Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247
402/636-2000

May 20, 1991
LIC-91-167R

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Reference: Docket No. 50-285

Gentlemen:

SUBJECT: Fort Calhoun Station Performance Indicators

Please find enclosed the monthly Fort Calhoun Station Performance Indicator Report dated April, 1991.

If you should have any questions, please contact me.

Sincerely,

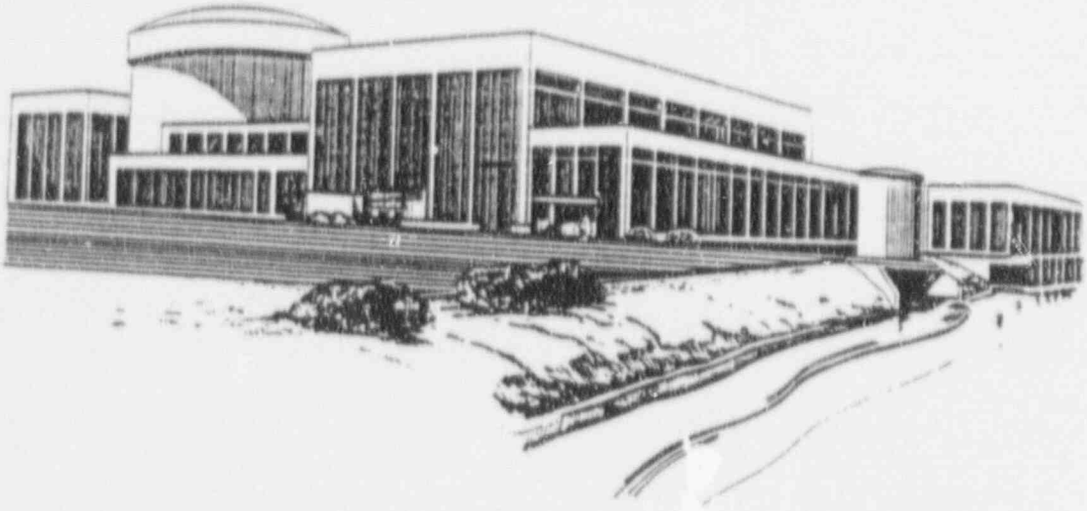
W. G. Gates
Division Manager
Nuclear Operations

WGG/sel

c: LeBoeuf, Lamb, Leiby & MacRae
R. D. Martin, NRC Regional Administrator, Region IV
W. C. Walker, NRC Project Manager
R. P. Mullikin, NRC Senior Resident Inspector
B. A. Boger, NRC Director, Reactor Project
III, IV, and V Special Projects

FORT CALHOUN STATION
PERFORMANCE INDICATORS

APRIL 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

System Engineering

Test and Performance Group

April 1991

ABSTRACT

PURPOSE

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

SCOPE

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

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

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

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

3) Develop formal definitions for each performance parameter. This will ensure consistency in future reports and allow comparison with industry averages where appropriate.

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

REFERENCES

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

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

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

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CHEMISTRY AND RADIOLOGICAL PROTECTION

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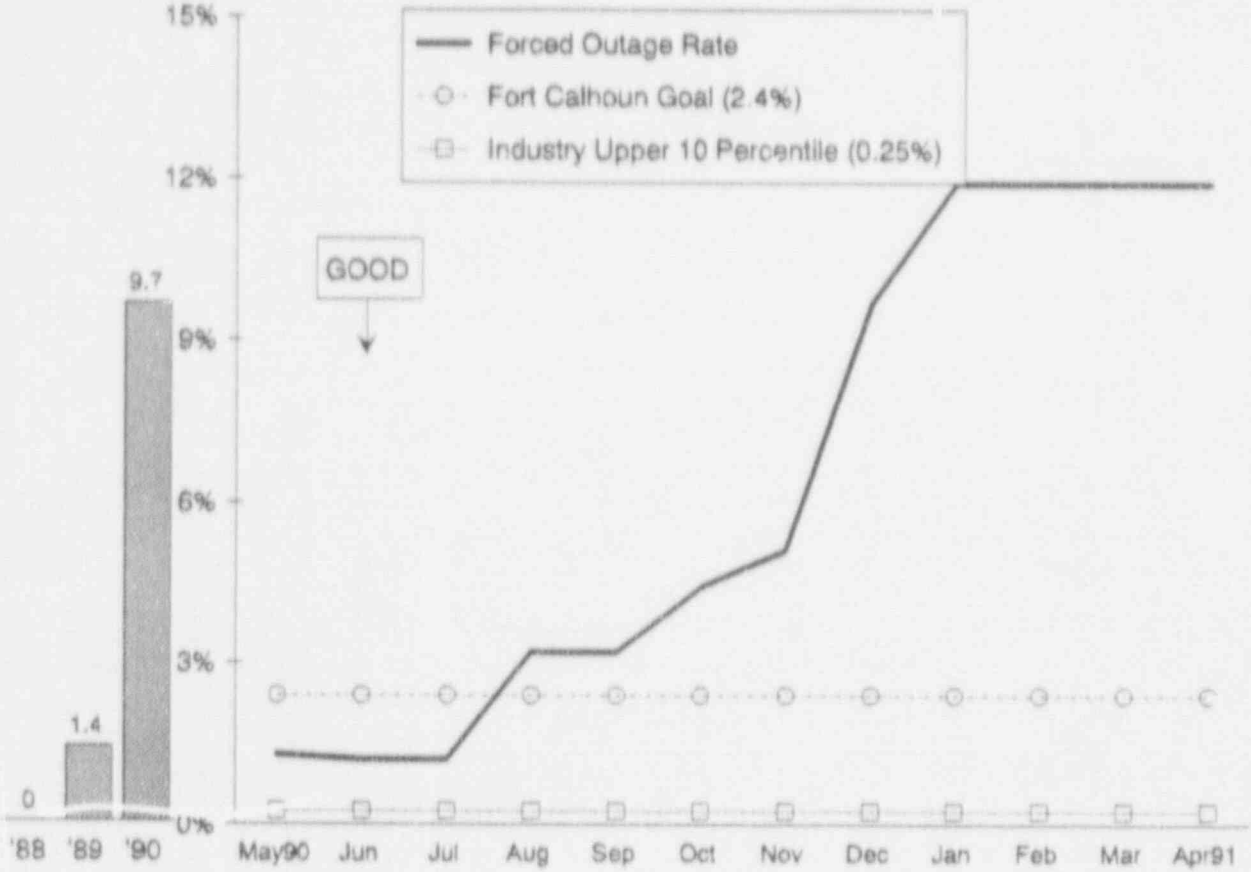
STATION NET GENERATION

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

During the month of April 1991, a net total of 219,323 MWH was generated by the Fort Calhoun Station. This low net generation reflects the fact that the Fort Calhoun Station was operated at planned reduced power for the entire month of April, 1991.

Data Source: Station Generation Report

Adverse Trend: None



FORCED OUTAGE RATE

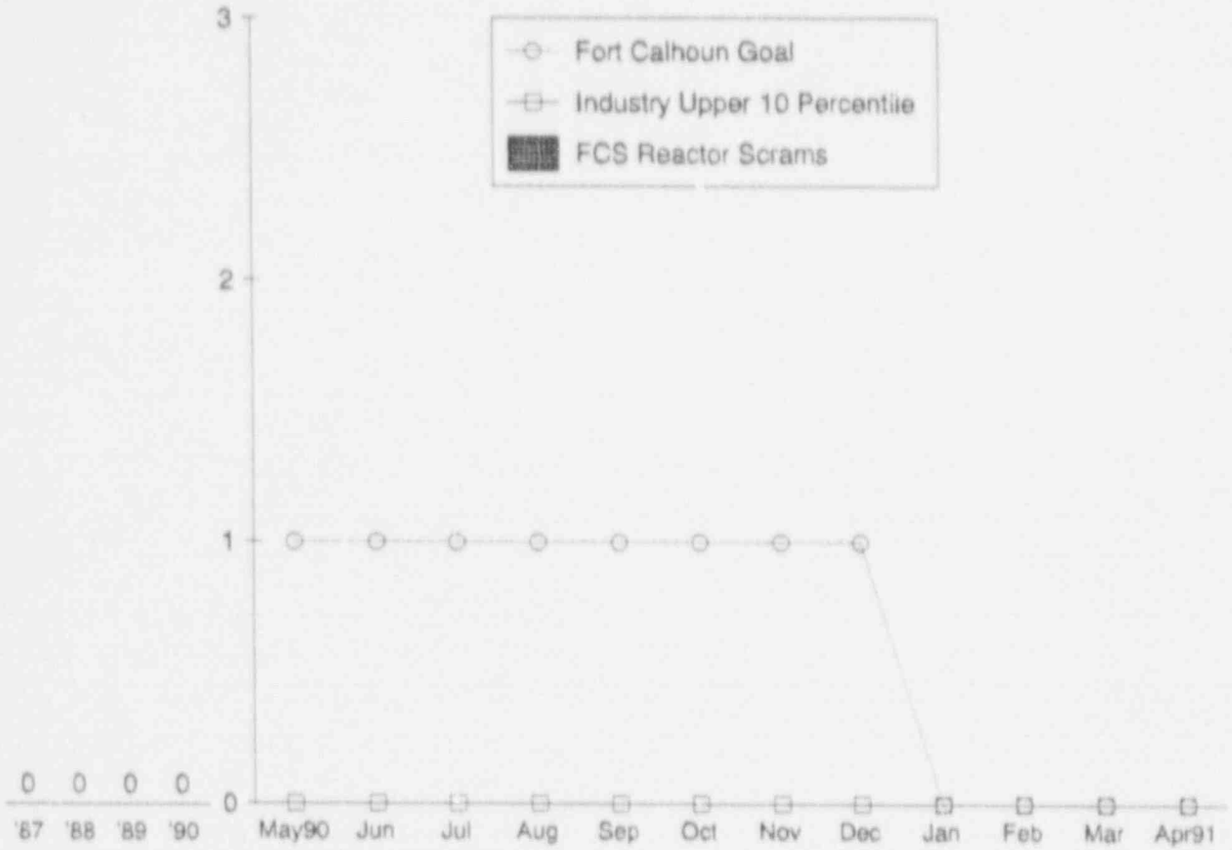
The forced outage rate was reported as 11.9% for the last twelve months.

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

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

Data Source: NERC GAD Forms

Adverse Trend: None



UNPLANNED AUTOMATIC REACTOR SCRAMS
WHILE CRITICAL

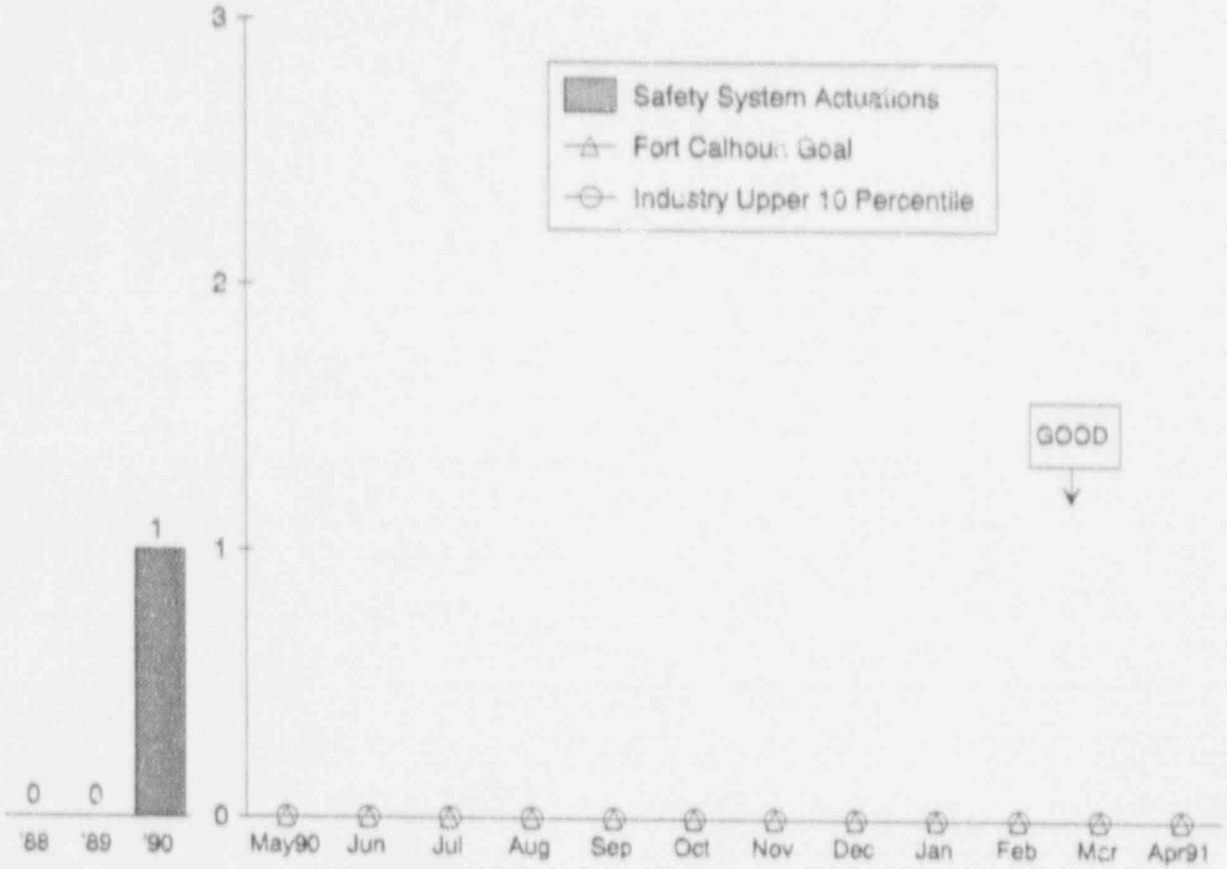
There were no unplanned automatic reactor scrams in April 1991. The last unplanned automatic reactor scram occurred on July 2, 1986.

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

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

Data Source: Plant Licensee Event Reports (LER)

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

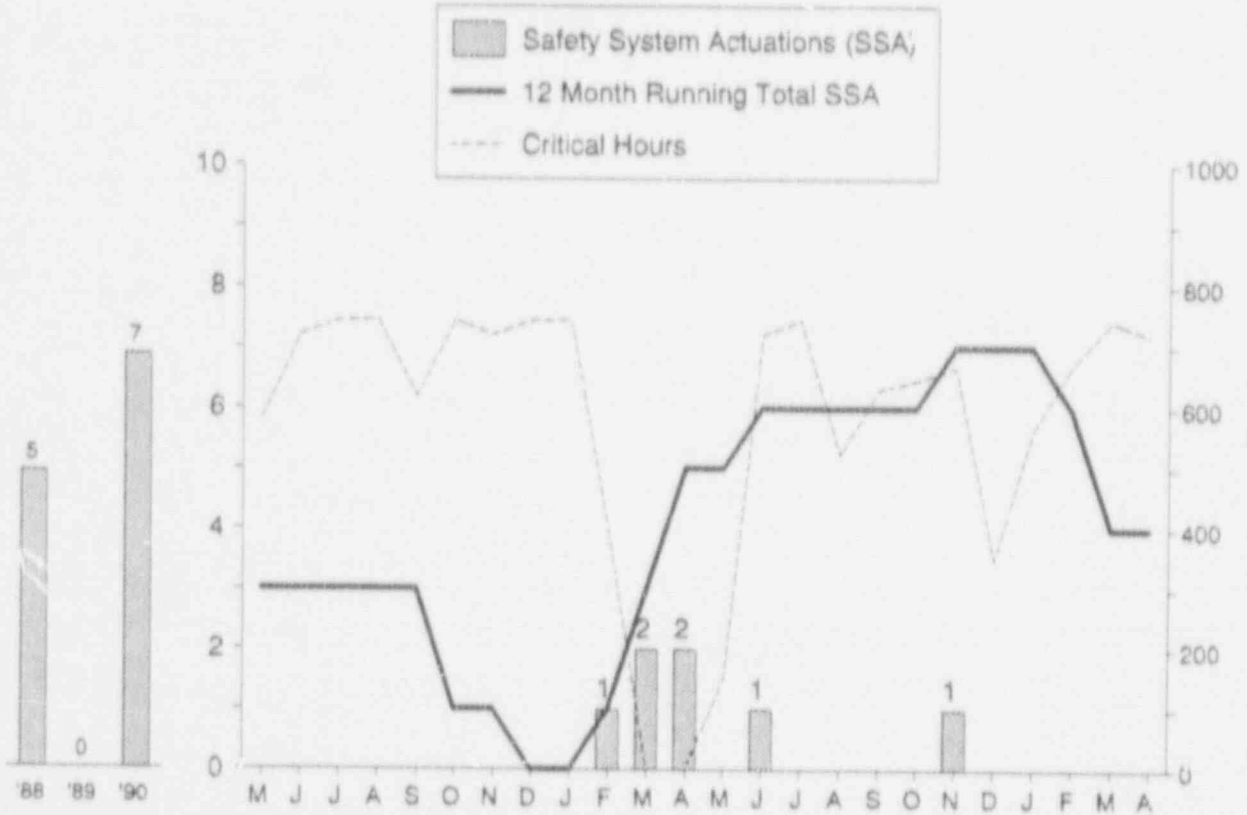
There were no unplanned safety system actuations during the month of April 1991.

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

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

Data Source: Plant Licensee Event Reports (LER)

Adverse Trend: None



UNPLANNED SAFETY SYSTEM ACTUATIONS - (NRC DEFINITION)

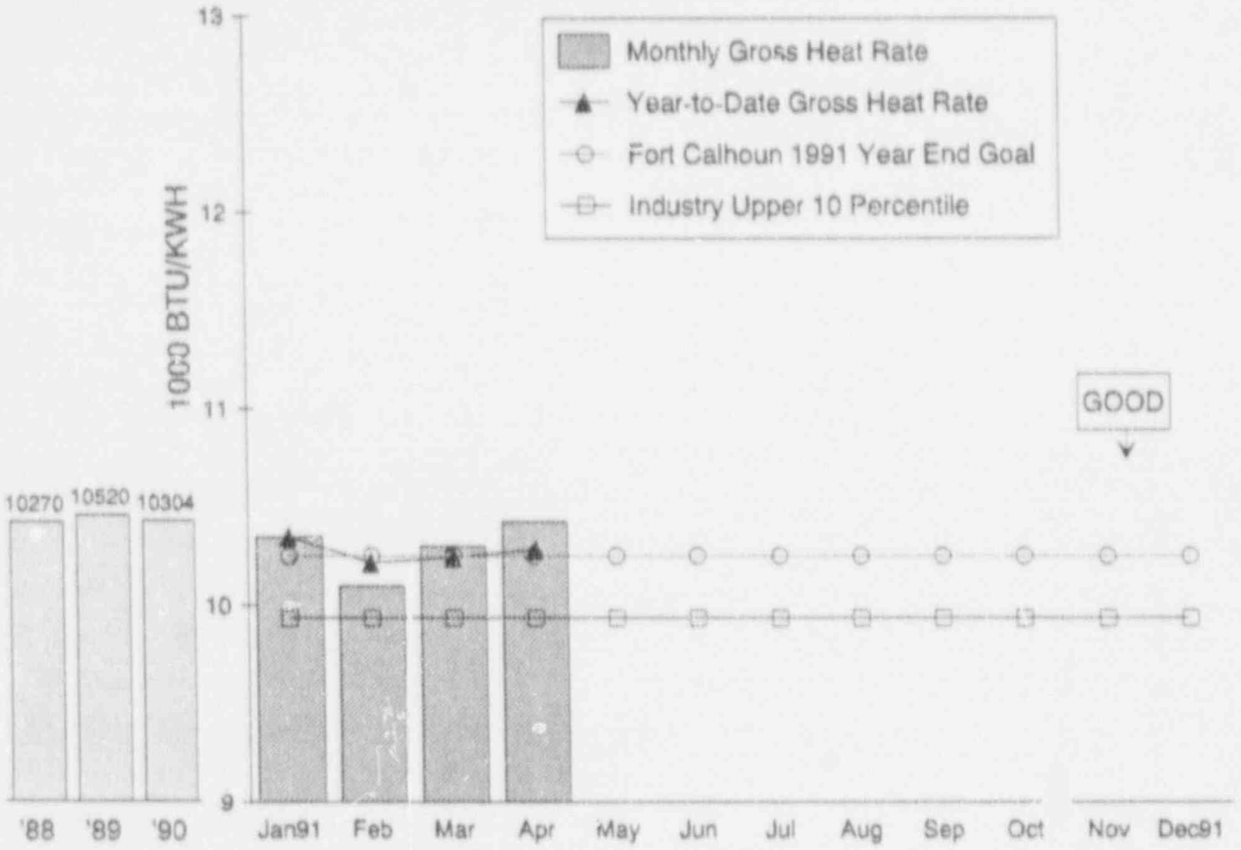
This indicator shows the number of unplanned safety system actuations (SSA's) which include the High and Low Pressure Safety Injection Systems, the Safety Injection Tanks, and the Emergency Diesel Generators. The NRC classification of SSA's includes actuations when major equipment is operated and when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

The last event of this type occurred in November 1990 when the Diesel Generators DG-1 and DG-2 experienced anticipatory starts when the turbine was tripped due to a forced shutdown of the plant. This forced shutdown was due to an Instrument Air System line failure in the Turbine Building.

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

Data Source: Plant Licensee Event Reports (LER)

Adverse Trend: None



GROSS HEAT RATE

The Gross Heat Rate Indicator goal has been changed. This goal was changed due to the rescheduling of the Cycle 13 Refueling Outage which resulted in a reduction in operating power to save fuel.

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 10,424 BTU/KWH during the month of April.

