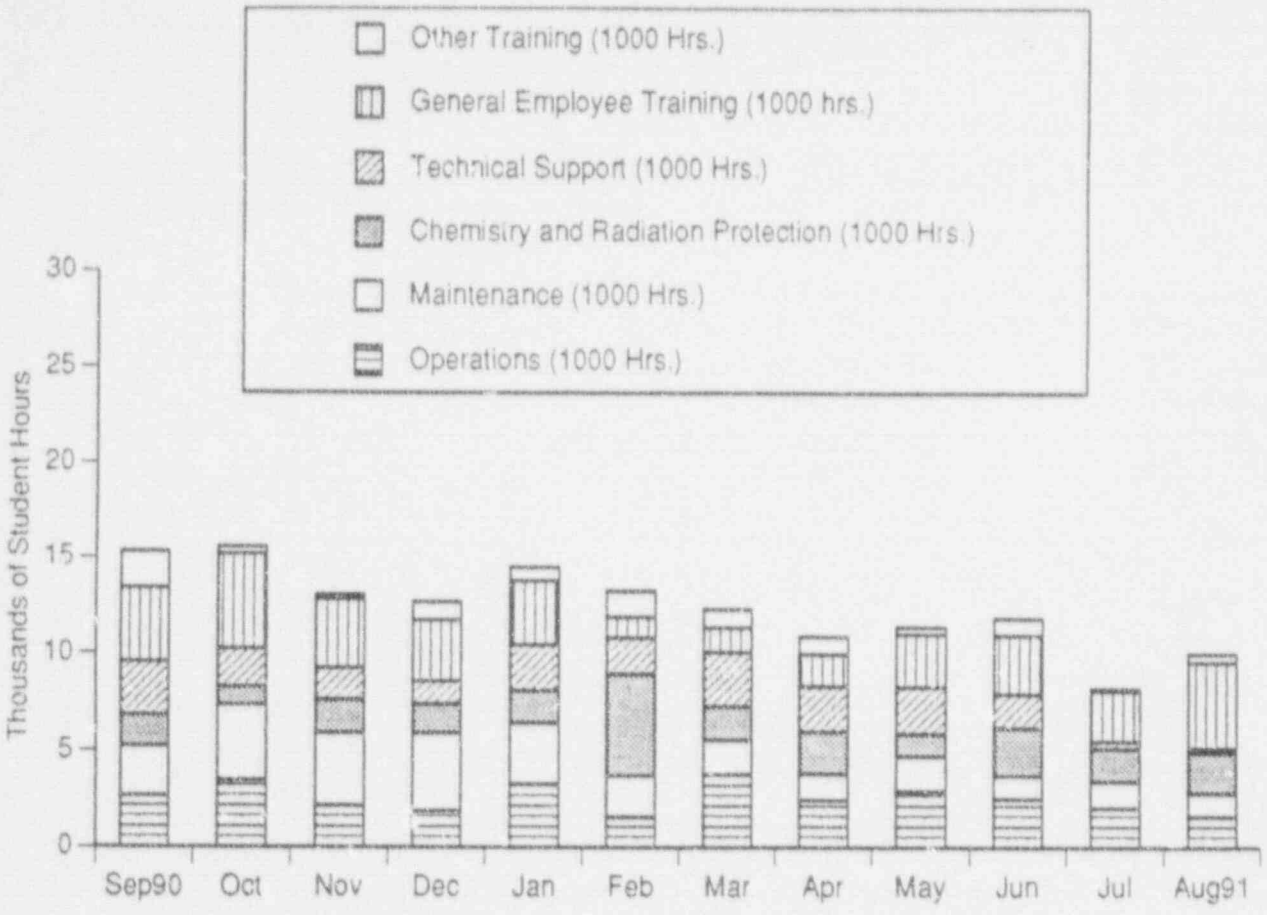
This indicator displays the training instruction hours administered to the listed departments for the reporting month. Due to a programming problem, information for the month of September 1991 was unavailable at the time of this report's publication.

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

DEPARTMENT	JULY '91	AUGUST '91
Operations	416	371
Maintenance	519	509
Chemistry and Radiation Protection	655	757
Technical Support	141	93
General Employee Training	357	520
Other	20	102
Total	2108	2352

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



TOTAL HOURS OF STUDENT TRAINING

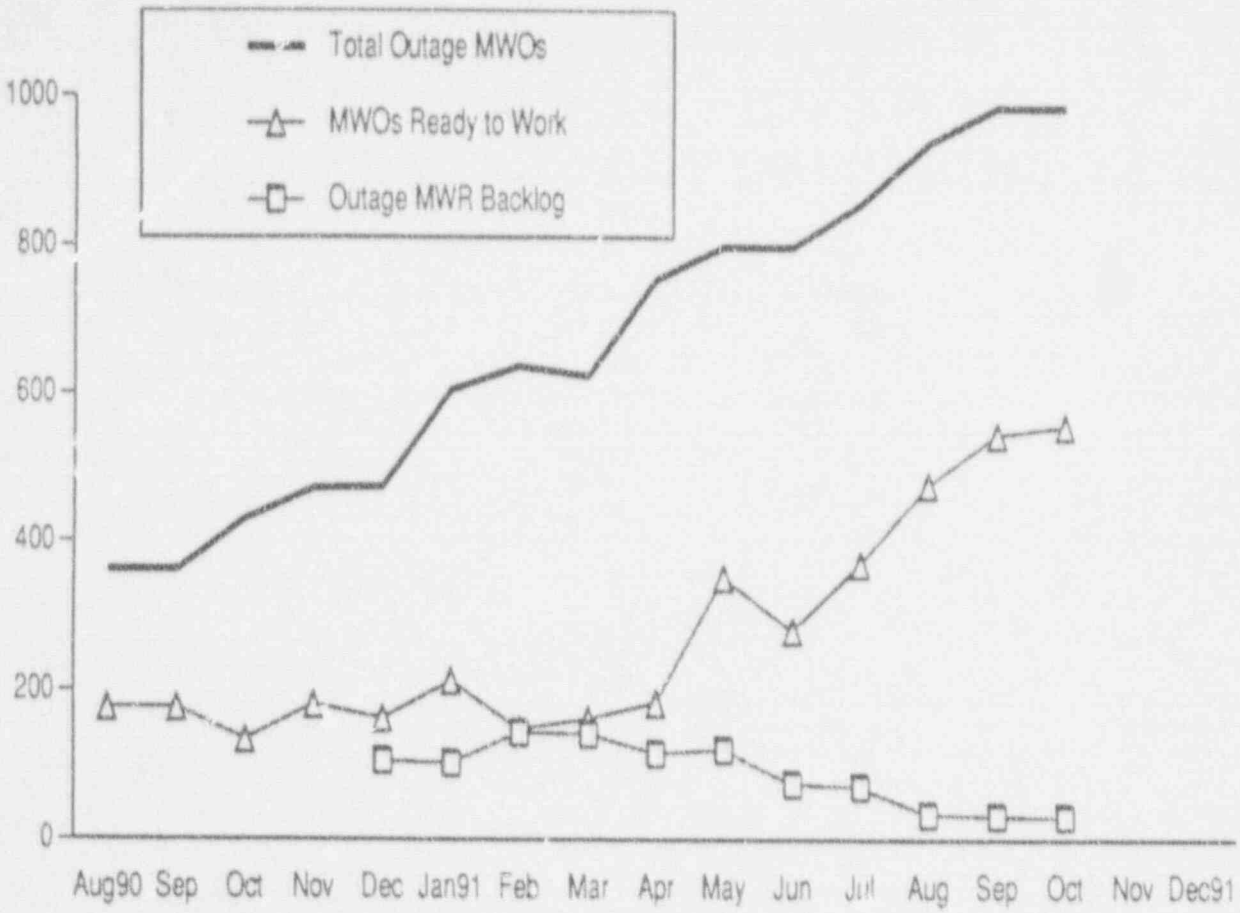
This indicator shows the total numbe: of student hours for Operations, Maintenance, Chemistry and Radiation Protection, Technical Support, General Employee Training, and Other Training conducted for the Fort Calhoun Station. Due to a programming problem, information for the month of September 1991 was not available 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	JULY '91	AUGUST '91
Operations	2050	1598
Maintenance	1351	1216
Chemistry and Radiation Protection	1743	2135
Technical Support	367	202
General Employee Training	2522	4473
Other	100	424
Total	8239	10048