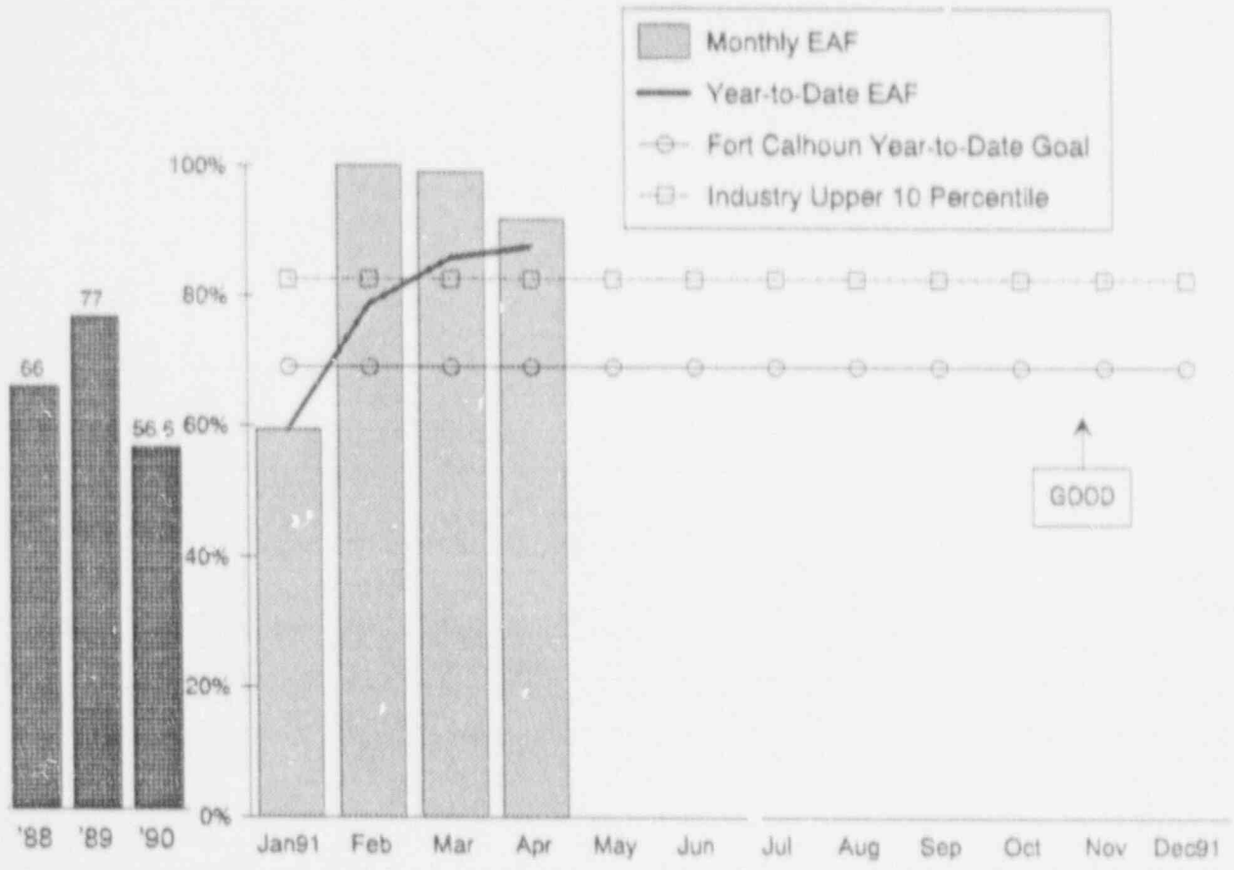
The year-to-date gross heat rate was reported as 10,293 BTU/KWH.

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), year-to-date EAF for 1991, and the EAF for the previous 3 years.

The EAF was reported as 91.62% for the month of April. The EAF was not effected by the 70% power reduction during February, since the reduction was under management control and for reasons of economy (fuel savings).

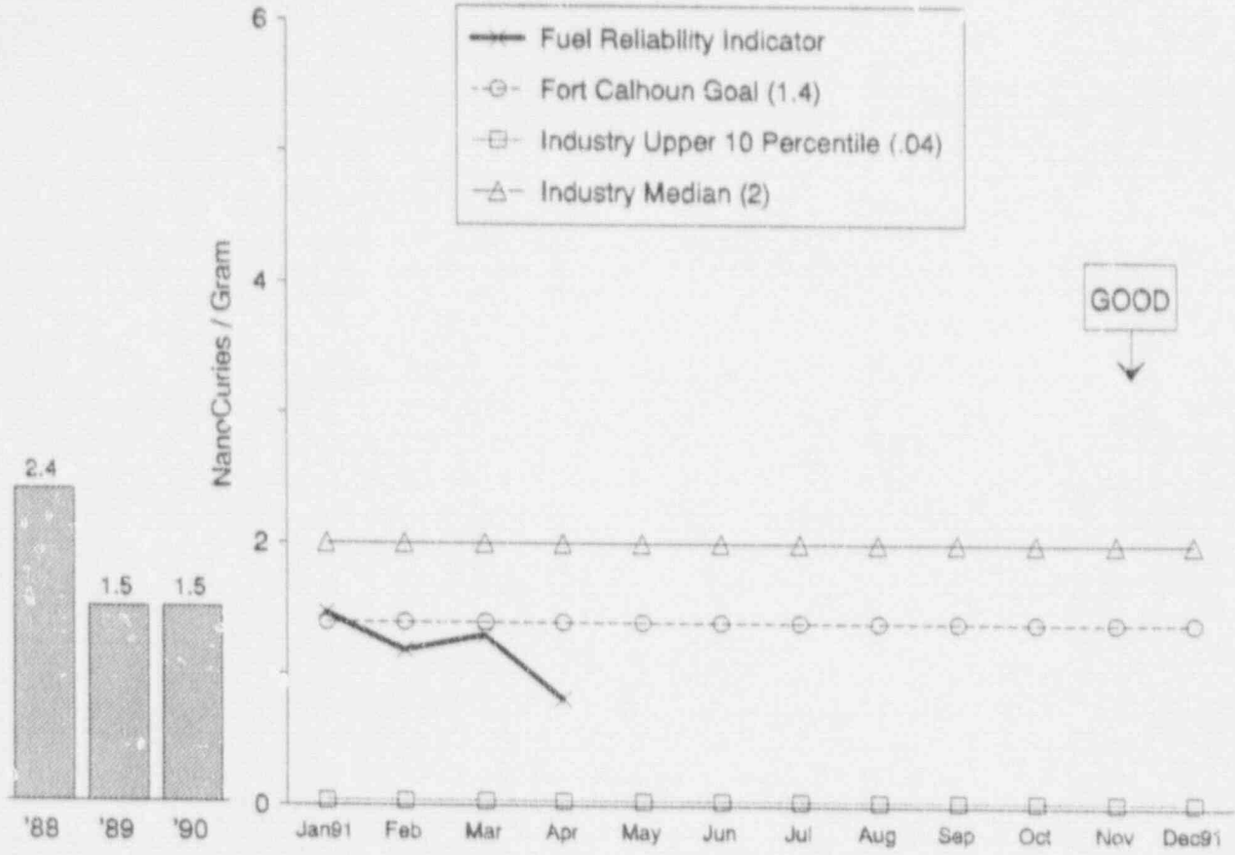
The year-to-date EAF was reported as 87.48%.

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 .317 nanocuries/gram for the month of April. This INPO indicator uses an industry normalized letdown purification rate. The FRI value using the plant's actual letdown purification rate was reported as 1.28 nanocuries/gram.

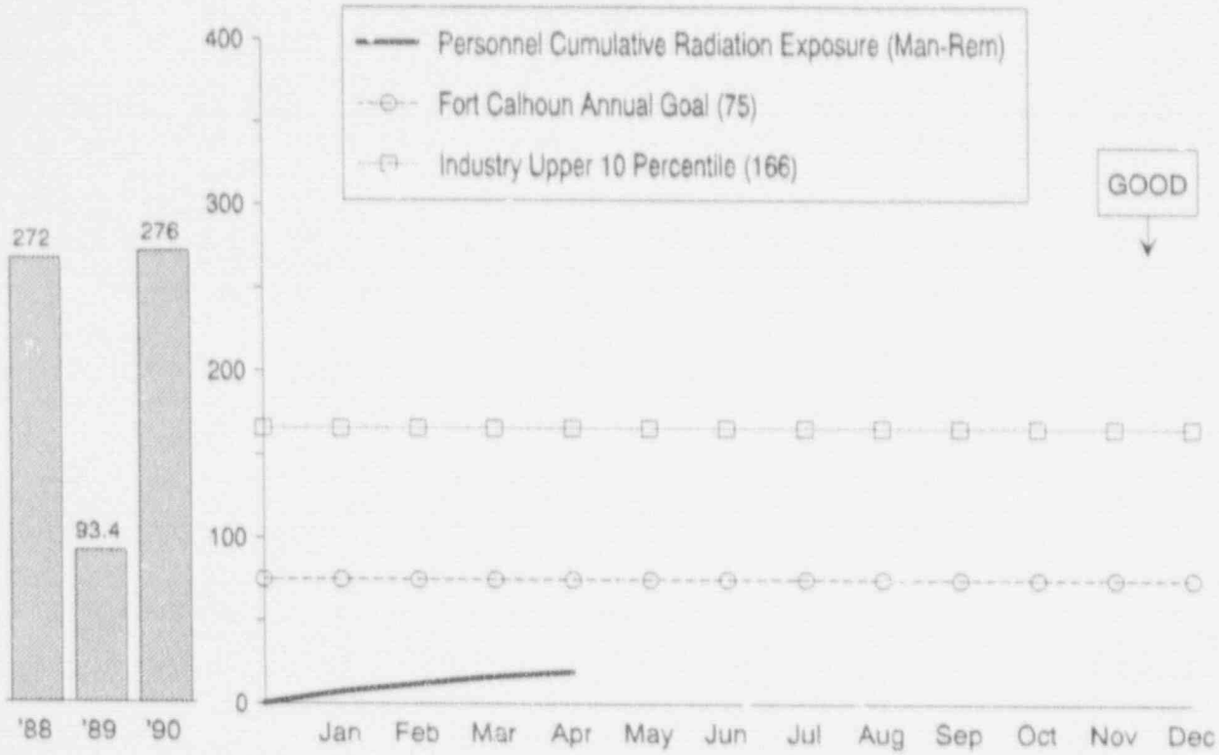
The Cycle 13 fuel performance continues without an observed fuel failure. The high FRI value is indicative of previous fuel failures. The last detected fuel failure was during Cycle 10.

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

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

Data Source: Holthaus/Lofshult

Adverse Trend: None



PERSONNEL RADIATION EXPOSURE
(CUMULATIVE)

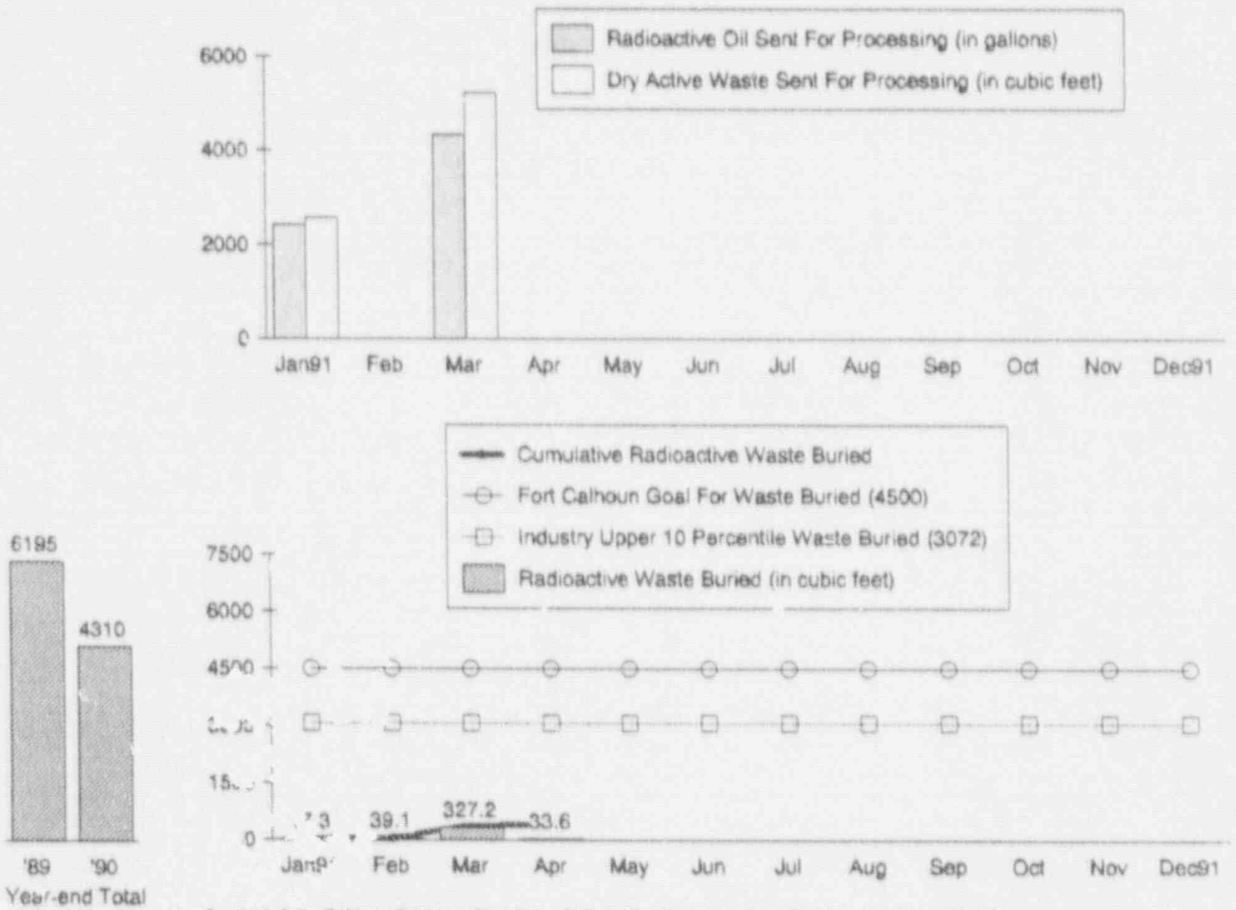
During April 1991, 3.1 man-rem was recorded by TLD's worn by personnel while working at the Fort Calhoun Station. The year-to-date exposure is 19.1 man-rem.

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

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

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None SEP 54



VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

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

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

Cumulative volume of radioactive oil shipped off-site for processing (gallons)	4,330.0
Cumulative amount of solid radwaste shipped off-site for processing (cubic feet)	5,218.0
Volume of solid radioactive waste which was buried during the month (cubic feet)	33.6
Cumulative volume of solid radioactive waste buried (cubic feet)	417.2
Amount of solid radioactive waste in temporary storage (cubic feet)	0.0

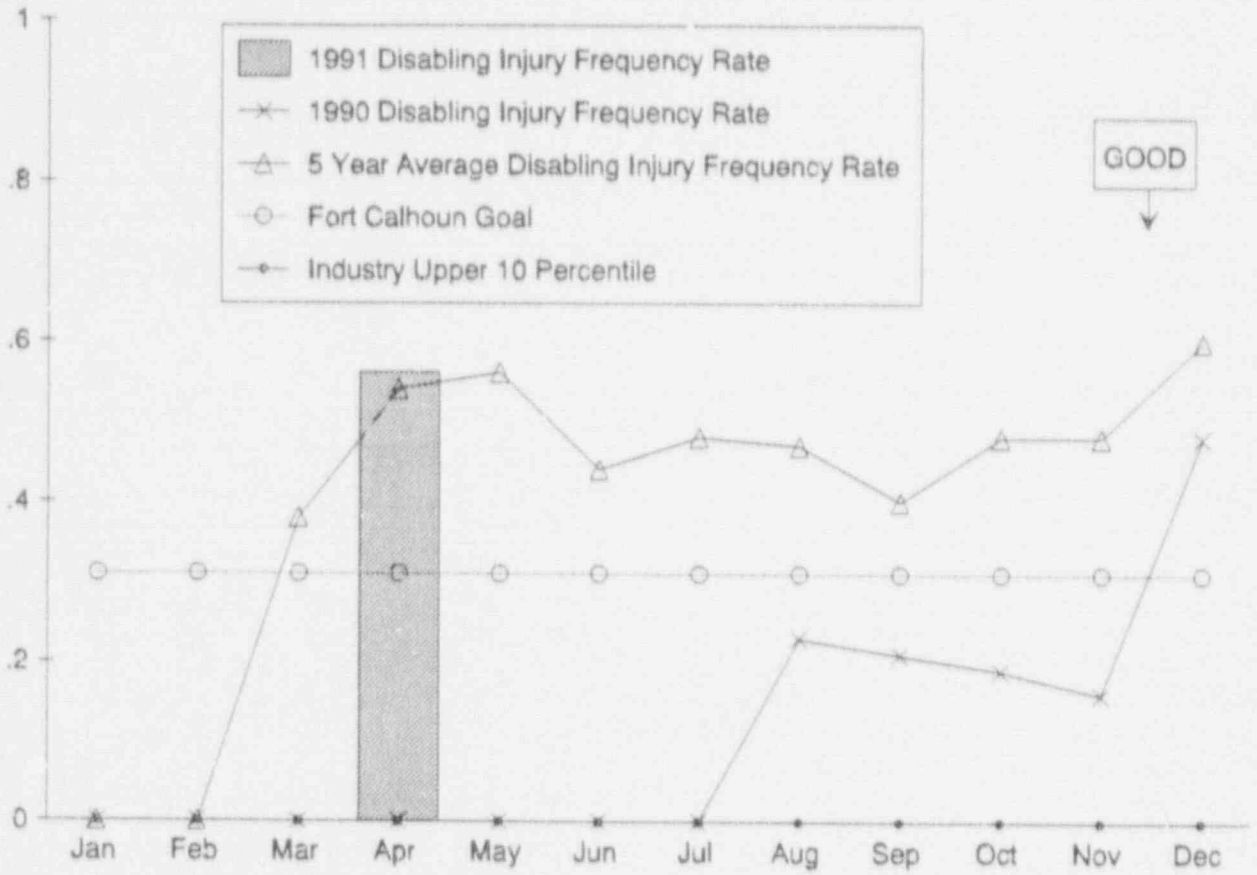
The Fort Calhoun goal for the volume of solid radioactive waste which has been buried is 4,500 cubic feet.

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)

Adverse Trend: None

SEP 54



DISABLING INJURY FREQUENCY RATE
(LOST TIME ACCIDENT RATE)

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

There was one (1) lost time accident reported at the Fort Calhoun Station in April. The total number of lost time accidents that have been reported during 1991 is one (1).

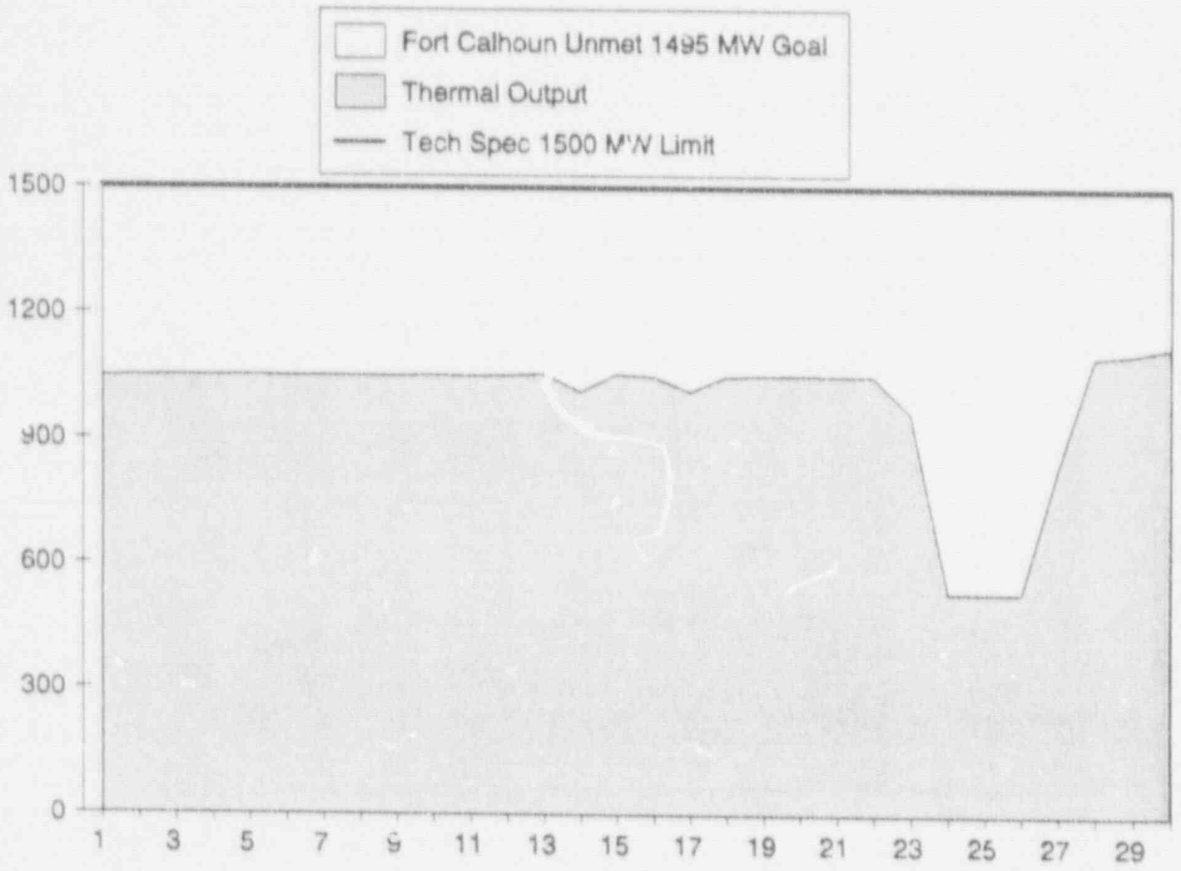
The 1991 disabling injury/illness frequency rate goal was set at 0.31%.