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



MWO OVERALL STATUS (CYCLE 14 REFUELING OUTAGE)

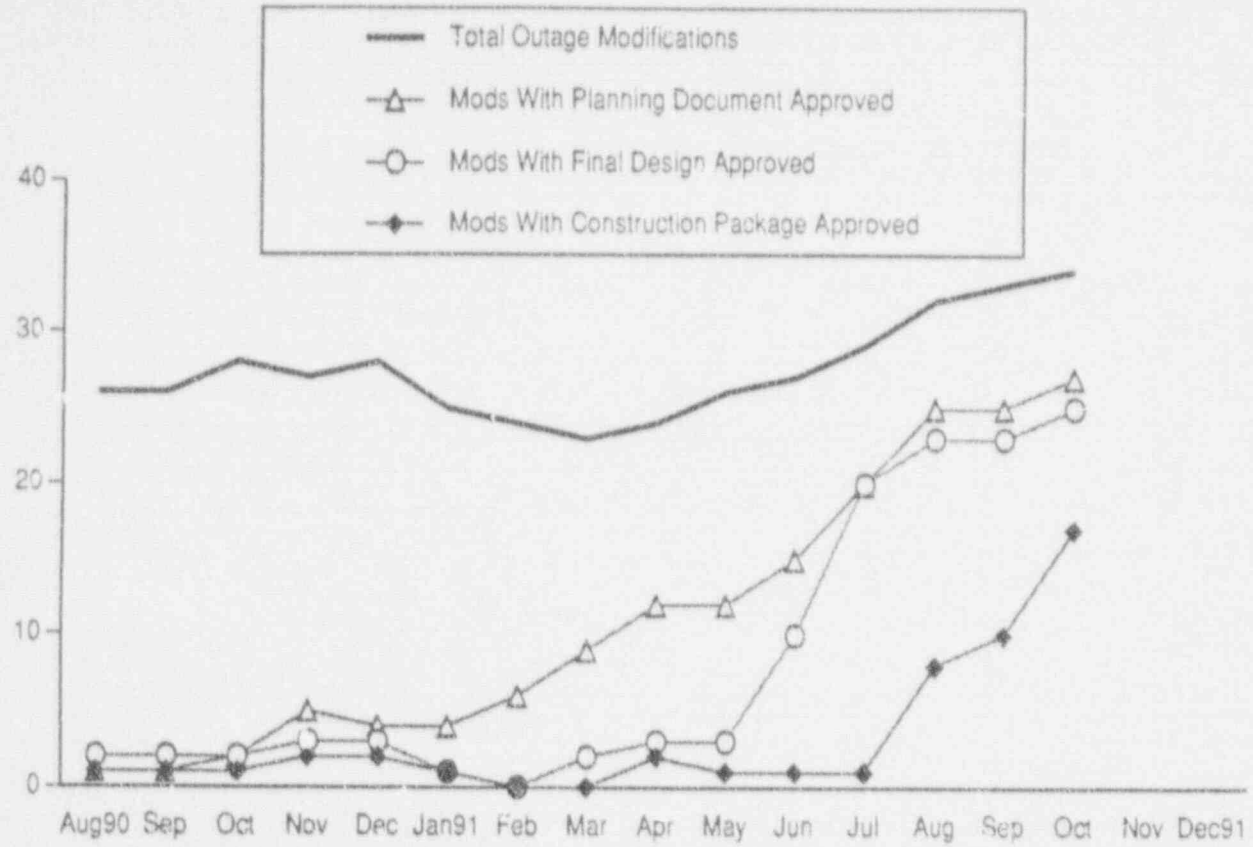
This indicator shows the total number of Maintenance Work Orders (MWOs) that have been written over the past reporting periods for completion during the Cycle 14 Refueling Outage and the number of MWOs that are ready for work (the parts for these MWOs are staged, the procedures are approved, and the paperwork is ready for field use.) Also included is the number of outage Maintenance Work Requests (MWRs) which have been identified for the Cycle 14 Refueling Outage, but have not yet been converted to MWOs. Any MWOs written after the start of the outage will be reflected in the indicator labeled Emergent MWOs. Approximately 3000 maintenance orders were completed during each of the previous two refueling outages.

At the end of the reporting month, there were 985 total outage MWOs with 558 of these MWOs ready to work and a backlog of 32 MWRs.

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 14 OUTAGE MODIFICATION PLANNING

This indicator shows the number of modifications approved for planning (to determine feasibility) or for completion during the Cycle 14 Refueling Outage (RFO). Additional data points will be added to this indicator as information becomes available.

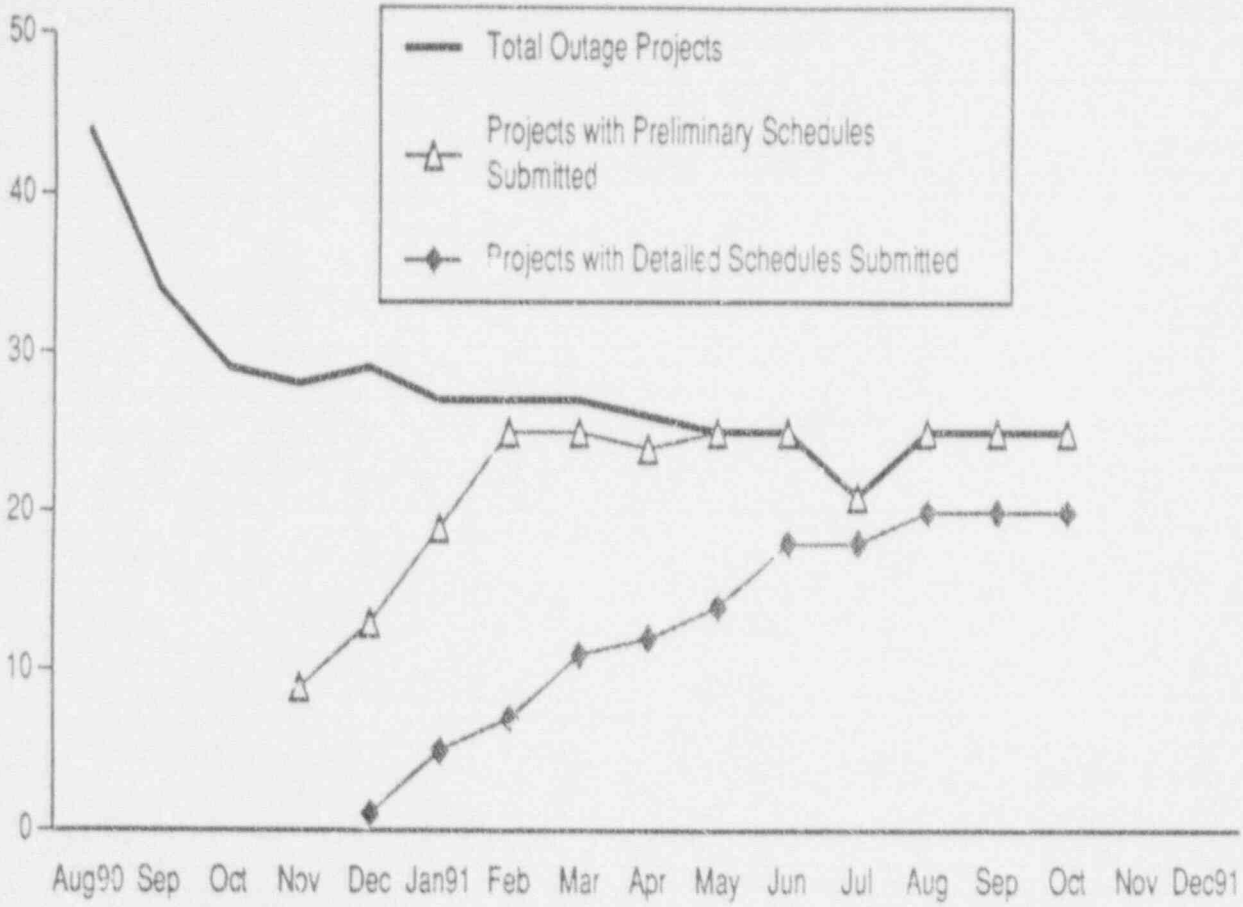
The current schedule for completion of the modification phases of the Cycle 14 Refueling Outage is as follows:

Outage Scope Freeze*	Oct. 1, 1990
Planning Documents Approved*	Feb 22, 1991
Final Designs Approved*	Apr 24, 1991
Construction Packages Approved*	Jun 15, 1991
Schedule Incorporated*	Jul 26, 1991
Material On Site*	Jul 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 January 1992 refueling outage start date. A forced outage after November 1991 could result in an early start date for the Cycle 14 RFO.

Data Source: Patterson/Dunham (Manager/Source)

Adverse Trend: None SEP 31



OVERALL PROJECT STATUS (CYCLE 14 REFUELING OUTAGE)

This indicator shows the status of the projects which affect the scope of the Cycle 14 Refueling Outage.

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

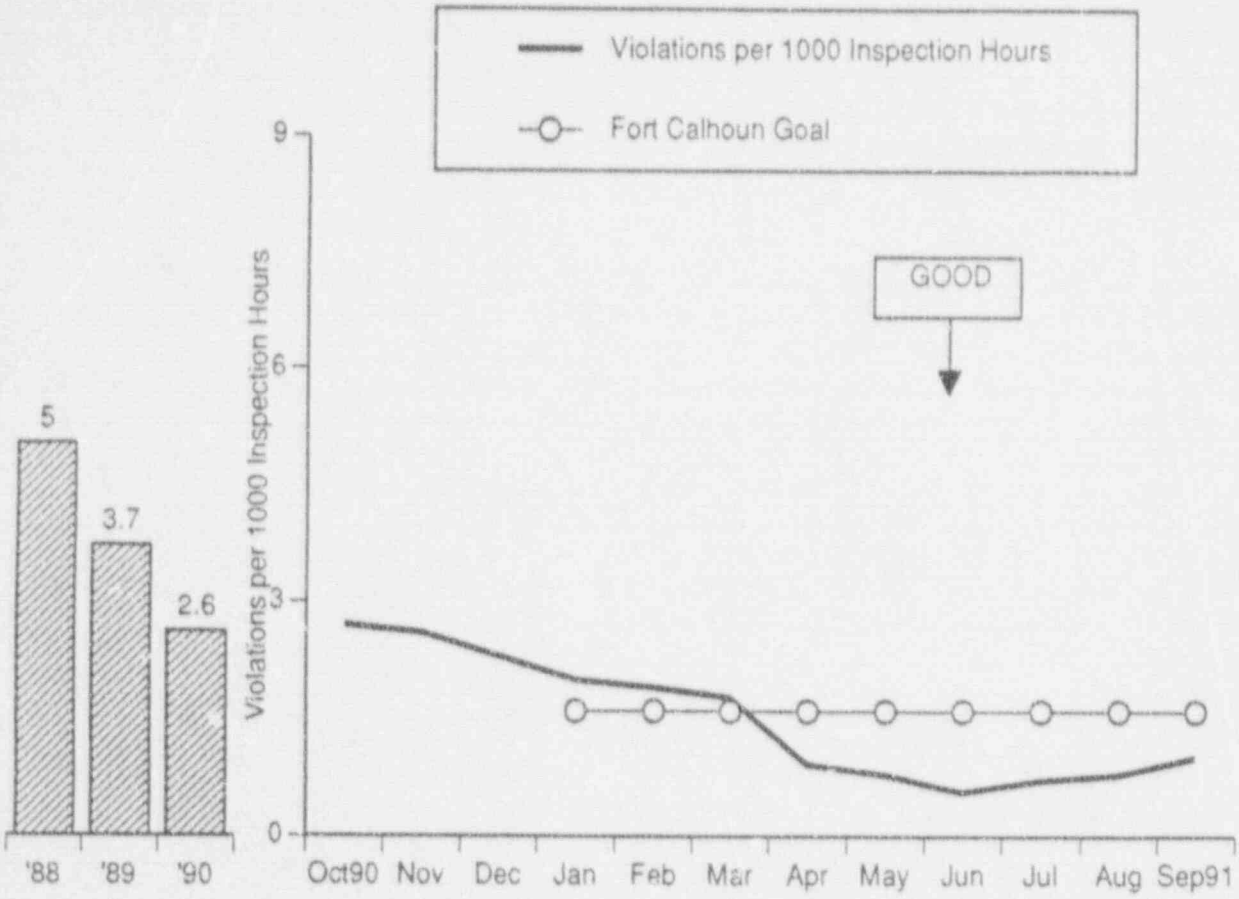
Additional data points will be added to this indicator as information becomes available.