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 26



DAILY THERMAL OUTPUT

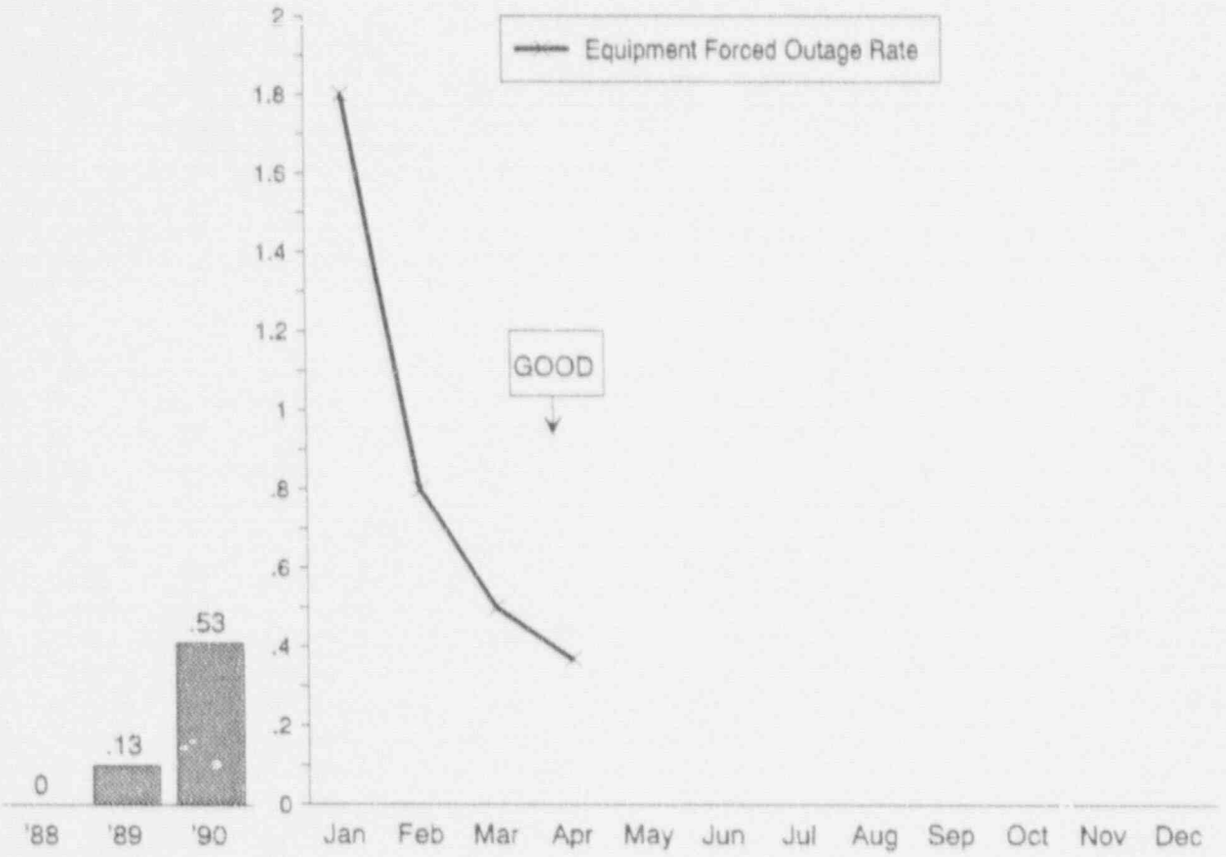
The above thermal output graph displays the daily operating power level during April 1991, the 1500 thermal megawatt average technical specification limit, and the 1495 thermal megawatt Fort Calhoun goal that was not met.

Plant power level was reduced to 70% in February for fuel conservation in support of the extension of power operations for Cycle 13. This power reduction will continue until the summer months when 100% power will be resumed. Reduced power operations will be resumed in the fall.

The power reduction of April 23 thru 26 was to repair the Feedwater Reg. Valve (FCV-1101).

Data Source: Holthaus/Gray (Manager/Source)

Adverse Trend: None



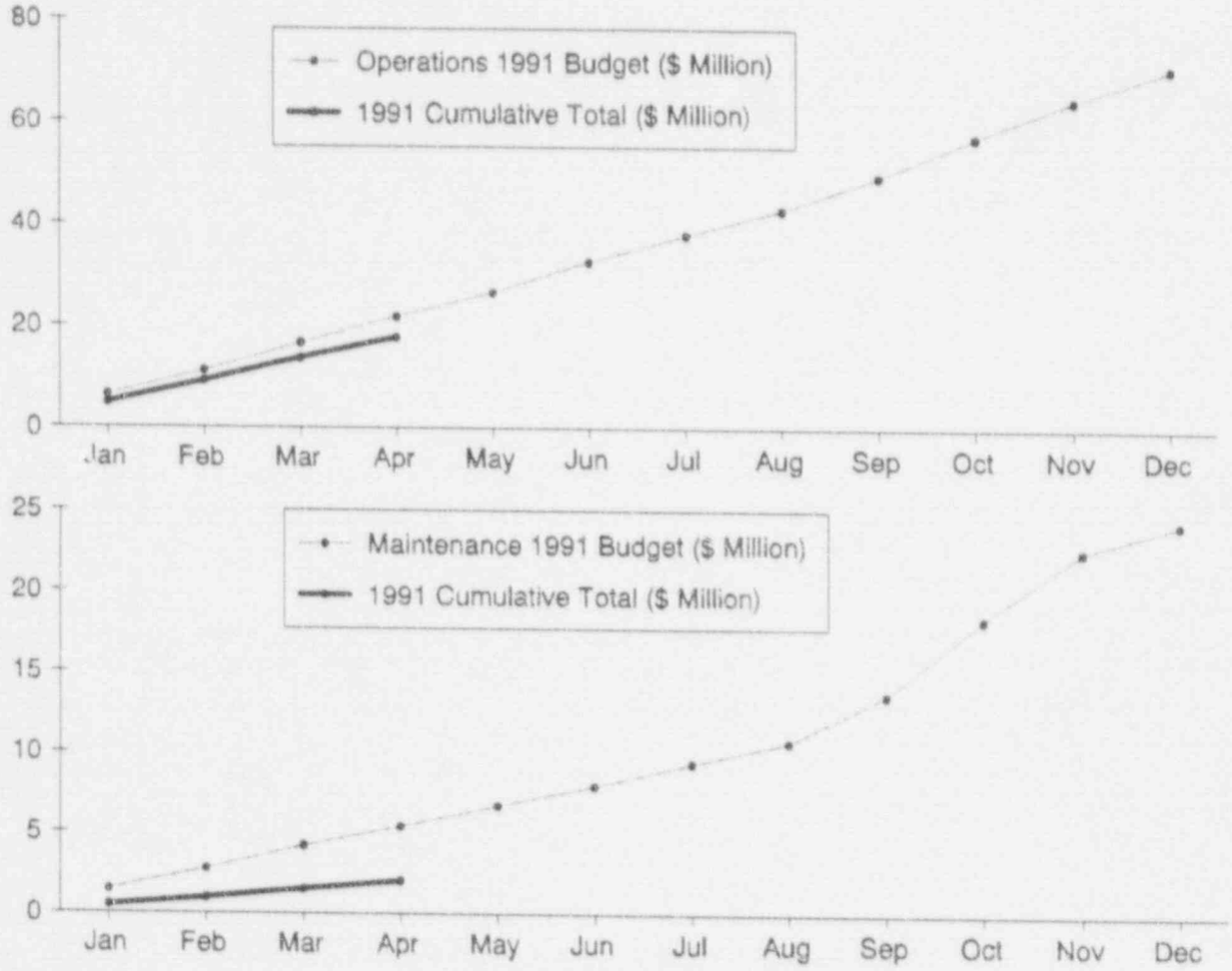
EQUIPMENT FORCED OUTAGES
PER 1000 CRITICAL HOURS

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

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

Data Source: Plant Licensee Event Report (LER)

Adverse Trend: None



OPERATIONS AND MAINTENANCE BUDGET

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

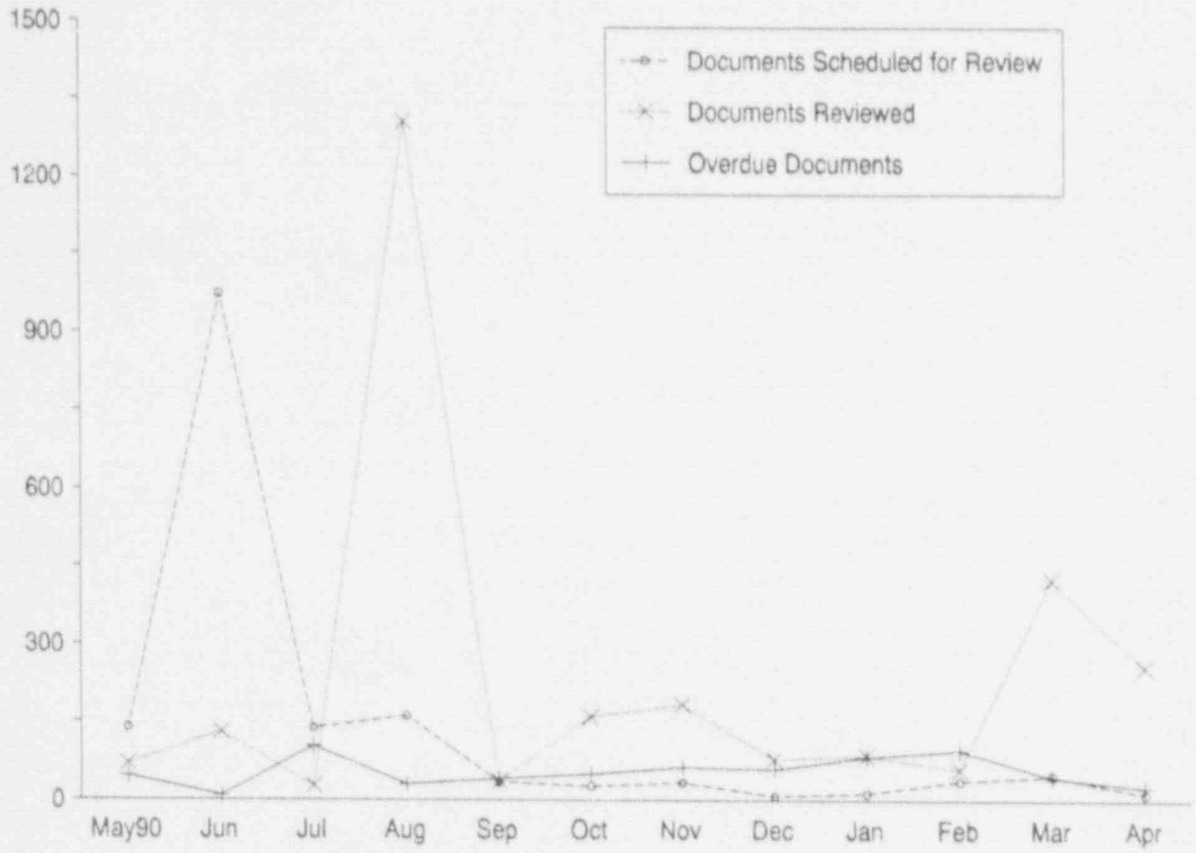
The above 1991 expediture budgets do not reflect the extension of power operations and refueling postponement for Cycle 13.

The budget year-to-date for Operations was 21.8 million dollars for April while the actual cumulative expenditures through April totaled 17.7 million dollars.

The budget year-to-date for Maintenance was 5.4 million dollars for April while the actual cumulative expenditures through April totaled 2.0 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.

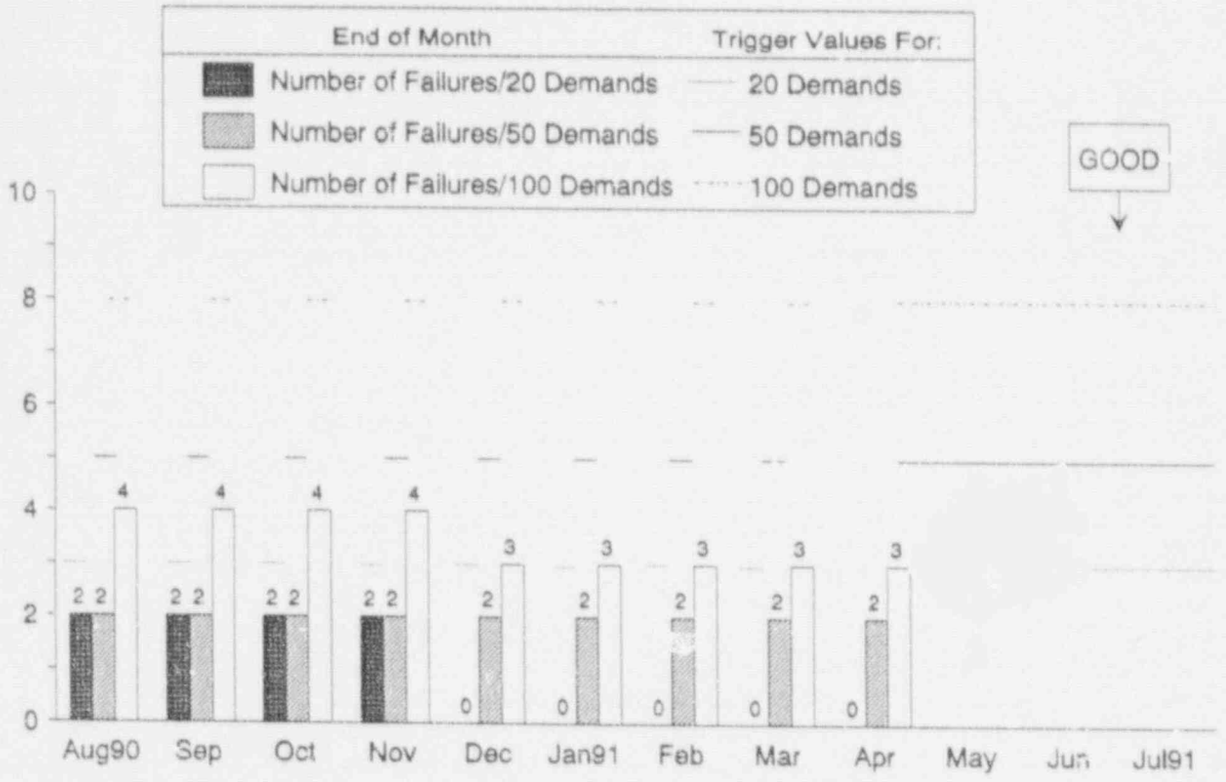
During April there were 237 document reviews completed while 13 document reviews were scheduled. At the end of April, there were 26 document reviews overdue. The overdue document reviews at the end of April consisted primarily of Operations documents.

During the month of April there were 198 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



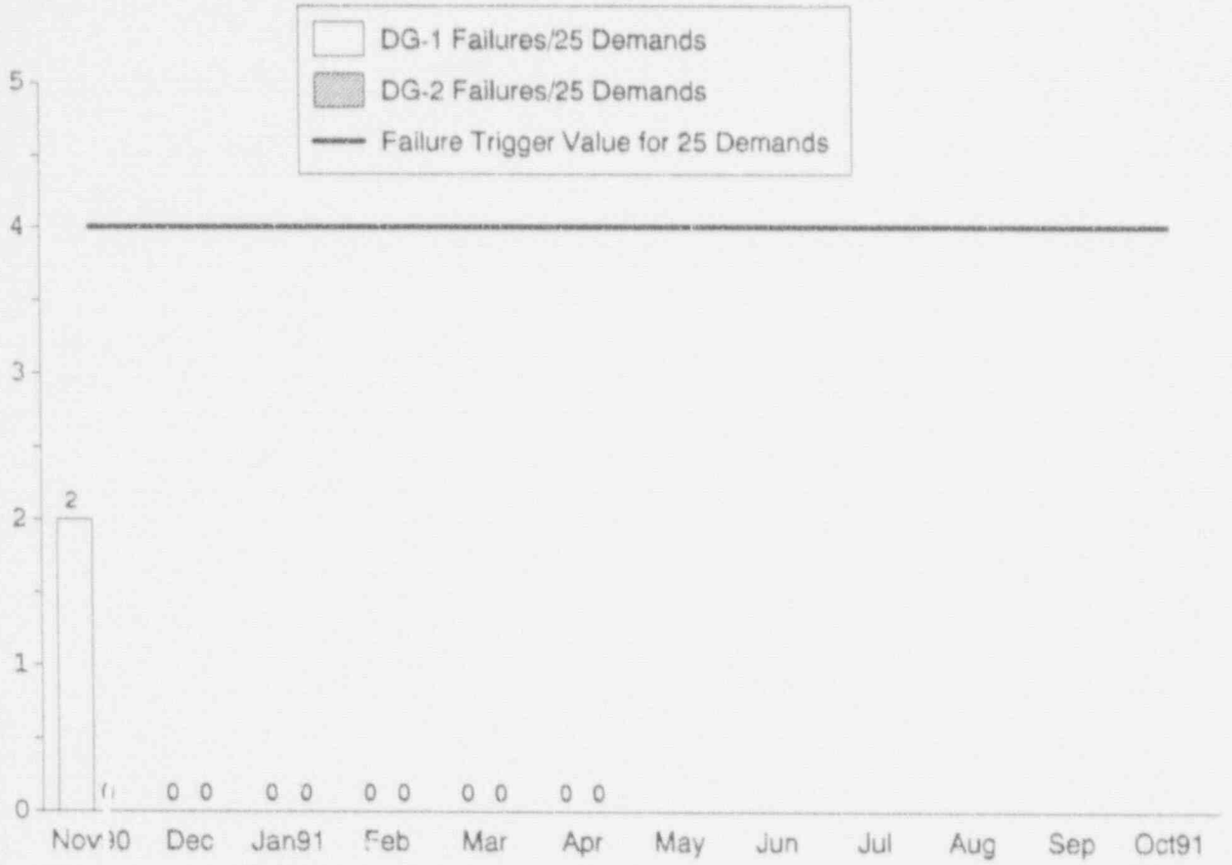
EMERGENCY DIESEL GENERATOR UNIT RELIABILITY

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 special tests in which a diesel generator was expected to be operated for a minimum of one hour and to be loaded with at least 50% of design load (see exceptions and other demand criteria in the Definition Section).

Data Source: Jaworski/Ronning (Manager/Source)

Adverse Trend: None



DIESEL GENERATOR RELIABILITY (25 DEMANDS)

This indicator shows the number of failures experienced by each emergency diesel generator during the last 25 start demands and the last 25 load-run demands. A trigger value of 4 failures within the last 25 demands is also shown. This trigger value of 4 failures within 25 demands is the Fort Calhoun goal for 1991.