The schedule for the Cycle 14 Refueling Outage projects is as follows:

All Projects Identified and Outage Scope Frozen	Oct 1, 1990
All Projects Scheduled in Detail	Jun 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

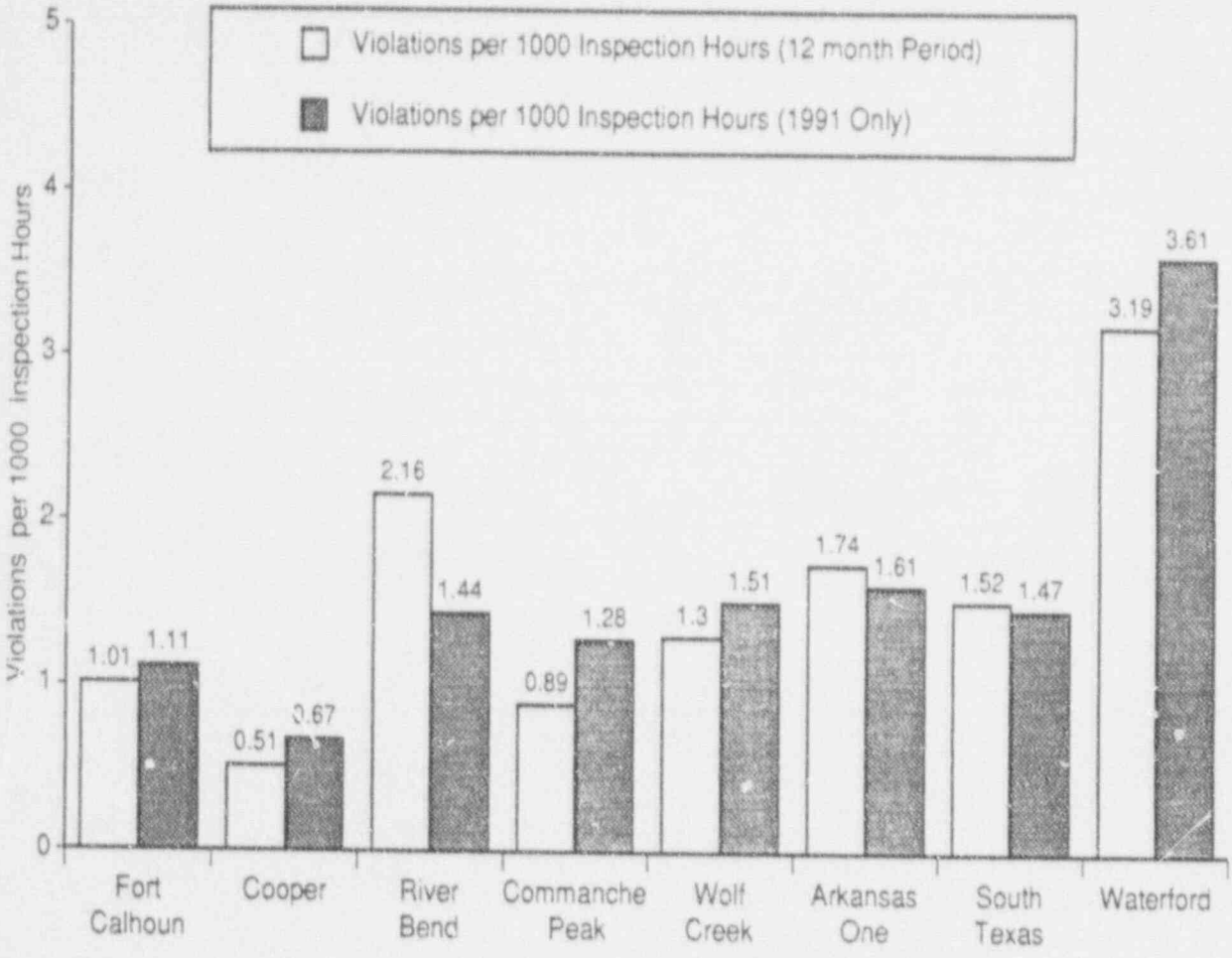
This indicator displays the number of NRC violations cited in inspection reports per 1000 NRC inspection hours. This indicator is one month behind the reporting month due to the time involved with collecting and processing the data.

The violations per 1000 inspection hours indicator was reported as 1.01 for the twelve mc s from October 1, 1990 through September 30, 1991.

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

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: Based on three consecutive months of declining performance, an adverse trend is indicated.



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 October 1, 1990 to September 30, 1991 and for the calendar year 1991 only.

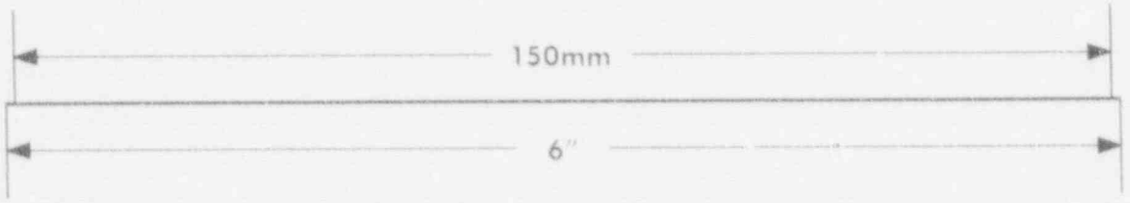
The Fort Calhoun goal for 1991 is 1.6 violations per 1000 inspection hours.

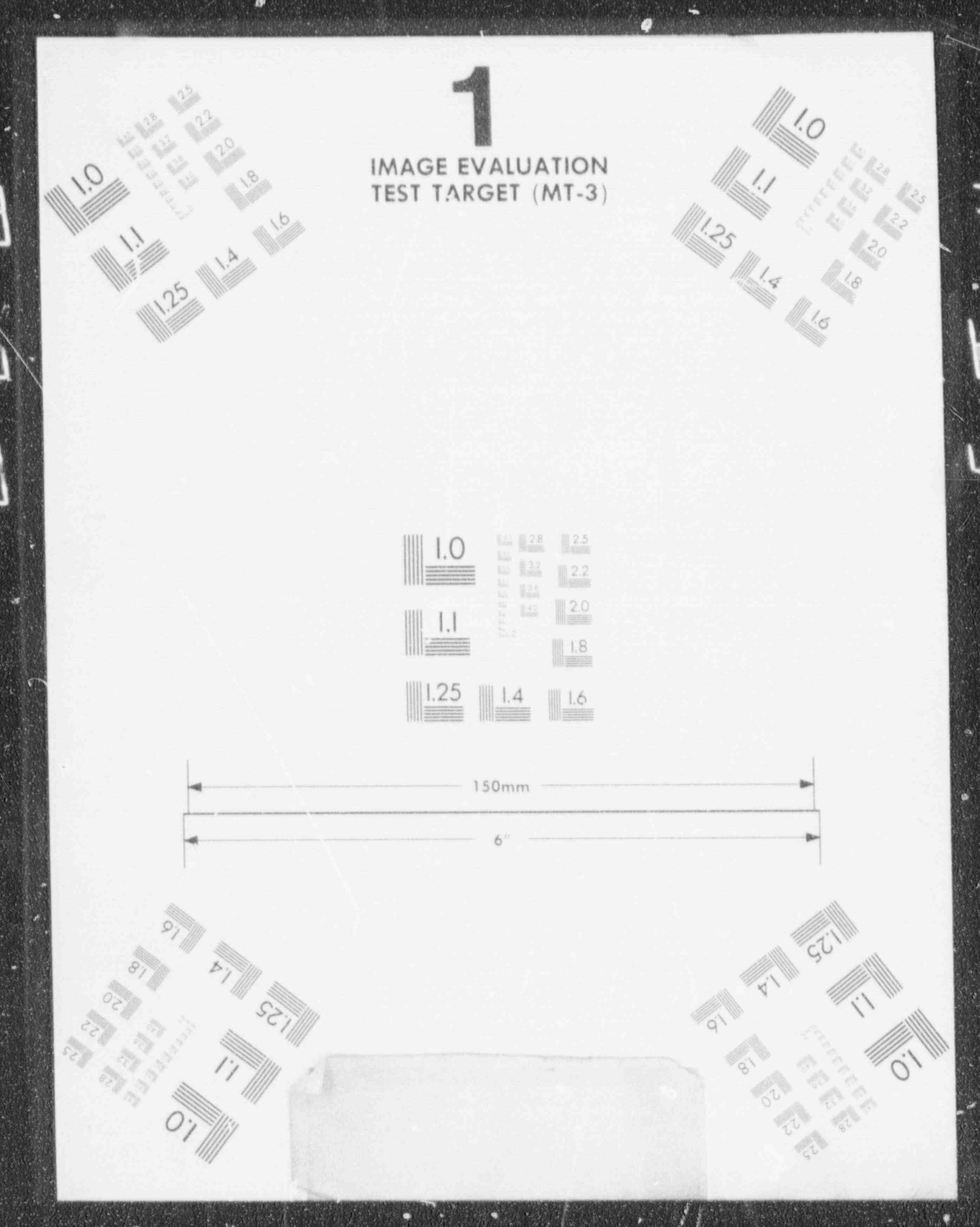
Data Source: Short/Howman (Manager/Source)