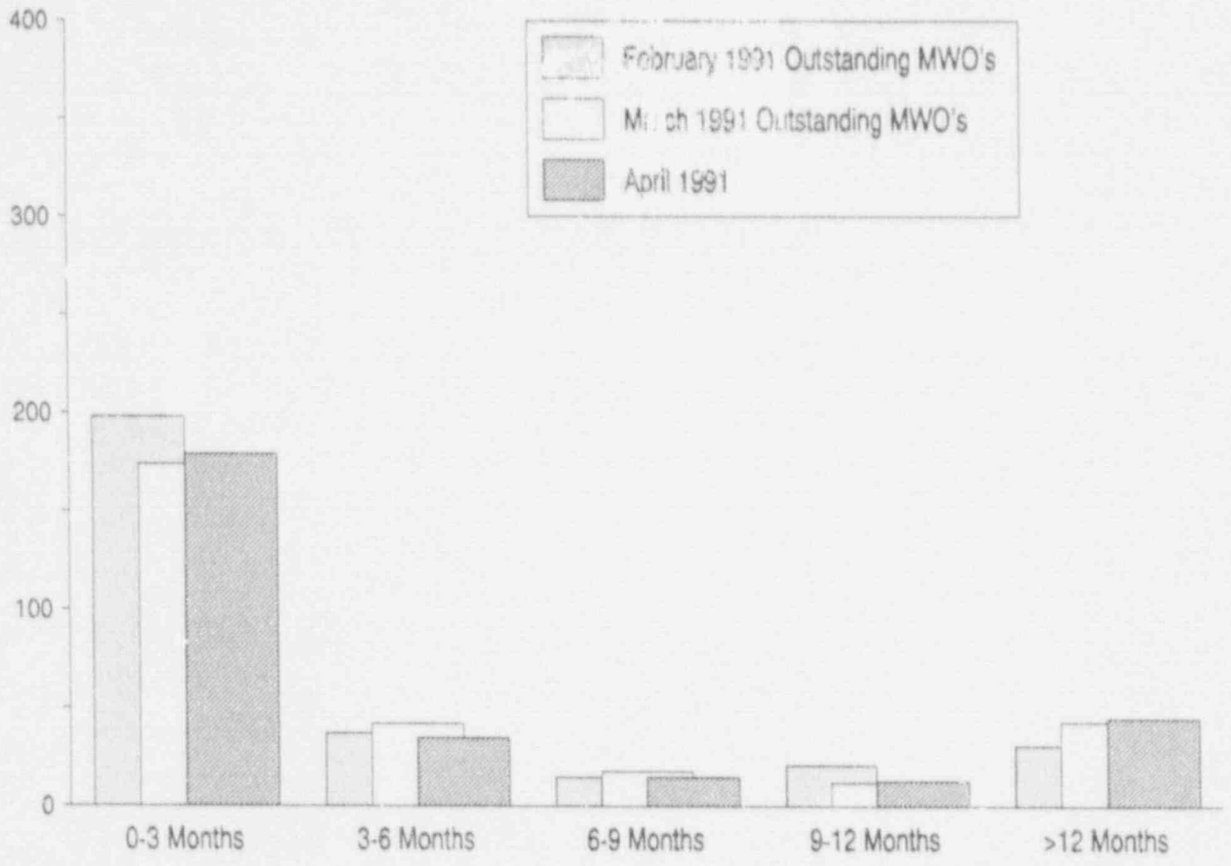
It must be emphasized that in accordance with NUMARC criteria, certain actions will take place in the event that any one emergency diesel generator experiences 4 or more failures within the last 25 demands on the unit. These actions are described in the Definition Section. A Standing Order has been drafted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

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

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

Data Source: Jaworski/Ronning (Manager/Source)

Adverse Trend: None

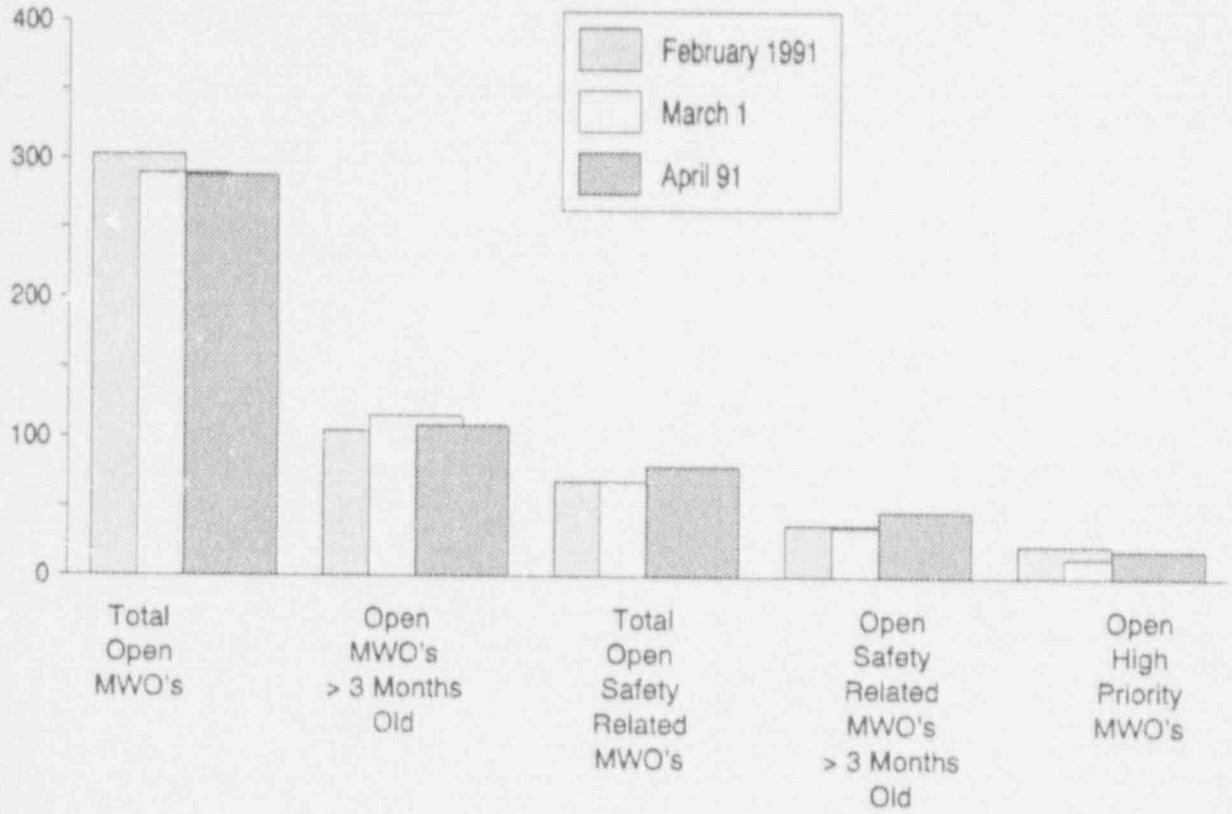


AGE OF OUTSTANDING MAINTENANCE WORK ORDERS
(CORRECTIVE NON-OUTAGE)

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None.



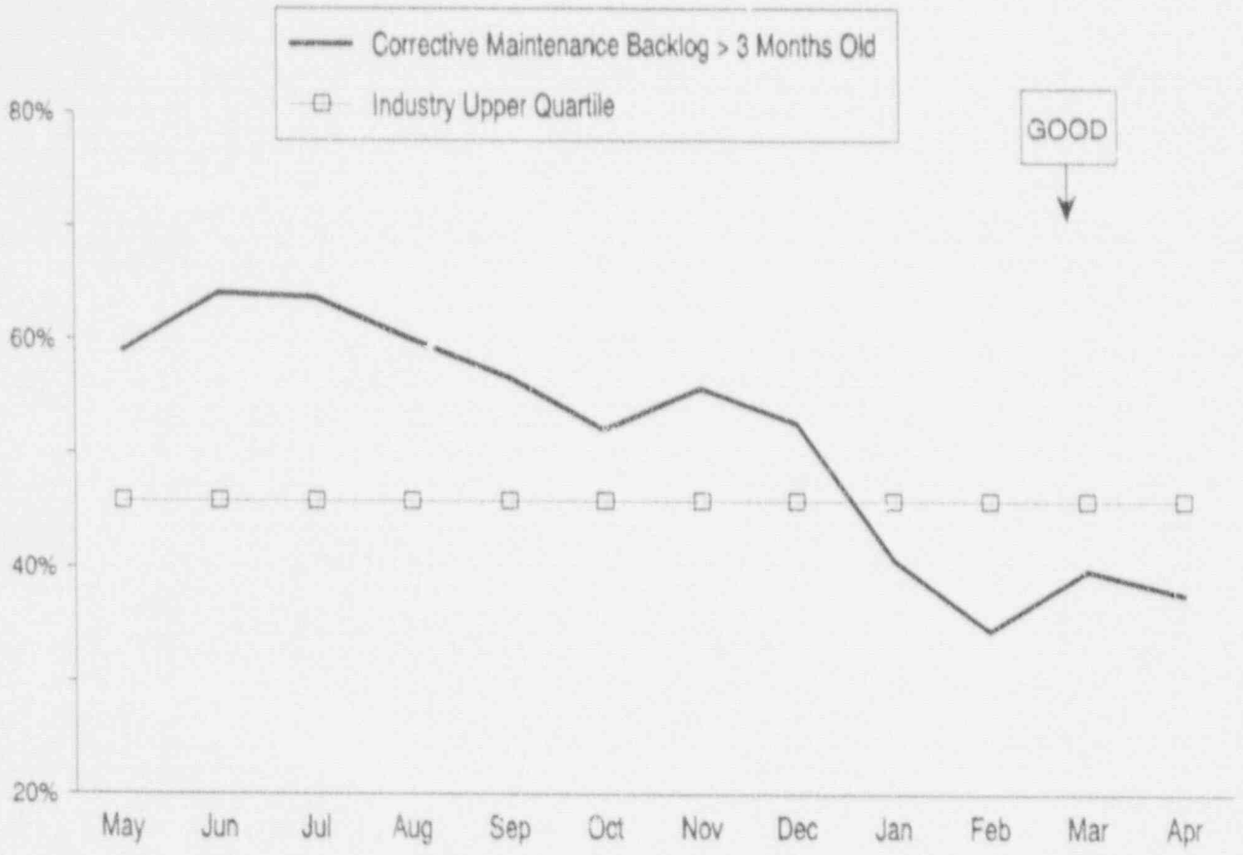
MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE)

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 36



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

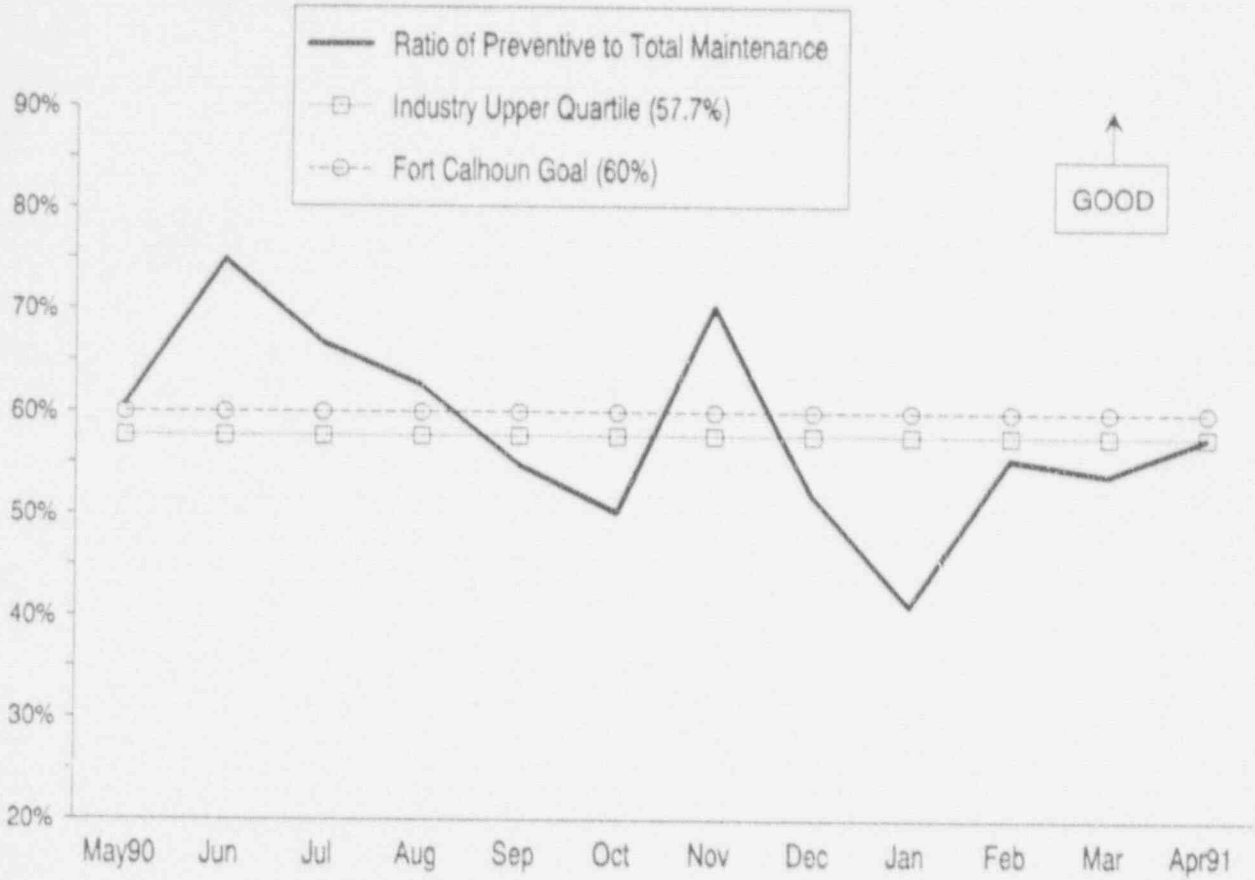
This indicator shows the percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of the reporting month.

The percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of April was reported as 37.6%.

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None



RATIO OF PREVENTIVE TO TOTAL MAINTENANCE
(NON-OUTAGE)

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

The ratio of preventive to total maintenance was 57.6% in April.

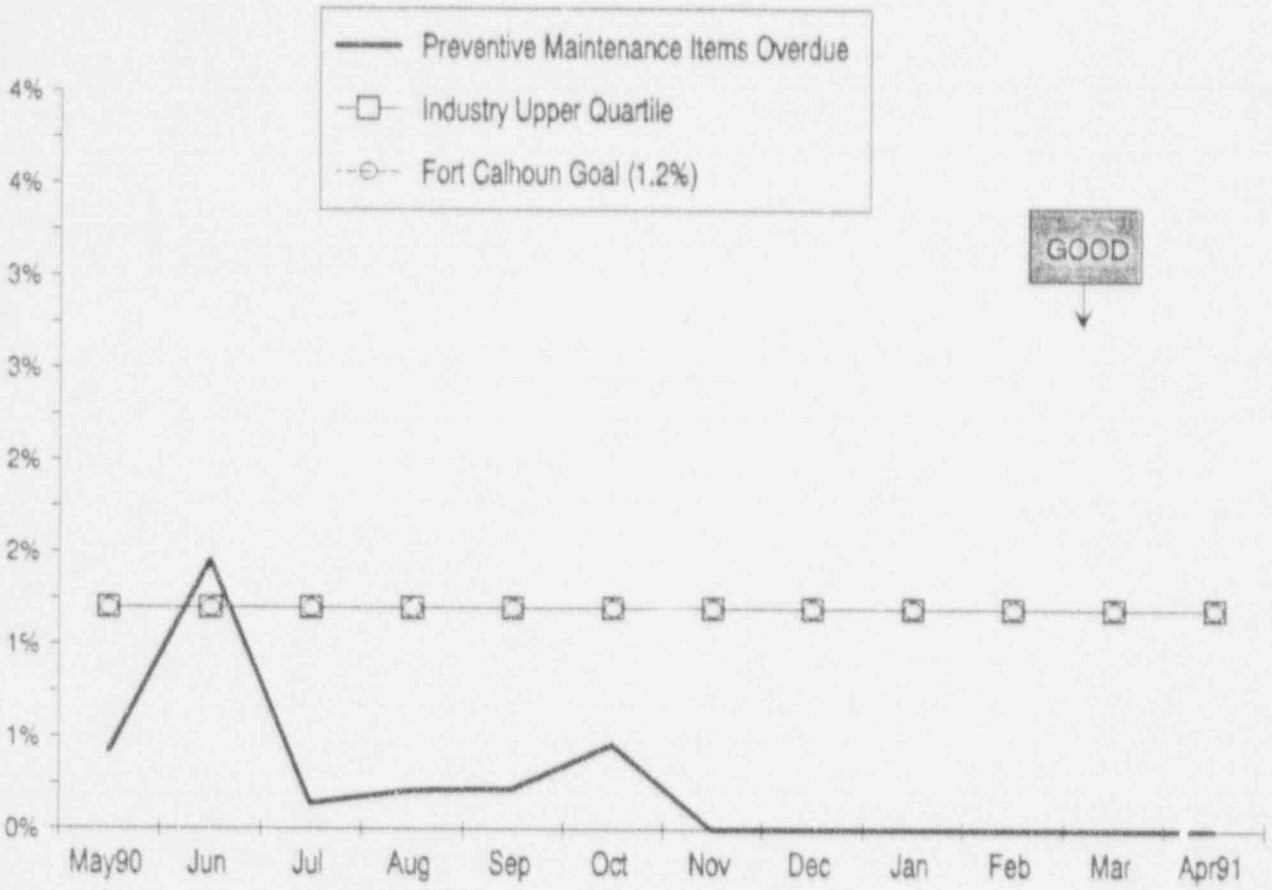
The Fort Calhoun goal is to have a ratio of preventive to total maintenance greater than 60%. The low values for the months of January through April 1991 are due to the low number of PM activities scheduled to be completed during these months.

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 41



PREVENTIVE MAINTENANCE ITEMS OVERDUE

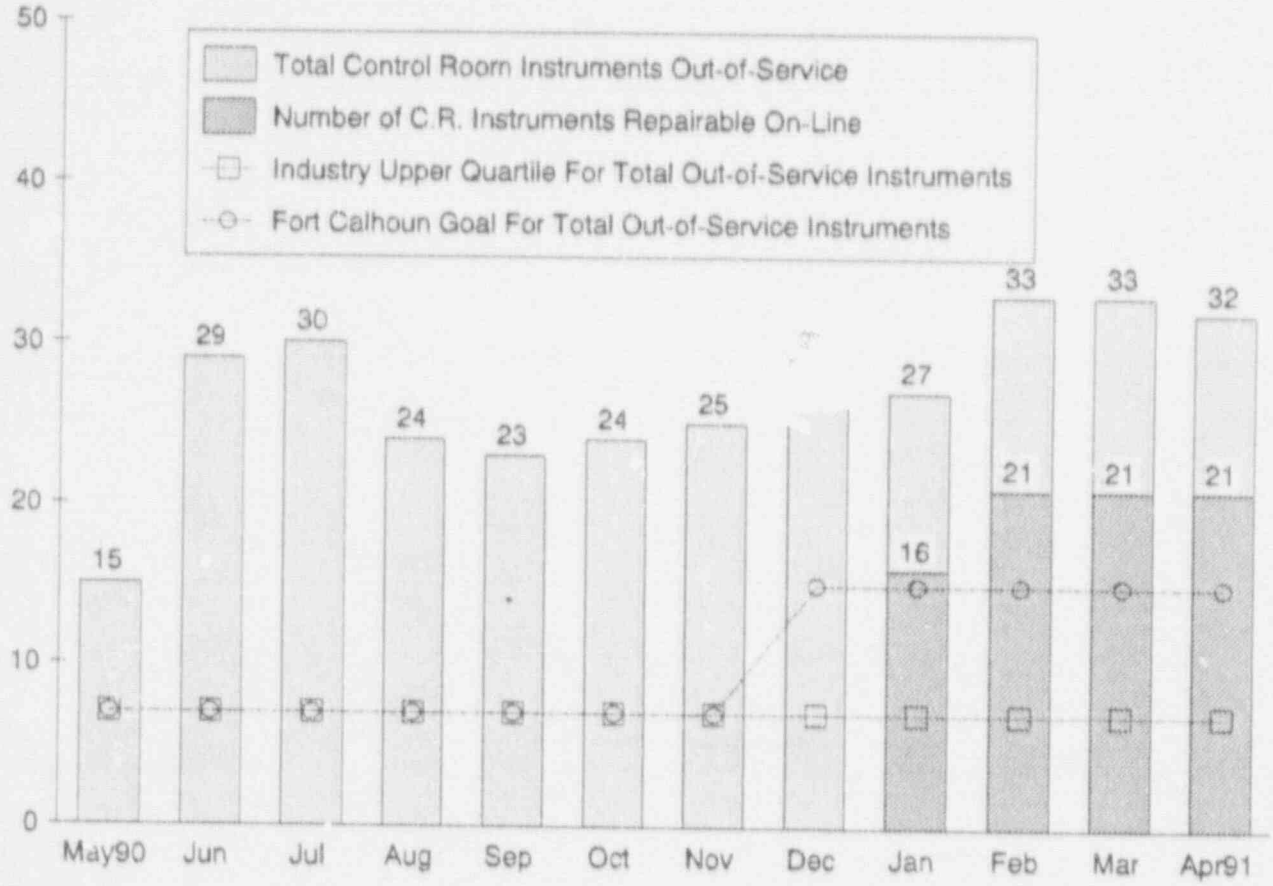
The purpose of this indicator is to monitor progress in the administration and execution of preventive maintenance programs. A small percentage of preventive maintenance items overdue indicates a station commitment to the preventive maintenance program and an ability to plan, schedule, and perform preventive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

During April 1991, 1145 PM items were completed. All PM's were completed within the allowable grace period.

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

Data Source: Patterson/Linden (Manager/Source)

Adverse Trend: None SEP 41



NUMBER OF OUT-OF-SERVICE
CONTROL ROOM INSTRUMENTS

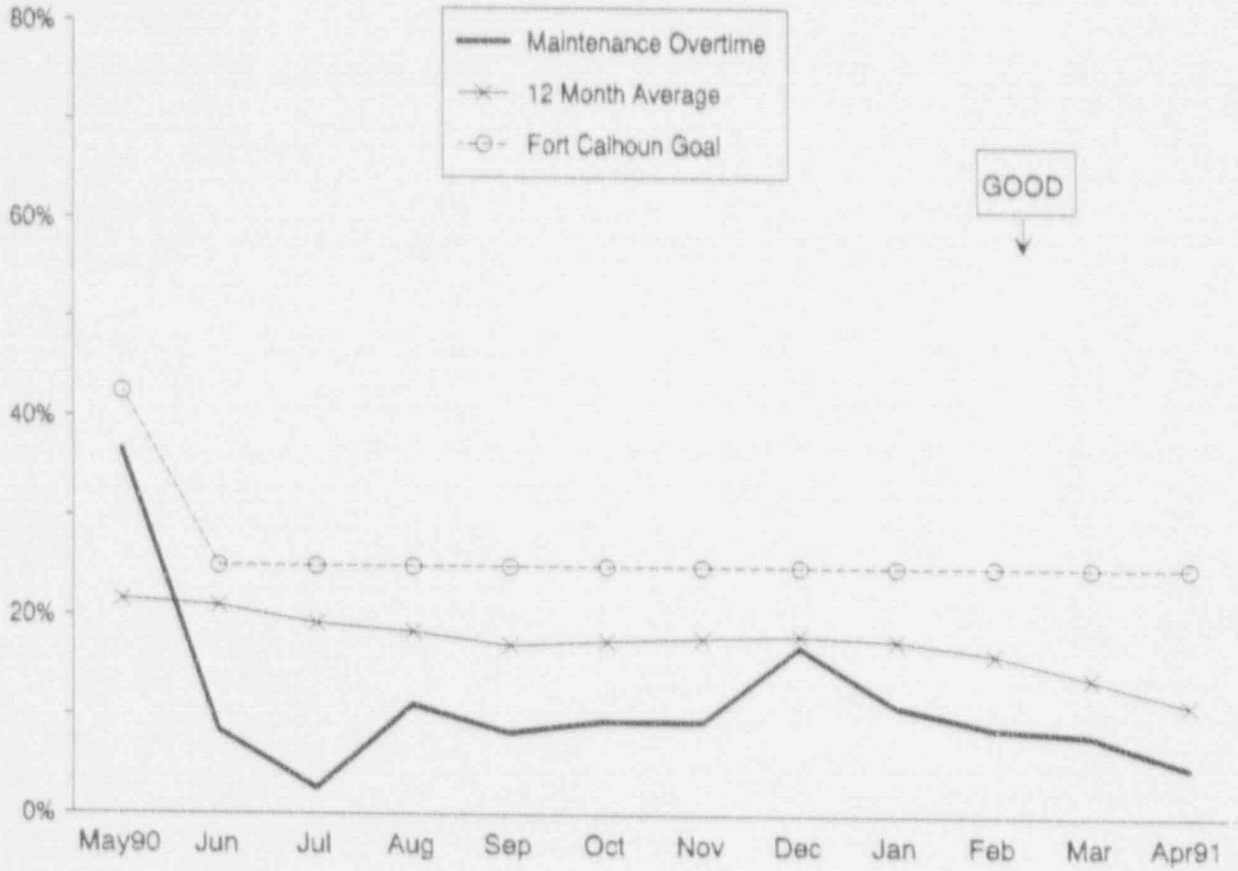
This indicator shows the number of out-of-service control room instruments, the number of instruments repairable during plant operations (on-line), the industry upper quartile for this indicator, and the Fort Calhoun goal.

There was a total of 32 out-of-service control room instruments at the end of April. A plant outage is required to repair 11 of these 32 control room instruments.

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

Data Source: Patterson/Adams (Manager/Source)

Adverse Trend: None



MAINTENANCE OVERTIME

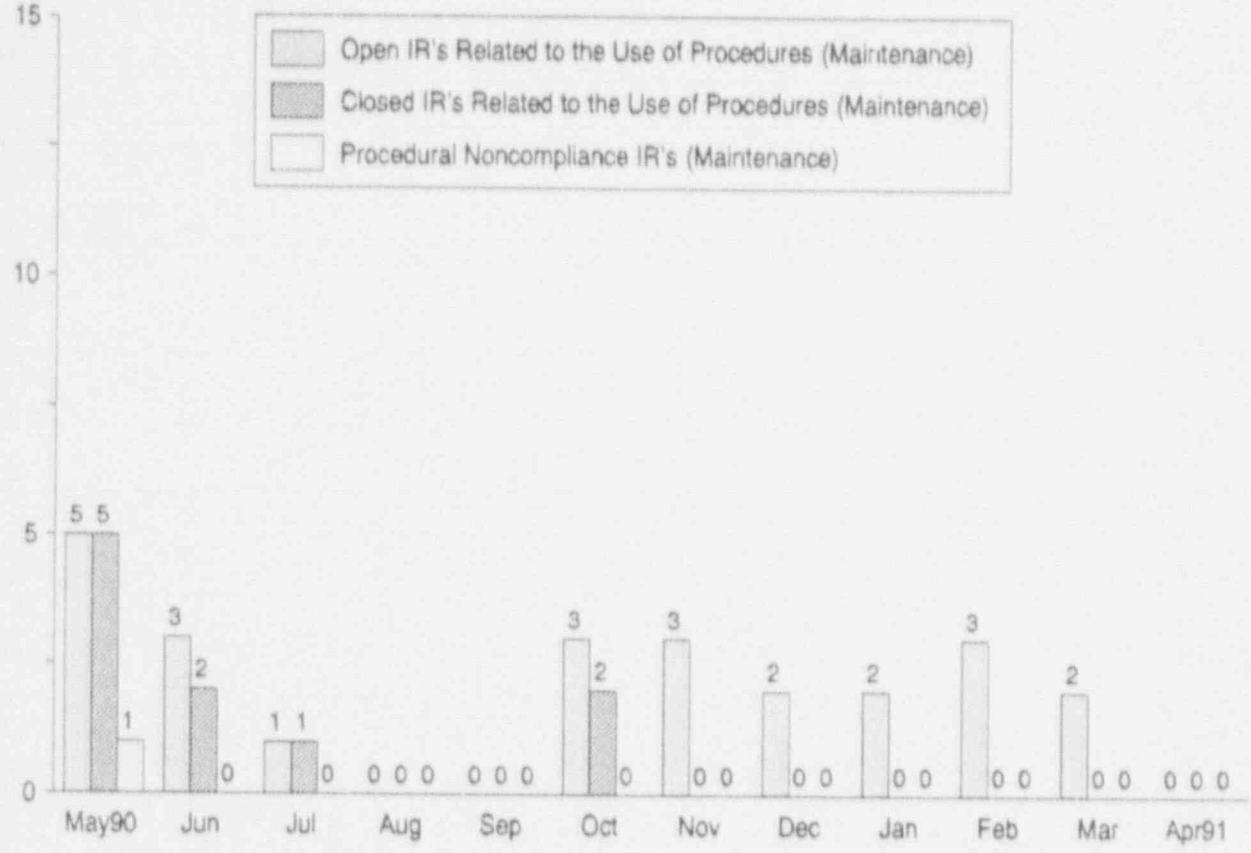
The Maintenance Overtime Indicator monitors the ability to perform the desired maintenance activities with the allotted resources. Excessive overtime indicates insufficient resource allocation and can lead to errors due to fatigue.

The percent of overtime hours with respect to normal hours was reported as 5% during the month of April 1991. The 12 month average percentage of overtime hours with respect to normal hours was reported as 11.3%.

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None



PROCEDURAL NONCOMPLIANCE INCIDENTS
(MAINTENANCE)

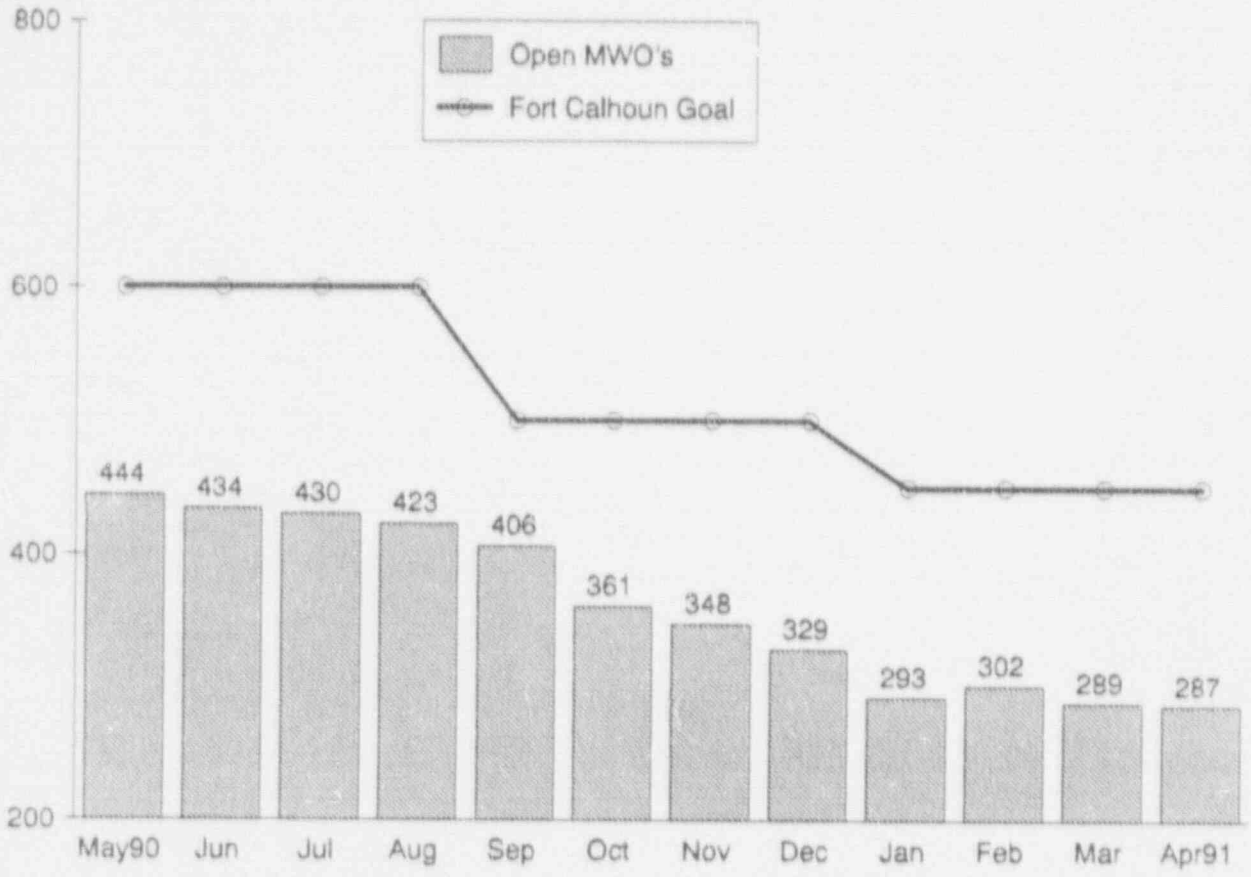
This indicator shows the number of identified Maintenance Incidents Reports (IR's) that are related to the use of procedures, the number of closed IR's that are related to the use of procedures (includes IR's that were caused by procedural noncompliance), and the number of closed IR's that were caused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

It should be noted that the second and third columns will lag behind the first column until the IR's are closed. This reporting method is due to the process in which IR's receive their cause category codes. IR's receive their cause category codes when they are closed.

Data Source: Patterson/McKay (Manager/Source)

Adverse Trend: None

SEP 15 & 44



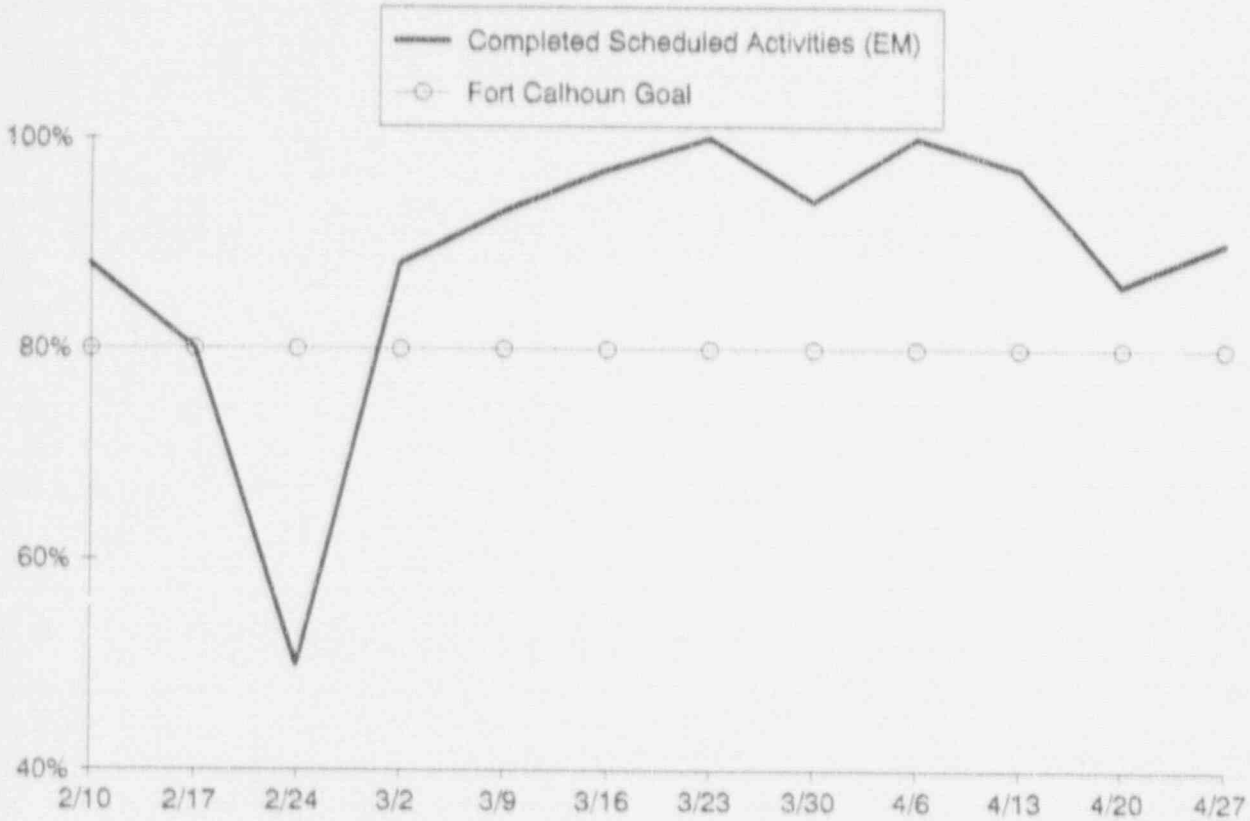
MAINTENANCE WORK ORDER BACKLOG
(CORRECTIVE NON-OUTAGE MAINTENANCE)

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

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

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None SEP 36



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES
(ELECTRICAL MAINTENANCE)

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

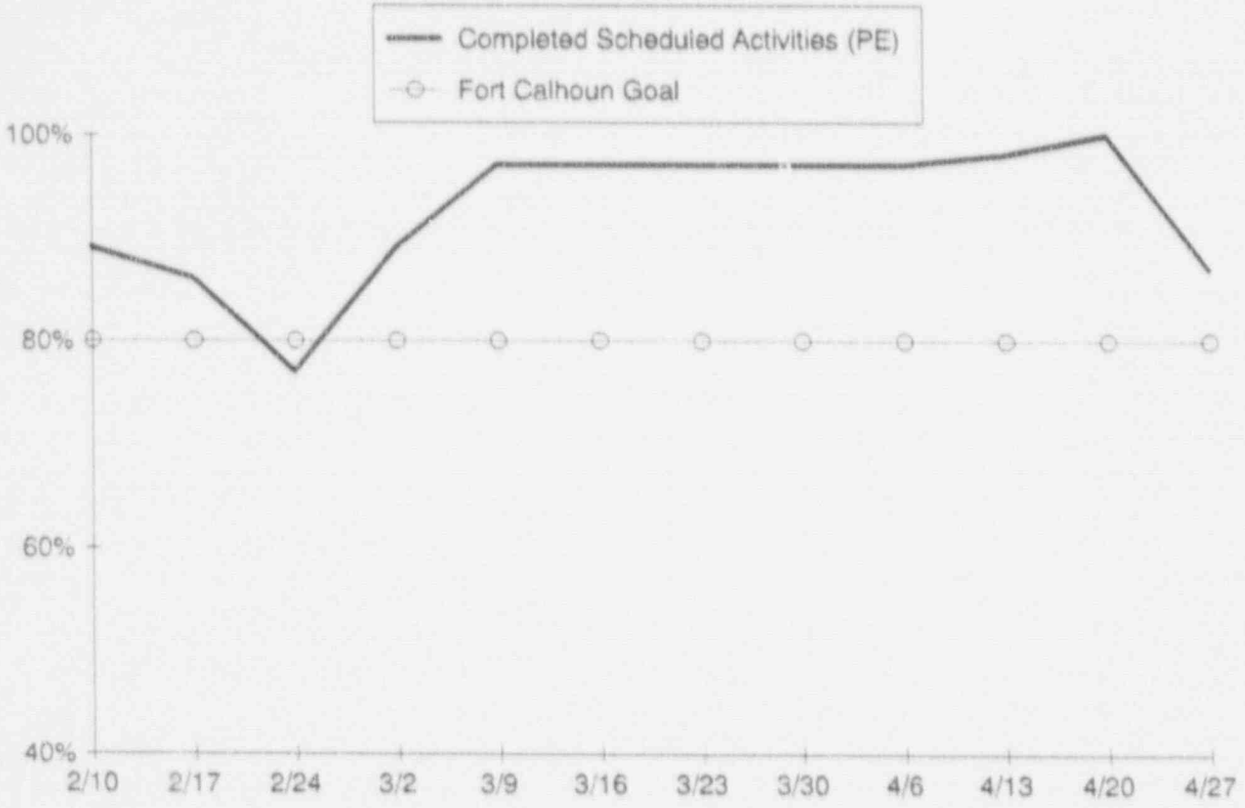
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	100%
Week 2	97%
Week 3	86%
Week 4	90%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES
(PRESSURE EQUIPMENT)

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

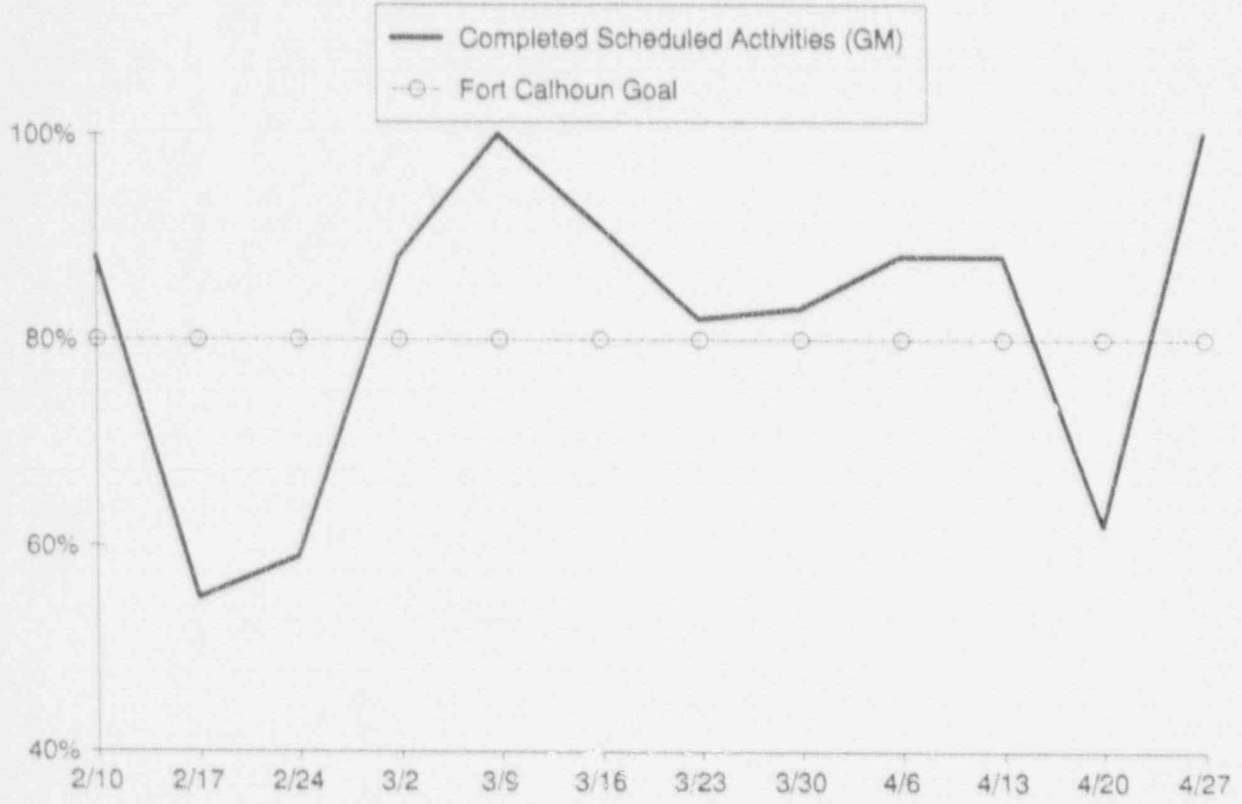
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	97%
Week 2	98%
Week 3	100%
Week 4	87%

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

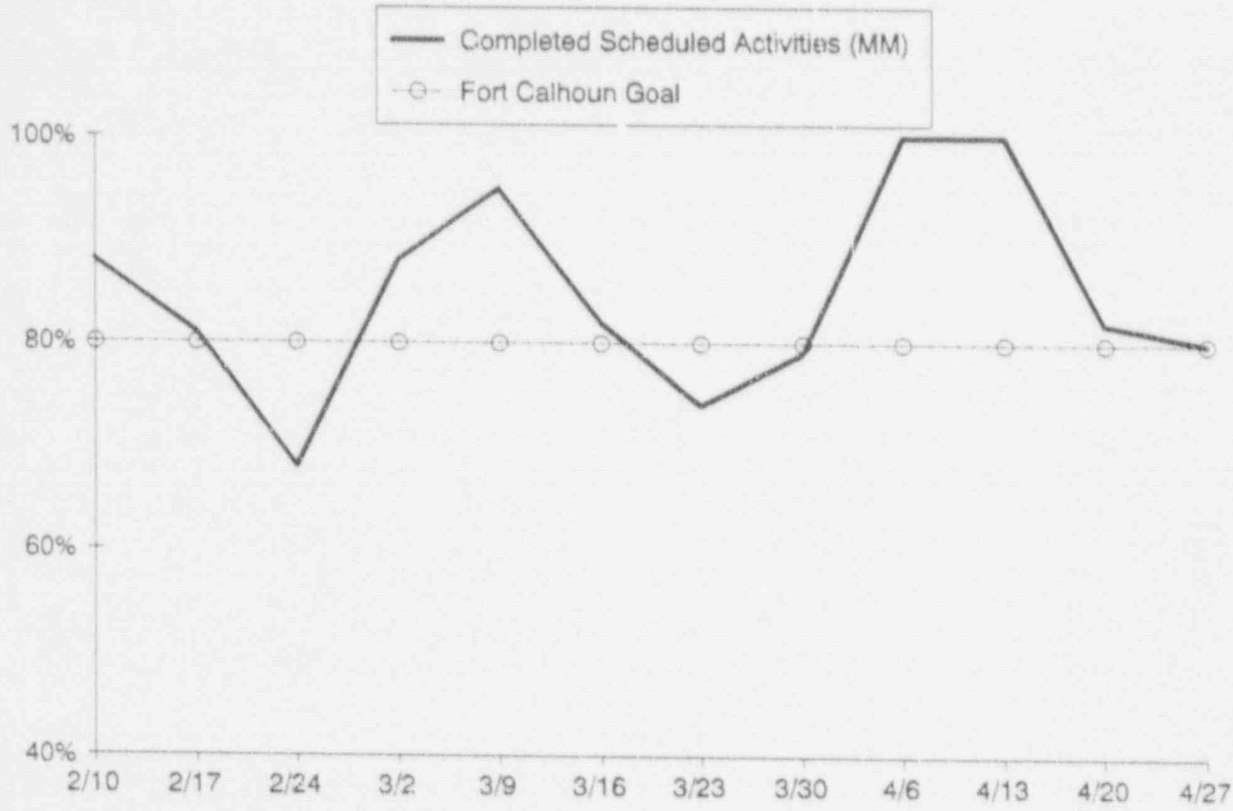
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	88%
Week 2	88%
Week 3	62%
Week 4	100%