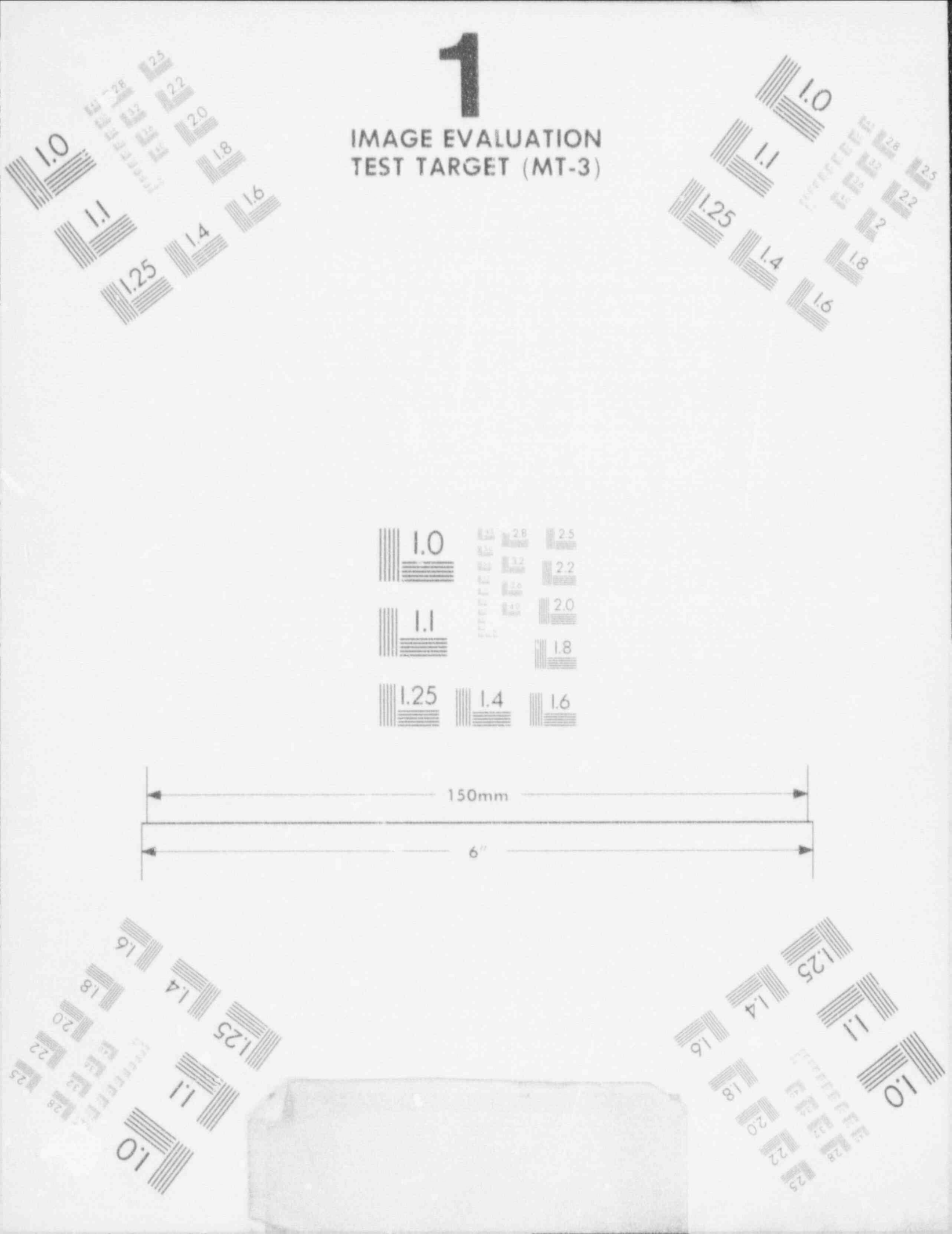
Adverse Trend: None

1

IMAGE EVALUATION TEST TARGET (MT-3)




1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
150mm
6"