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

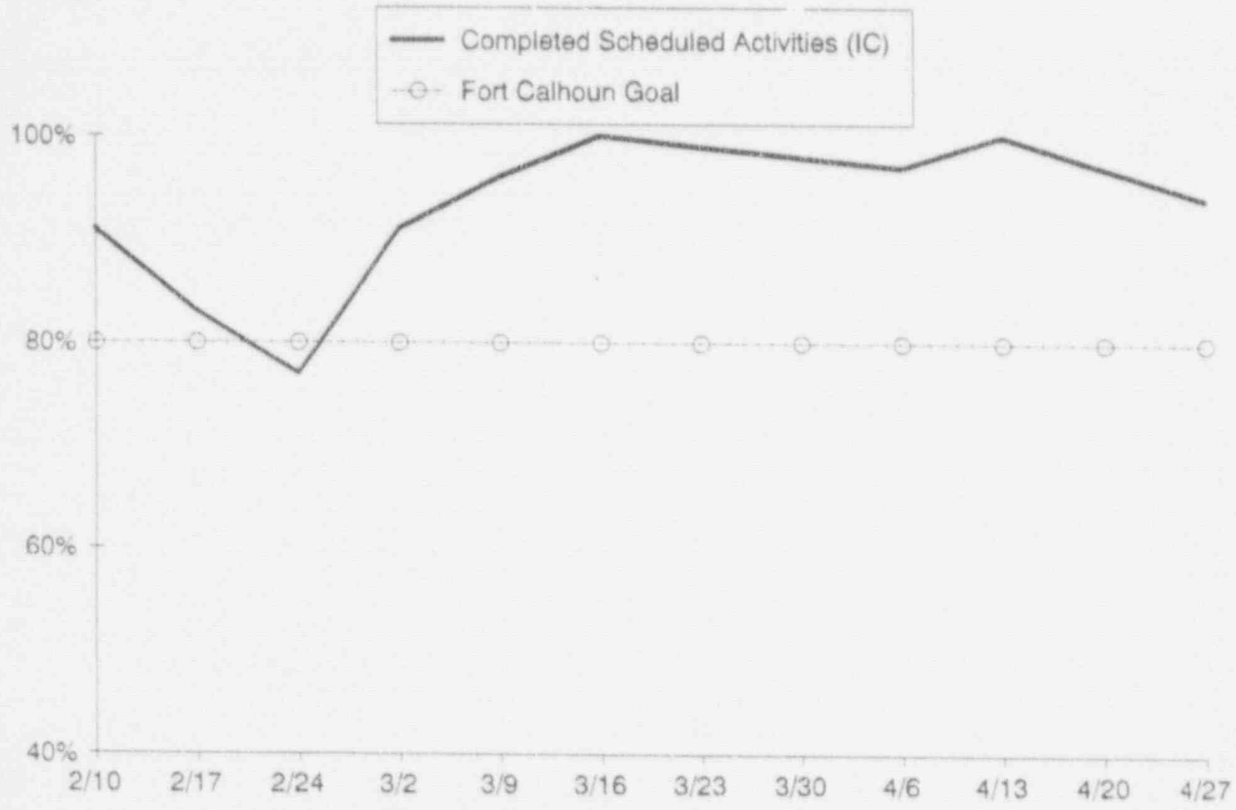
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	100%
Week 2	100%
Week 3	82%
Week 4	80%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES
(INSTRUMENTATION & CONTROL)

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

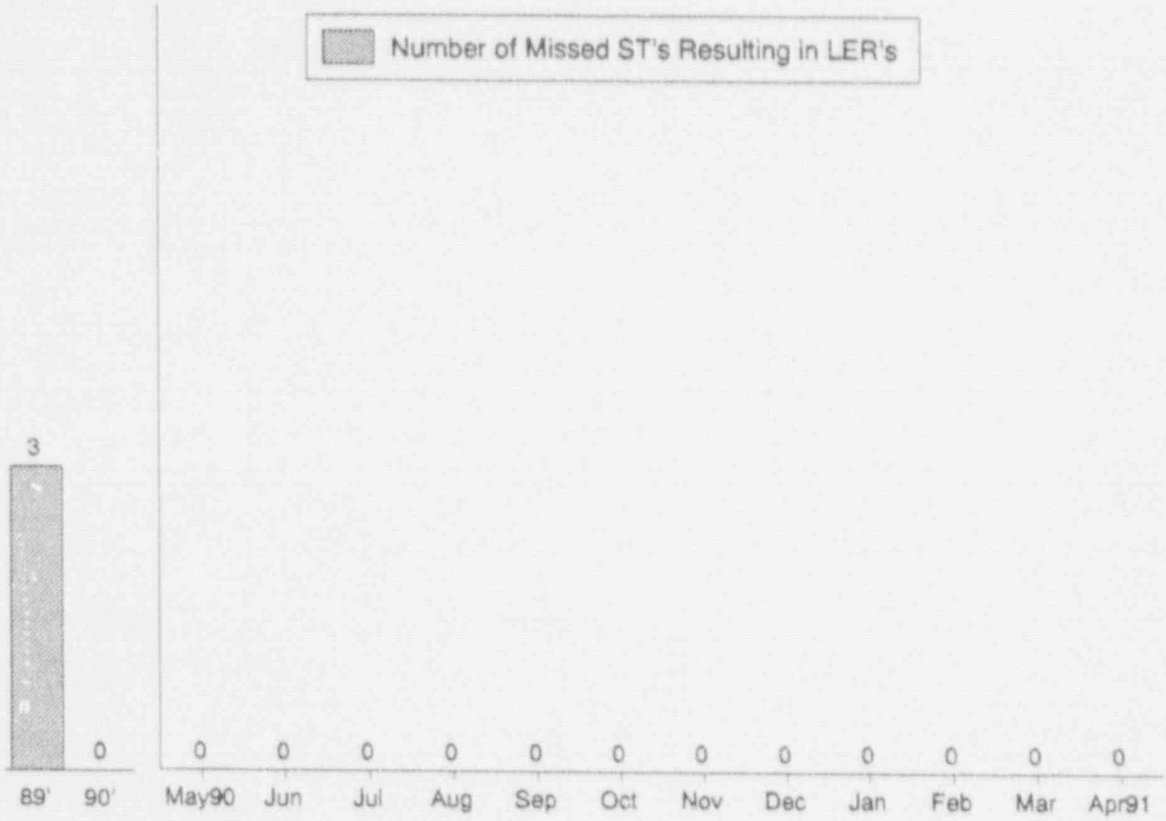
The Fort Calhoun Station goal for this indicator is 80%.

Reporting Month	Completed Scheduled Activities
Week 1	97%
Week 2	100%
Week 3	97%
Week 4	94%

Data Source: Patterson/Schmitz (Manager/Source)

Adverse Trend: None

SEP 33



NUMBER OF MISSED SURVEILLANCE TESTS
RESULTING IN LICENSEE EVENT REPORTS

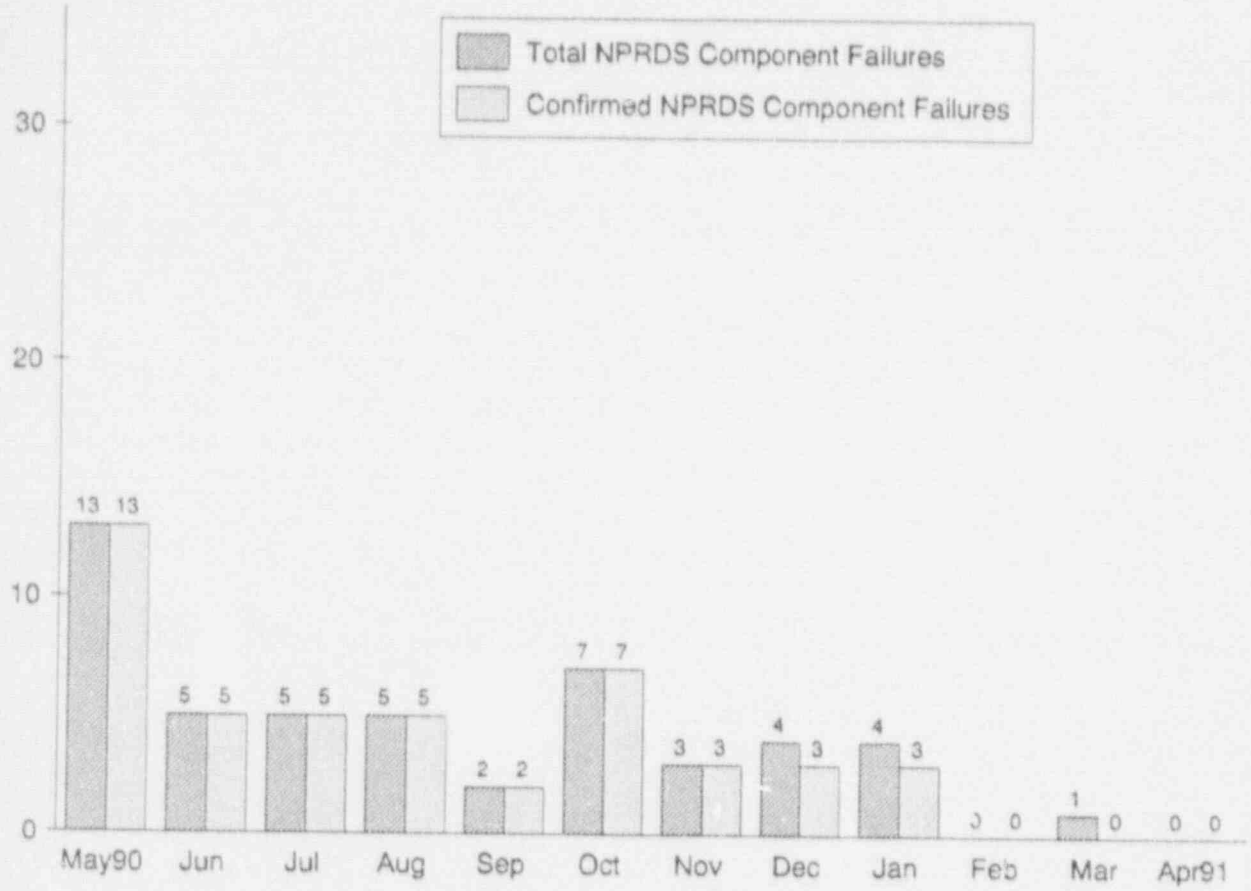
This indicator shows the number of missed Surveillance Tests (ST's) that result in Licensee Event Reports (LER's) during the reporting month. The graph on the left shows the yearly totals for the indicated years.

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

Data Source: Plant Licensee Event Reports (LER)

Adverse Trend: None

SEP 60 & 61



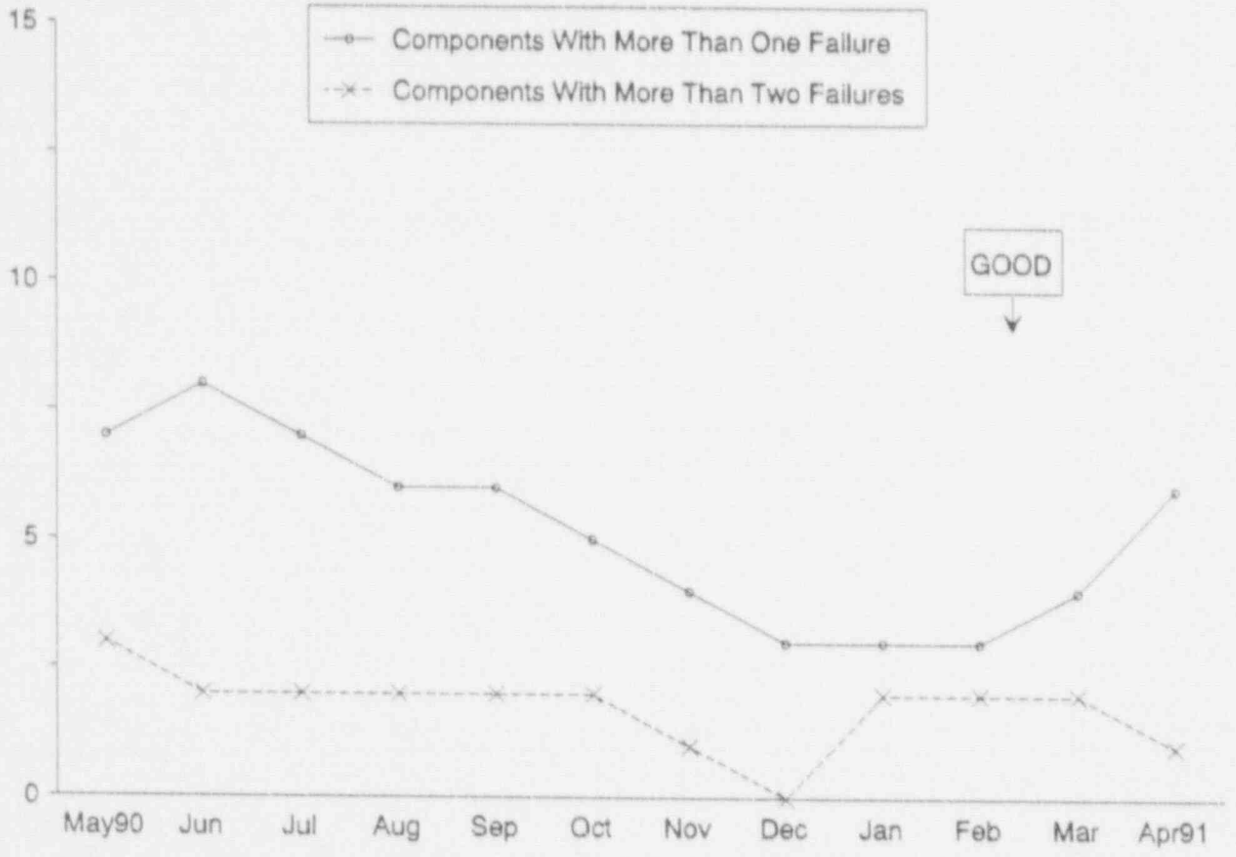
NUMBER OF NUCLEAR PLANT RELIABILITY
DATA SYSTEMS (NPRDS)
REPORTABLE FAILURES

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

Data Source: Jaworski/Dowdy (Manager/Source)

Adverse Trend: None



MAINTENANCE EFFECTIVENESS

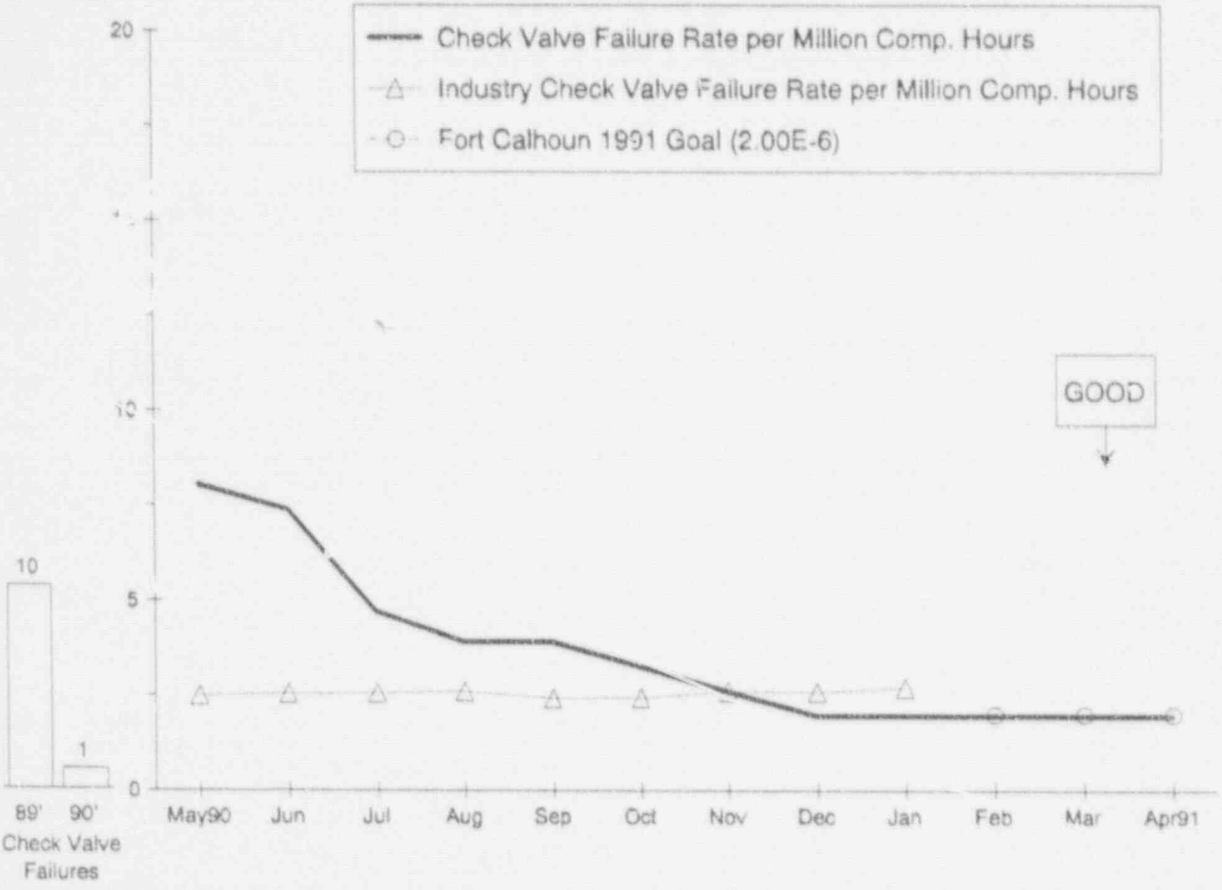
The Maintenance Effectiveness Indicator was developed following guidelines set forth by the Nuclear Regulatory Commission's Office for Analysis and Evaluation of Operational Data (NRC/AEOD). The NRC/AEOD is currently developing and verifying a maintenance effectiveness indicator using the Nuclear Plant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

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

During the last 12 reporting months there were 6 NPRDS components with more than 1 failure, of which 1 of the 6 had more than two failures. The NPRDS component tag number with more than two failures was CH-1B.

Data Source: Jaworski/Dowdy (Manager/Source)

Adverse Trend: None



CHECK VALVE FAILURE RATE

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

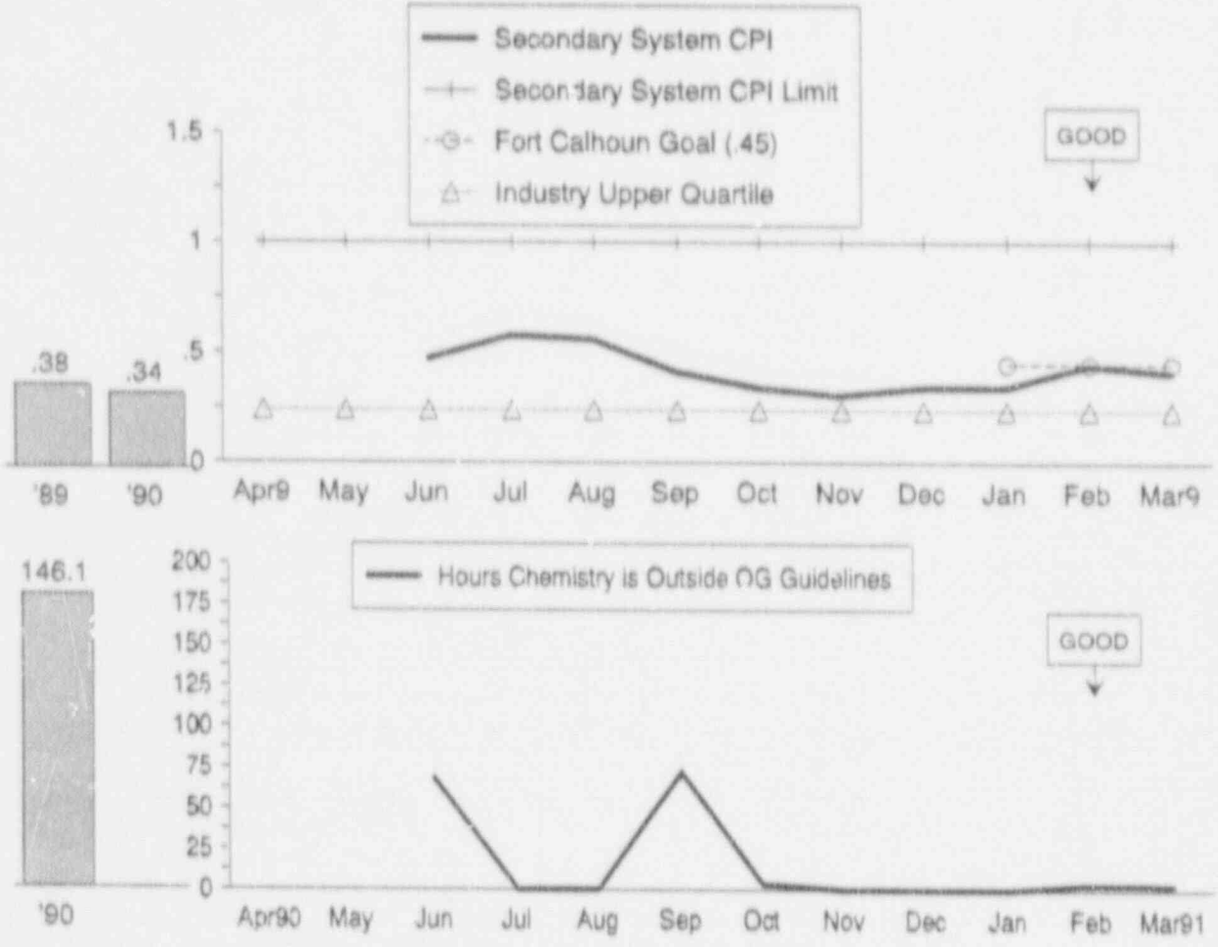
The data for the industry check valve failure rate is three months behind the reporting month due to the time involved in collecting and processing the data.

For January 1991, the Fort Calhoun Station reported an actual check valve failure rate of 1.95E-6 while the industry reported an actual failure rate of 2.71E-6. At the end of April, the Fort Calhoun Station reported a calculated check valve failure rate of 1.95E-6. The Fort Calhoun goal for this indicator is a failure rate of 2.00E-6.

Data Source: Jaworski/Dowdy (Manager/Source)

Adverse Trend: None

SEP 43



SECONDARY SYSTEM CHEMISTRY

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

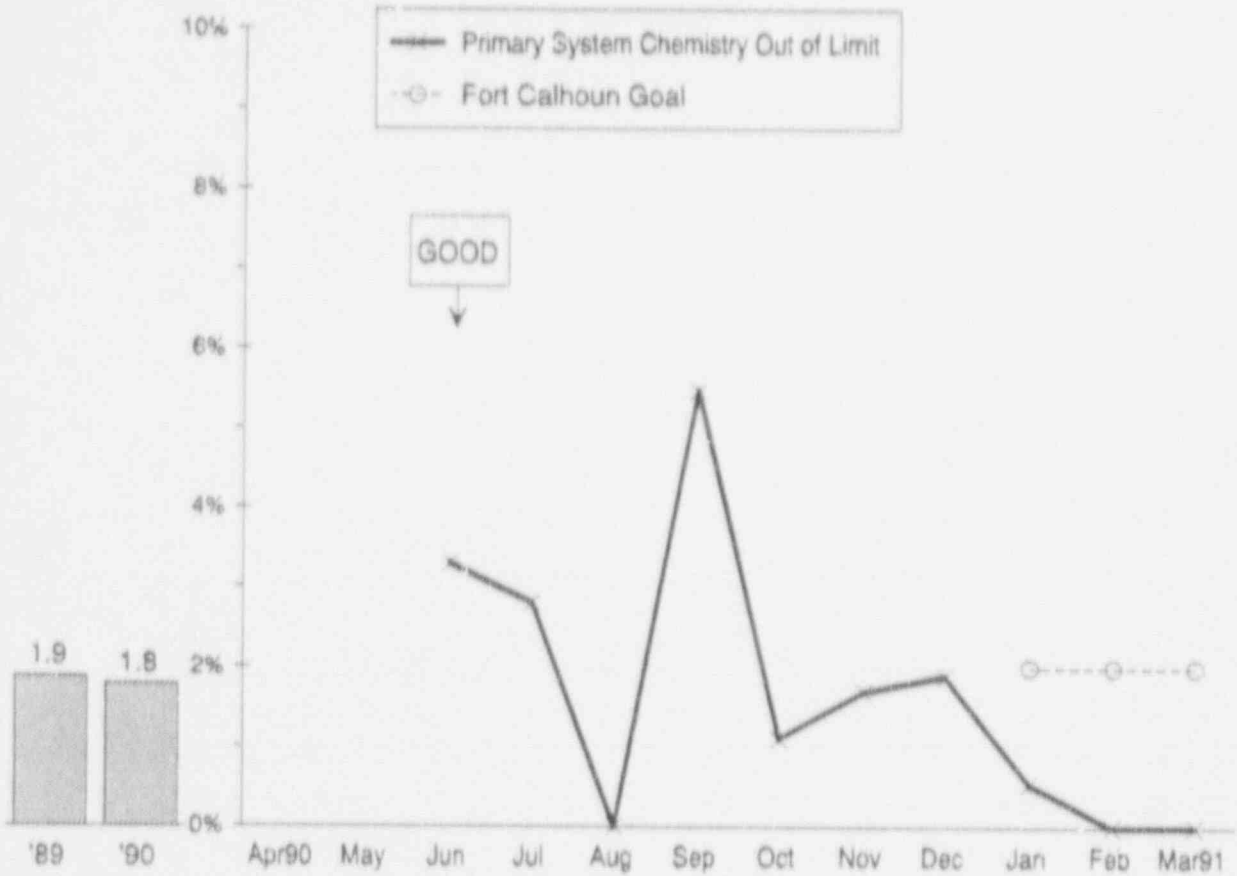
A new goal has been added to the CPI graph. The Fort Calhoun goal for the CPI is 0.45. The CPI was reported as 0.413 for the month of March. The industry upper quartile value for this indicator was 0.16 for August 1989 through Dec. 1989. The CPI industry value then changed to 0.24 for 1990.

The number of hours outside the OG guidelines was reported as 2.8 hours for the reporting month.

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

Data Source: Franco/Glantz (Manager/Source)

Adverse Trends: 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.

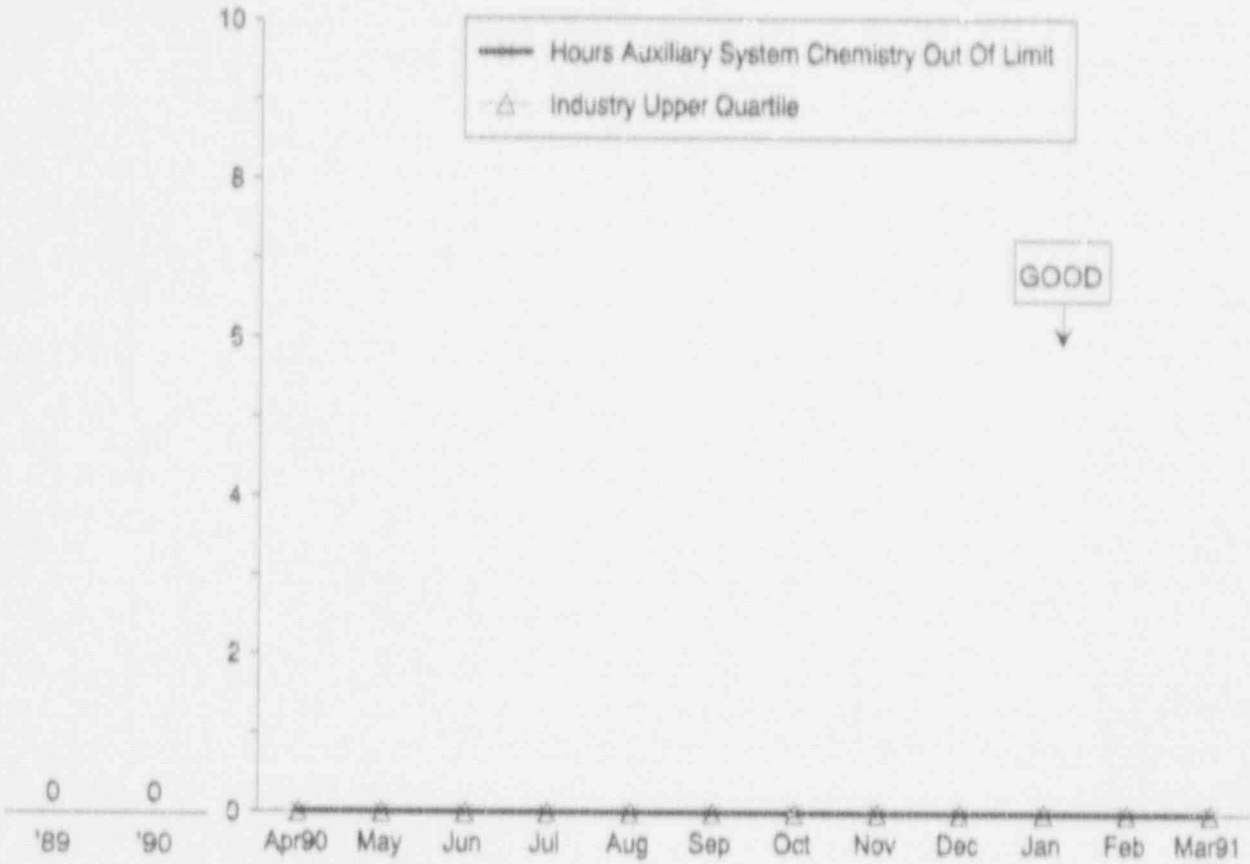
A new goal of 2% has been added to the graph for this indicator.

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

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

Data Source: Franco/Glantz (Manager/Source)

Adverse Trend: None



AUXILIARY SYSTEM (CCW) CHEMISTRY HOURS
OUTSIDE STATION LIMITS

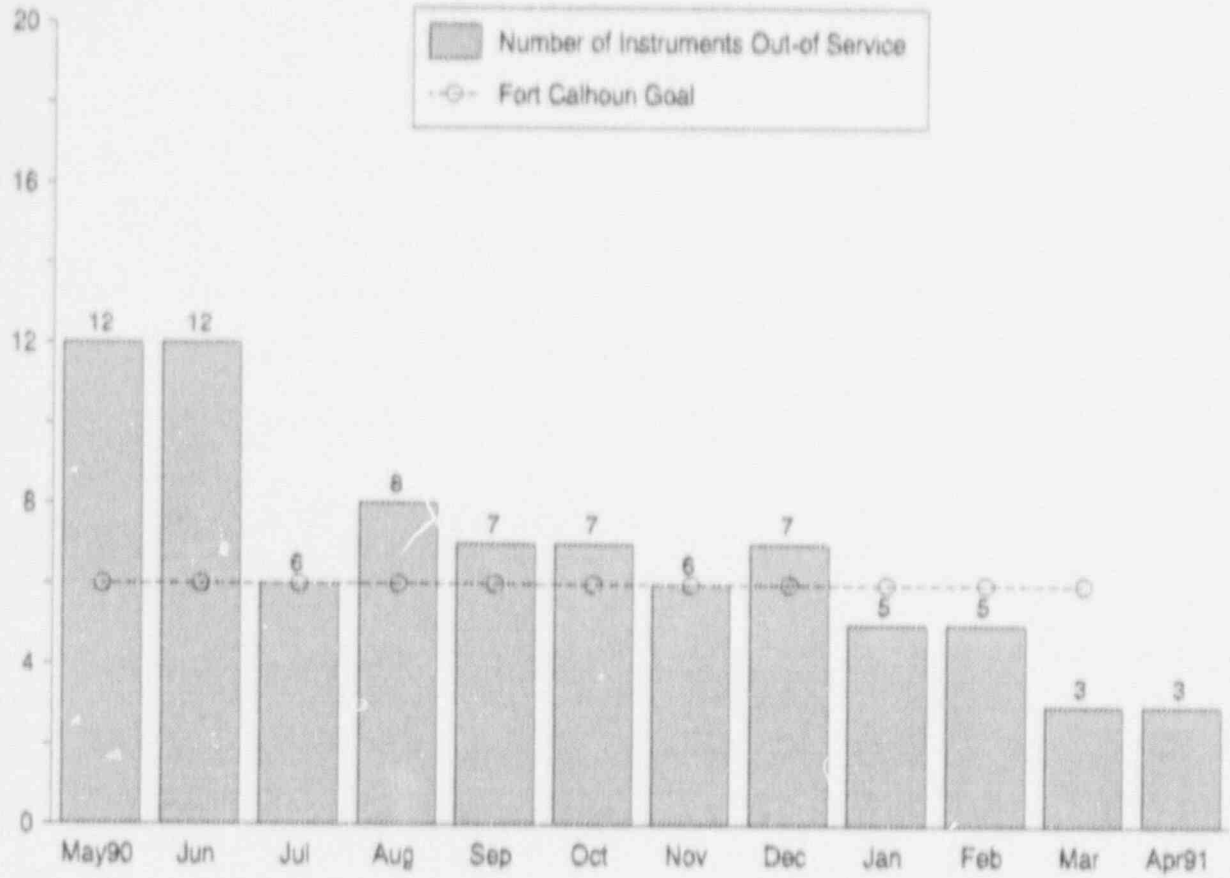
The Auxiliary System Chemistry Hours Outside Station Limits indicator tracks the monthly hours that the Component Cooling Water (CCW) system is outside the station chemistry limit. The above chemistry indicator is one month behind the reporting period due to the time needed for data collection and evaluation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

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

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

Data Source: Franco/Glantz (Manager/Source)

Adverse Trend: None



IN-LINE CHEMISTRY INSTRUMENTS
OUT-OF-SERVICE

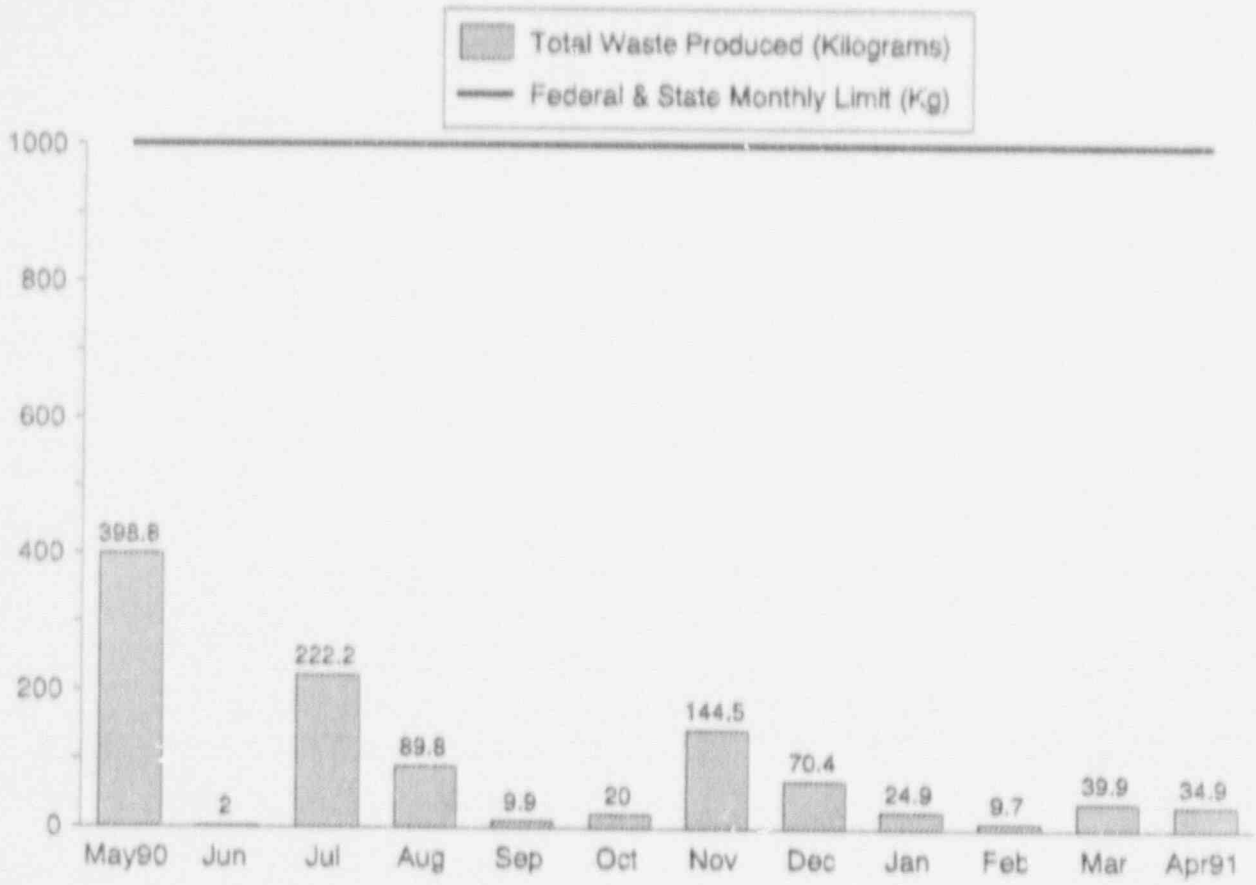
This indicator shows the total number of in-line chemistry system instruments that are out-of-service at the end of the reporting month. The chemistry systems involved in this indicator include the Secondary System and the Post Accident Sampling System (PASS).

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

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

Data Source: Patterson/Renaud (Manager/Source)

Adverse Trend: None



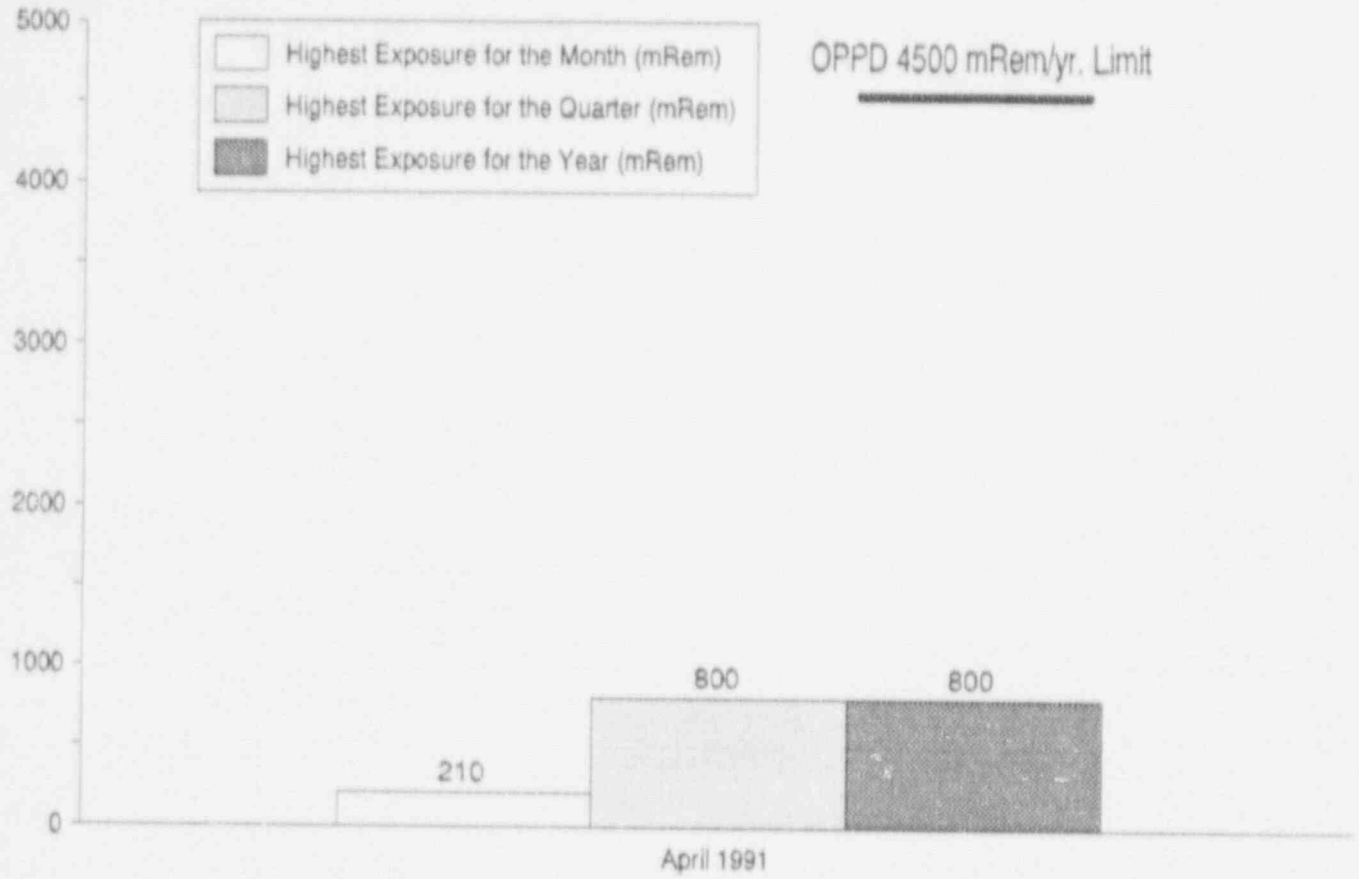
HAZARDOUS WASTE PRODUCED

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 April, 0.0 kilograms of non-halogenated hazardous waste was produced, 34.9 kilograms of halogenated hazardous waste was produced, and 0.0 kilograms of other hazardous waste was produced.

Data Source: Patterson/Henning (Manager/Source)

Adverse Trend: None



MAXIMUM INDIVIDUAL RADIATION EXPOSURE

During April 1991, an individual accumulated 210 mRem which was the highest individual exposure for the month.