1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
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2.0
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150mm
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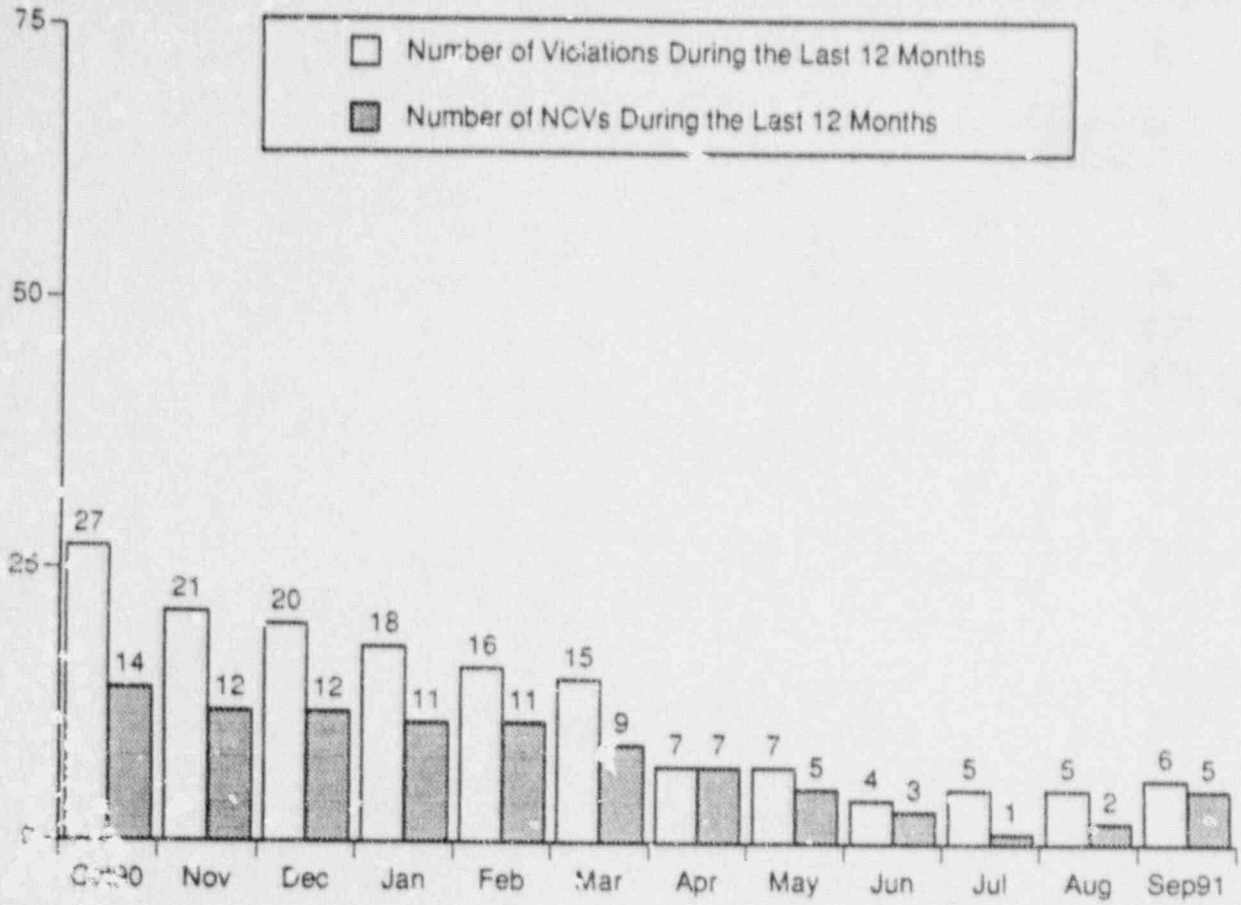


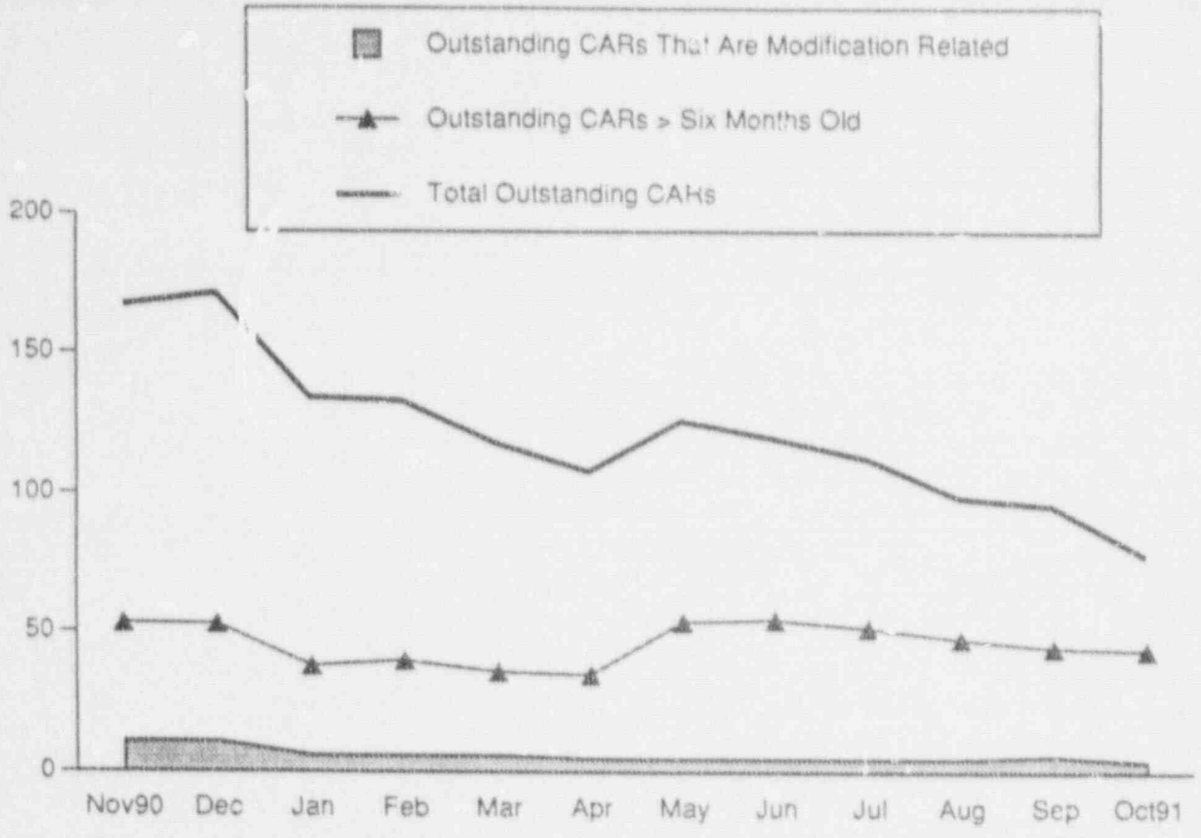
CUMULATIVE VIOLATIONS AND NCVs (TWELVE-MONTH RUNNING TOTAL)

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

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

Data Source: Short/Howman (Manager/Source)

Adverse Trend: None



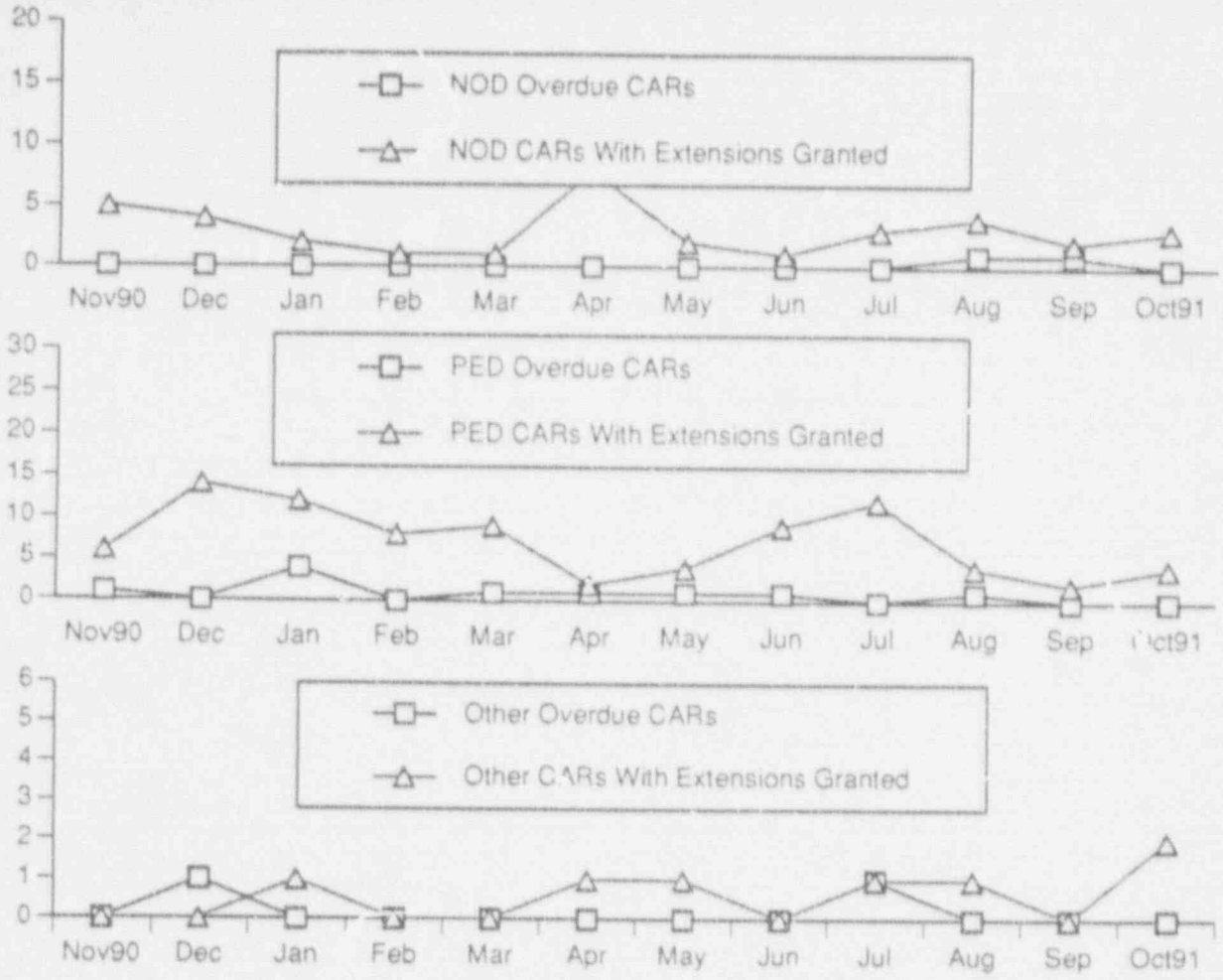
OUTSTANDING CORRECTIVE ACTION REPORTS

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

At the end of October 1991, there were 78 outstanding CARs, 44 CARs that were greater than six months old, and 4 CARs that were modification related.

Data Source: Orr/Gurtis (Manager/Source)

Adverse Trend: None



OVERDUE AND EXTENDED CORRECTIVE ACTION REPORTS

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

Overdue CARs

Overdue CARs	August '91	September '91	October '91
NOD	1	1	0
PED	1	0	0
Others	0	0	0
Total	2	1	0

Extended CARs

Extended CARs	August '91	September '91	October '91
NOD	4	2	3
PED	4	2	4
Others	1	0	2
Total	9	4	9

Data Source: Orr/Gurtis (Manager/Source)

Adverse Trend: None

1990 SALP Funct. Area	CARs	Signif. CARs	NRC Viola.	LERs
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	CARs	Signif. CARs	NRC Viola.	LERs
A) Plant Operations	24 (1)	1	1	3 (2)
B) Radiolog. Controls	7	0	2	0
C) Maint/Surveil.	63 (8)	0	1	7 (1)
D) Emergency Preparedness	16	0	0	0
E) Security	5	0	4	1
F) Engr/Tech Support	76 (4)	2	1	8
G) Safety Assess/ Qual. Verif.	24	1	0	2 (1)
H) Other	0	0	0	0
Total	215 (13)	4	9	21 (4)

Note: ( ) indicate value for the reporting month.

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

The above matrix shows the number of Corrective Action Reports (CARs) issued by the Nuclear Services Division (NSD) vs. the number of Significant CARs issued by NSD vs. the number of violations issued by the NRC for the Fort Calhoun Station in 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.

Data Source: Orr/Gurtis (Manager/Source)
Short/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, non-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. This indicator tracks performance for SEP #15, 20, & 21.

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

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.

DIESEL GENERATOR UNAVAILABILITY
This indicator provides monthly data on the number of hours of diesel generator planned and unplanned unavailability. The Fort Calhoun goal for the second half of 1991 for the number of unavailable hours per diesel generator has been established based upon the 1990 industry median value provided by INPO.

DECONTAMINATED RADIATION CONTROLLED AREA
The percentage of the Radiation Controlled Area, which includes the auxiliary building, the radwaste building, and areas of the C/PP building, that is decontaminated based on the total square footage. This indicator tracks performance for SEP # 54.

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). This does not include contractor personnel. This indicator tracks personnel performance for SEP #25 & 26.

DOCUMENT REVIEW (BIENNIAL)
The Document Review Indicator shows the number of documents reviewed, the number of documents scheduled for review, and the number of document reviews that are overdue for the reporting month. A document review is considered overdue if the review is not complete within 6 months of the assigned due date. This indicator tracks performance for SEP #46.

EMERGENCY DIESEL GENERATOR UNIT RELIABILITY
This indicator shows the number of failures that were reported during the last 20, 50, and 100 emergency diesel generator demands at the Fort Calhoun Station. Also shown are trigger values which correlate to a high level of confidence that a unit's diesel generators have obtained a reliability of greater than or equal to 95% when the demand failures are less than the trigger values.
1)Number of Start Demands: All valid and inadvertent start demands, including all start-only demands and all start demands that are followed by load-run demands, whether by automatic or manual initiation. A start-only demand is a demand in which the emergency generator is started, but no attempt is made to load the generator.
2)Number of Start Failures: Any failure within the emergency generator system that prevents the generator from achieving specified frequency and voltage is classified as a valid start failure. This includes any condition identified in the course of maintenance inspections (with the emergency generator in standby mode) that definitely would have resulted in a start failure if a demand had occurred.
3)Number of Load-Run Demands: For a valid load-run demand to be counted the load-run attempt must meet one or more of the following criteria:
A)A load-run of any duration that results from a real automatic or manual initiation.
B)A load-run test to satisfy the plant's load and duration as stated in each test's specifications.
C)Other special tests in which the emergency generator is expected to be operated for at least one hour while loaded with at least 50% of its design load.

4)Number of Load-Run Failures: A load-run failure should be counted for any reason in which the emergency generator does not pick up load and run as predicted. Failures are counted during any valid load-run demands.
5)Exceptions: Unsuccessful attempts to start or load-run should not be counted as valid demands or failures when they can be attributed to any of the following:
A)Spurious trips that would be bypassed in the event of an emergency.
B)Malfunction of equipment that is not required during an emergency.
C)Intentional termination of a test because of abnormal conditions that would not have resulted in major diesel generator damage or repair.
D)Malfunctions or operating errors which would have not prevented the emergency generator from being restarted and brought to load within a few minutes.
E)A failure to start because a portion of the starting system was disabled for test purpose, if followed by a successful start with the starting system in its normal alignment.
Each emergency generator failure that results in the generator being declared inoperable should be counted as one demand and one failure. Exploratory tests during corrective maintenance and the successful test that follows repair to verify operability should not be counted as demands or failures when the EDG has not been declared operable again.

ENGINEERING CHANGE NOTICE (ECN) BREAKDOWN

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

ENGINEERING CHANGE NOTICE (ECN) STATUS

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

EQUIPMENT FORCED OUTAGES PER 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.
The density correction factor is the ratio of the specific volume of coolant at the RCS operating temperature (540 degrees F, Vf = 0.02146) divided by the specific volume of coolant at normal letdown temperature (120 degrees F at outlet of the letdown cooling heat exchanger, Vf = 0.016204), which results in a density correction factor for FCS equal to 1.32. This density correction factor affects both the INPO and Plant Specific FRIs.

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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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.

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. This indicator tracks training performance for SEP #68.

LICENSED OPERATOR REQUALIFICATION TRAINING
The total number of hours of training given to each crew during each cycle. Also provided are the simulator training hours (which are a subset of the total training hours), the number of non-requalification training hours and the number of exam failures.

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

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

MWO OVERALL STATUS (CYCLE 13 REFUELING OUTAGE)
The total number of Maintenance Work Orders (MWOs) that have been written for completion during the Cycle 14 Refueling Outage. MWOs which are written after the start of the Refueling Outage will be labeled Emergent MWOs. Also shown is the number of MWRs which have been identified for the Cycle 14 Refueling Outage, but have not yet been converted to MWOs. 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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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 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 LERS

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 (STs) that result in Licensee Event Reports (LERs) during the reporting month. This indicator tracks missed STs for SEP #60 & 61.

OPERATIONS AND MAINTENANCE BUDGET

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

OUTSTANDING CORRECTIVE ACTION REPORTS

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

OUTSTANDING ENGINEERING ASSISTANCE REQUESTS (EARs)

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

OUTSTANDING MODIFICATIONS

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

1)Form FC-1133 Backlog/In Progress. This number represents modification requests that have not been plant approved during the reporting month.

2)Modification Requests Being Reviewed. This category includes:

A.)Modification Requests that are not yet reviewed.

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

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

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

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

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

5)Design Engineering Update Backlog/In Progress. PED has received the Modification Completion Report but the drawings have not been updated.

The above mentioned outstanding modifications do not include modifications which are proposed for cancellation.

OVERALL PROJECT STATUS (CYCLE 14 REFUELING OUTAGE)

The number of projects which affect the scope of the Cycle 14 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 (CARs) and the number of CARs which received extensions broken down by organization for the last 6 months.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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 MWRs, MWOs, STs, PMOs, 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 % 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 IRs related to the use of procedures (includes the number of closed IRs caused by procedural noncompliance), and the number of closed procedural noncompliance IRs. This indicator trends personnel performance for SEP #15 & 44.

PROGRESS OF CYCLE 14 OUTAGE MODIFICATION PLANNING
The number of modifications approved for planning (to determine feasibility) for completion during the Cycle 14 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, 25 & 26.

SECONDARY SYSTEM CHEMISTRY PERFORMANCE INDEX
The Chemistry Performance Index (CPI) is a calculation based on the concentration of key impurities in the secondary side of the plant. These key impurities are the most likely cause of deterioration of the steam generators. The chemistry parameters are reported only for the period of time greater than 30 percent power.
The CPI is calculated using the following equation: $CPI = (Ka/0.8) + (Na/20) + (O_2/10)) / 3$ where the following are monthly averages of: Ka = average blowdown cation conductivity, Na = average blowdown sodium concentration, O_2 = average condensate pump discharge dissolved oxygen concentration.

SECURITY 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 Badges - Incidents associated with improper use and handling of security badges. Incidents include security badges that are lost, taken out of the protected area, out of control on-site, or inadvertently destroyed or broken.
3) Access Control and Authorization - Administrative and procedural errors associated with the use of the card-access system such as tailgating, incorrect security badge issued, and improper escort procedures. This also includes incidents that were caused by incorrect access authorization information entered into the security system computer.
4) Security Key Control - Incidents 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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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.
7) Door Hardware Failure - 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.

STAFFING LEVEL

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

STATION NET GENERATION

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

STOCKOUT RATE

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

TEMPORARY MODIFICATIONS

The number of temporary mechanical and electrical configurations to the plant's systems.
1)Temporary configurations are defined as electrical jumpers, electrical blocks, mechanical jumpers, or mechanical blocks which are installed in the plant operating systems and are not shown on the latest revision of the P&ID, schematic, connection, wiring, or flow diagrams.
2)Jumpers and blocks which are installed for Surveillance Tests, Maintenance Procedures, Calibration Procedures, Special Procedures, or Operating Procedures are not considered as temporary modifications unless the jumper or block remains in place after the test or procedure is complete. Jumpers and blocks installed in test or lab instruments are not considered as temporary modifications.
3)Scaffolding is not considered a temporary modification. Jumpers and blocks which are installed and for which MRs have been submitted will be considered as temporary modifications until final resolution of the MR and the jumper or block is removed or is permanently recorded on the drawings. This indicator tracks temporary modifications for SEP #62 & 71.

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 & 54.

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.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

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

SAFETY ENHANCEMENT PROGRAM INDEX

The purpose of the Safety Enhancement Program (SEP) P[illegible]rmance 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. An explanation will be provided for indicators with data representing three months of declining performance that have been labeled as adverse trends.
The following indicators are exhibiting adverse trends for the reporting month:

Equipment Forced Outages per 1000 Critical Hours
(Page 13)
This indicator has shown an increase for three consecutive months.

Ratio of Preventive to Total Maintenance (Non-Outage)
(Page 22)
The ratio of preventive to total maintenance has decreased for three consecutive months.

Recordable Injury/Illness Cases Frequency Rate
(Page 62)
This indicator has been defined by the Manager of the Safety Department as exhibiting an adverse trend based on the 5 year frequency rate.

Violations per 1000 Inspection H
(Page 73)
This indicator has shown an increase for three consecutive months.

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.

Number of Out of Service Control Room Instruments
(Page 24)
The total number of out-of-service control room instruments for the reporting month (25) is above the Fort Calhoun goal of 15.

Secondary System Chemistry
(Page 37)
The Secondary System Chemistry Performance Index for the reporting month (0.506) is above the Fort Calhoun goal of 0.45.

Number of Hot Spots
(Page 46)
The number of Hot Spots for the reporting month (6[illegible]) exceeds the Fort Calhoun goal of 40.

Stockout Rate
(Page 54)
The percentage of pick tickets generated when the amount of parts requested is equal to or less than the minimum stocking level and parts are not available is above the Fort Calhoun goal of 2%.

Temporary Modifications
(Page 58)
The age of temporary modifications for the reporting month exceeds the Fort Calhoun Goals.

End of Management Attention Report.

PERFORMANCE INDICATOR REPORT IMPROVEMENTS/CHANGES

Table of Contents
The table of contents has been revised, at the request of S. K. Gambhir, to include a comparison of the reporting month's indicator values to the previous months and to note improved or declining performance.

Number of Nuclear Plant Reliability Data Systems Reportable Failures
(Page 34)
The graph for this indicator has been revised to correct a graphing error in past months reports.

Check Valve Failure Rate
(Page 36)
The graph for this indicator has been revised to correct a graphing error in past months reports.

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	01/31/89 - 02/17/90	3,817,954	45,589,459
12th Refueling	02/17/90 - 05/29/90	*	*
Cycle 13#	05/29/90 - 02/01/92	# 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 - 05/06/95	*	*

FORT CALHOUN STATION
CURRENT PRODUCTION AND OPERATIONS "RECORDS"

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