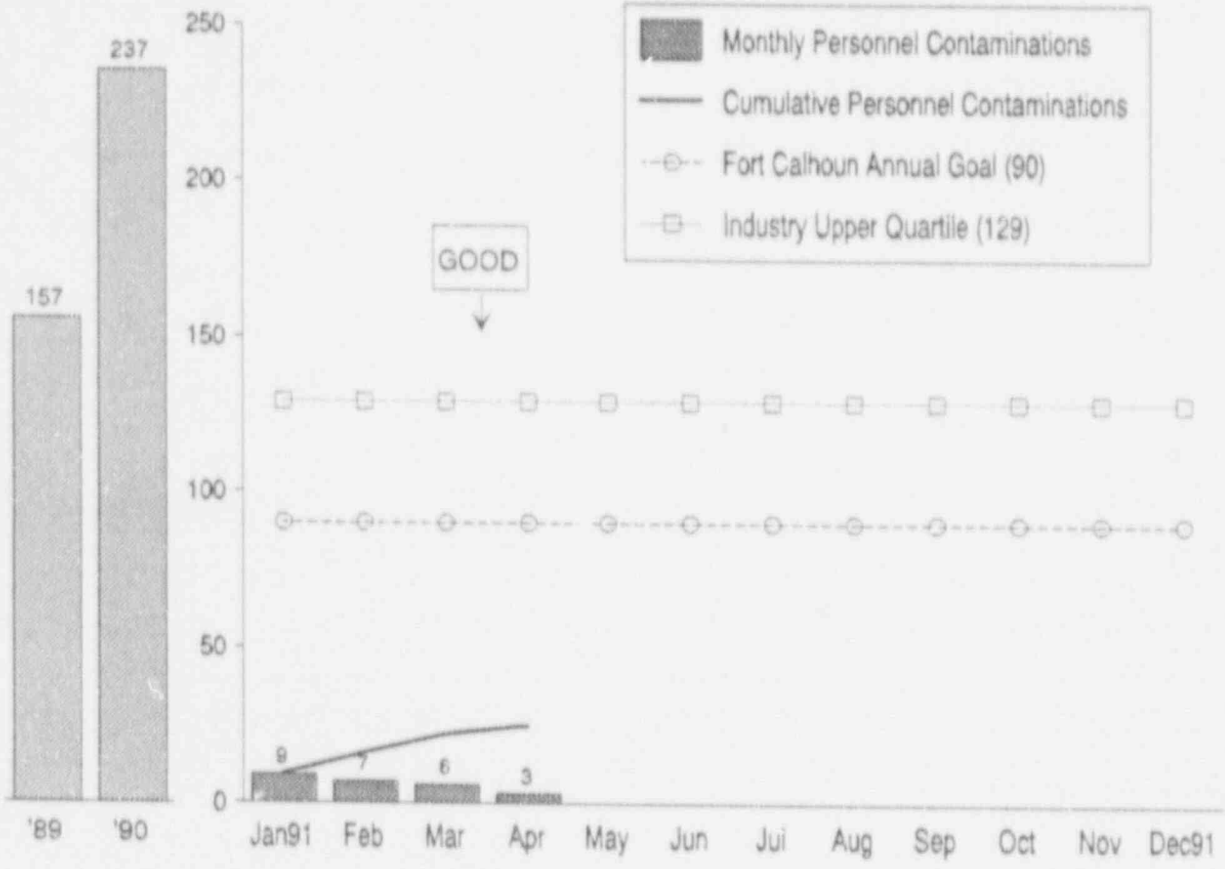
The maximum individual exposure to date for the first quarter of 1991 has been 800 mRem.

The maximum individual exposure reported to date for 1991 has been 800 mRem.

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

Data 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 25 cumulative contaminations have occurred during 1991.

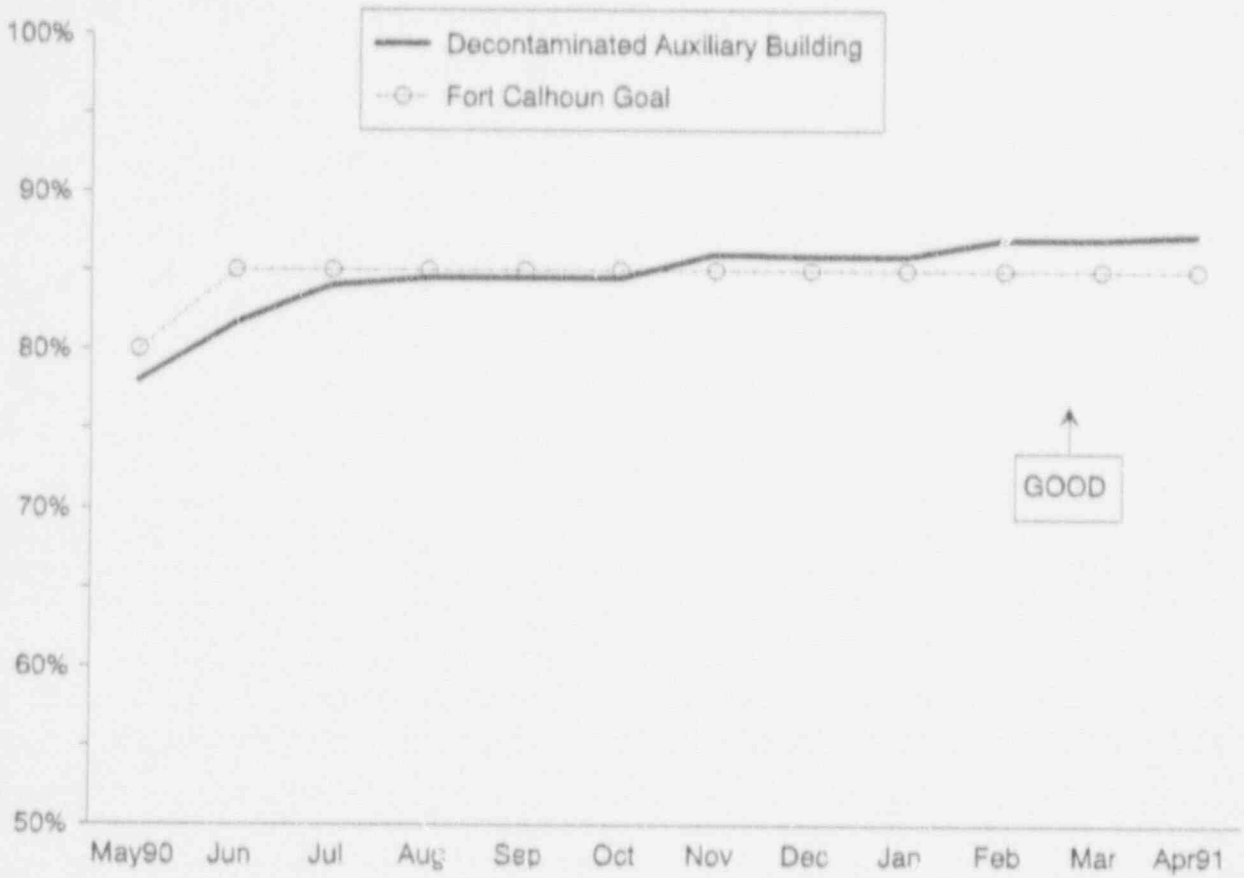
There was a total of 237 skin and clothing contaminations in 1990.

The 1991 goal for skin and clothing is 90 contaminations.

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

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None SEP 15 & 54



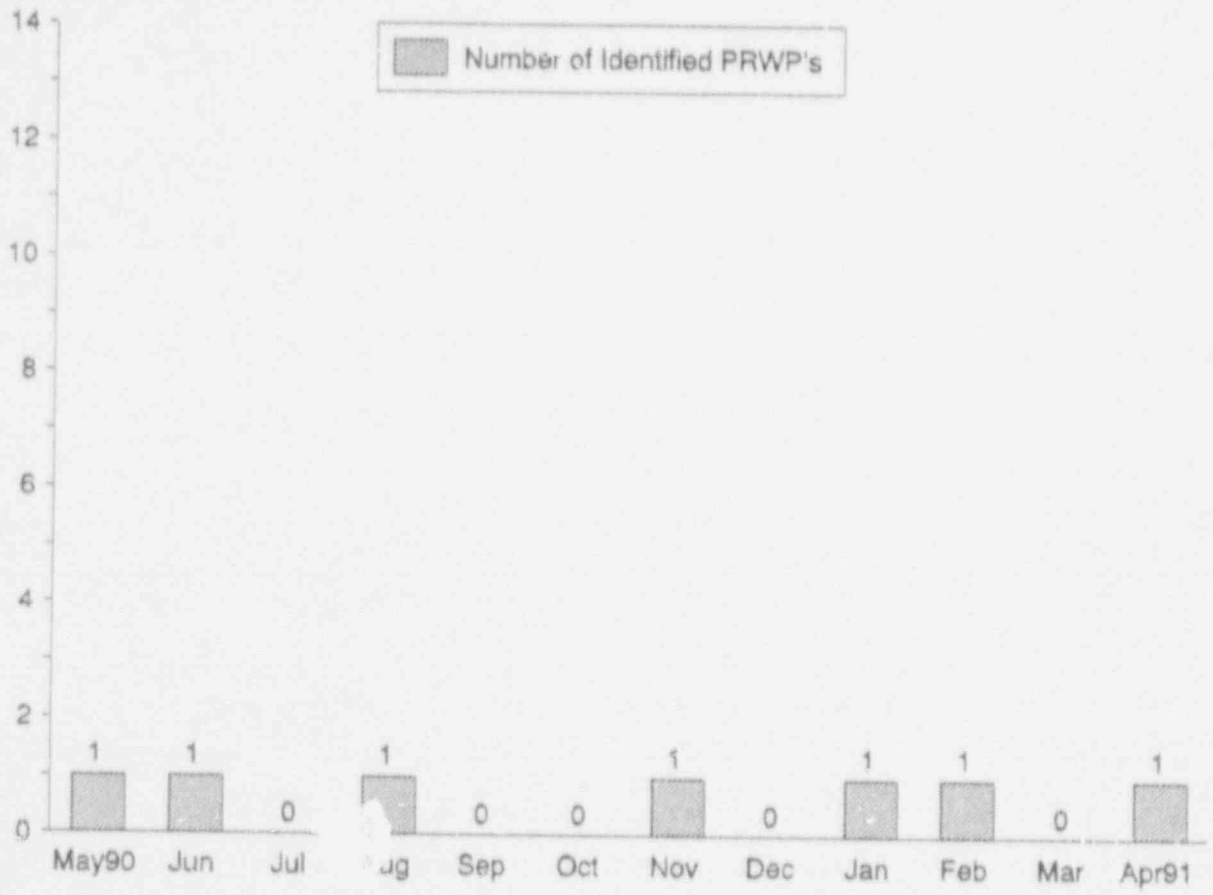
DECONTAMINATED AUXILIARY BUILDING

This graph shows the percentage of the auxiliary building which 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).

As of the end of the reporting month, 87.3% of the total square footage of the auxiliary building was decontaminated. An increase in the percentage of the auxiliary building which is decontaminated is expected after the auxiliary building painting is completed.

Data Source: Patterson/Gundal (Manager/Source)

Adverse Trend: None SEP 54



RADIOLOGICAL WORK PRACTICES PROGRAM

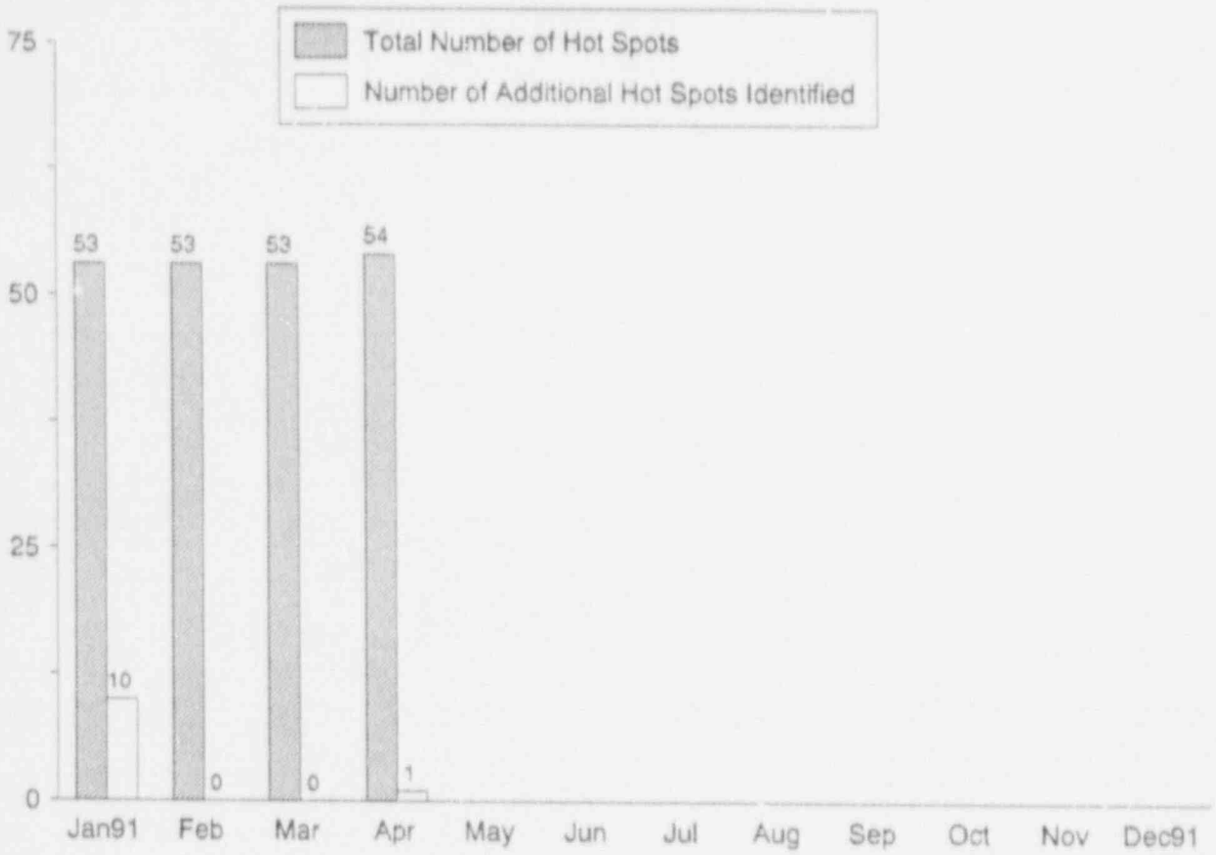
The Radiological Work Practices Program Indicator shows the number of Poor Radiological Work Practices (PRWP's) which were identified during the reporting month.

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

During the month of April 1991, one (1) PRWP was identified.

Data Source: Patterson/Williams (Manager/Source)

Adverse Trend: None SEP 52

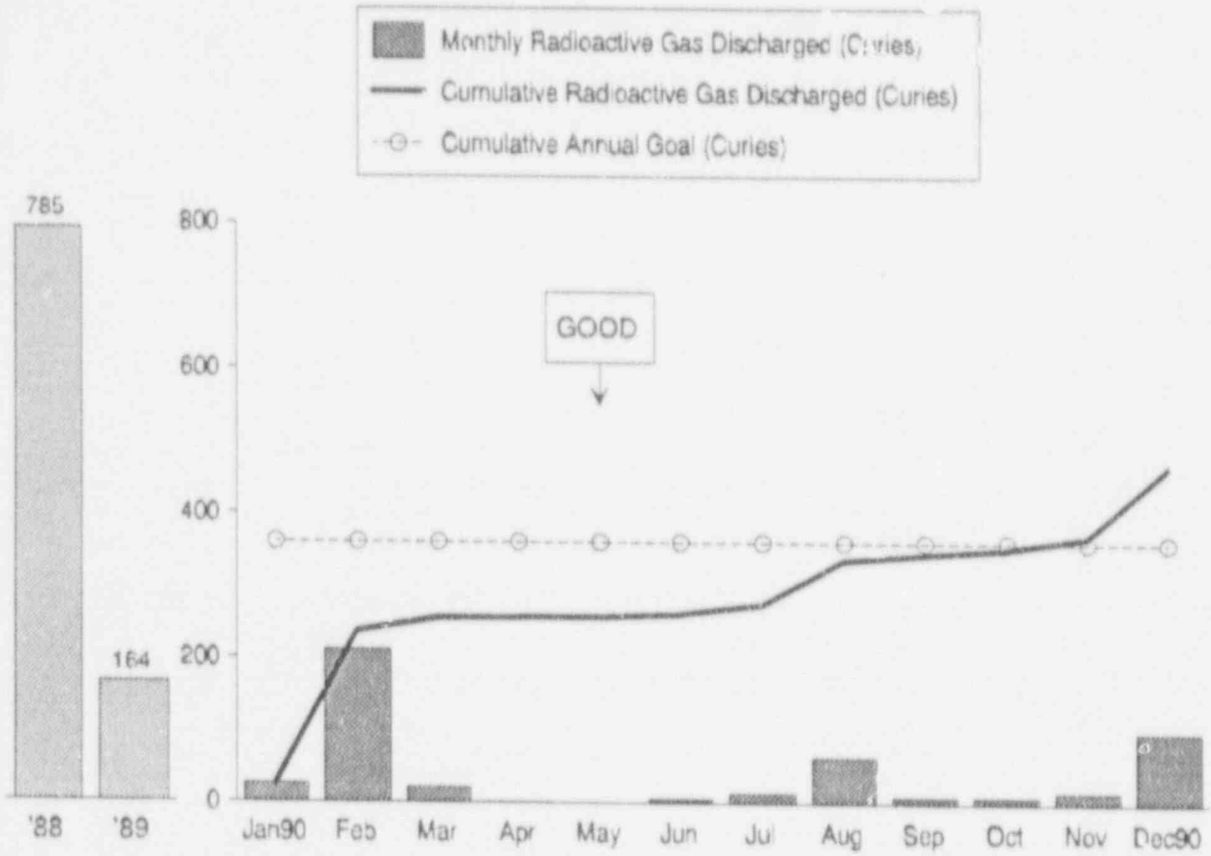


NUMBER OF HOT SPOTS

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.

Data Source: Patterson/Williams (Manager/Source)

Adverse Trends: None



GASEOUS RADIOACTIVE WASTE BEING
DISCHARGED TO THE ENVIRONMENT

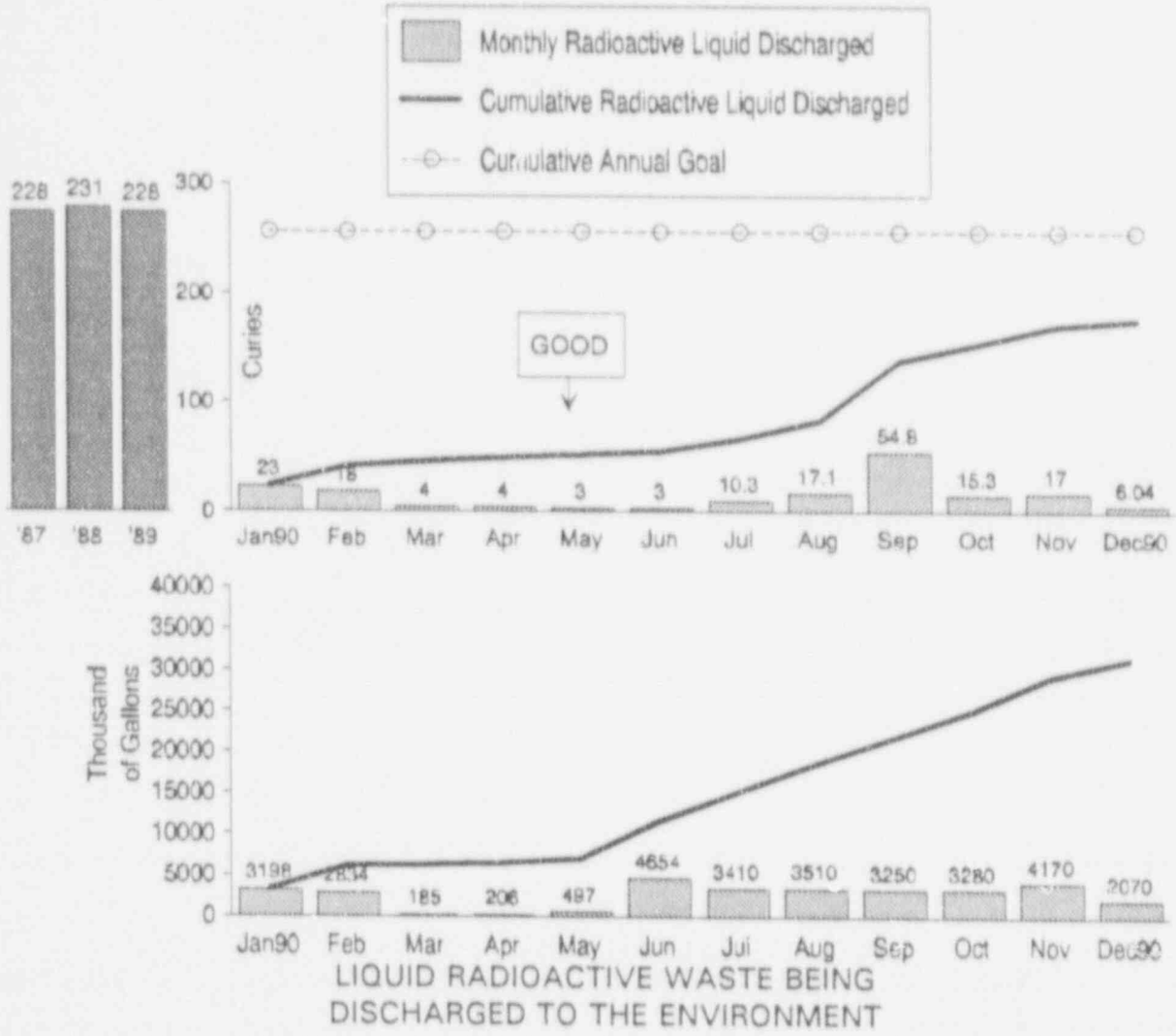
The gaseous radioactive waste being discharged to the environment is shown for January 1990 through December 1990. A total of 465.3 curies have been released to the environment from January through December of 1990. The Fort Calhoun Station goal was 360 curies for this indicator.

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

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

Data Source: Franco/Krist (Manager/Source)

Adverse Trend: None



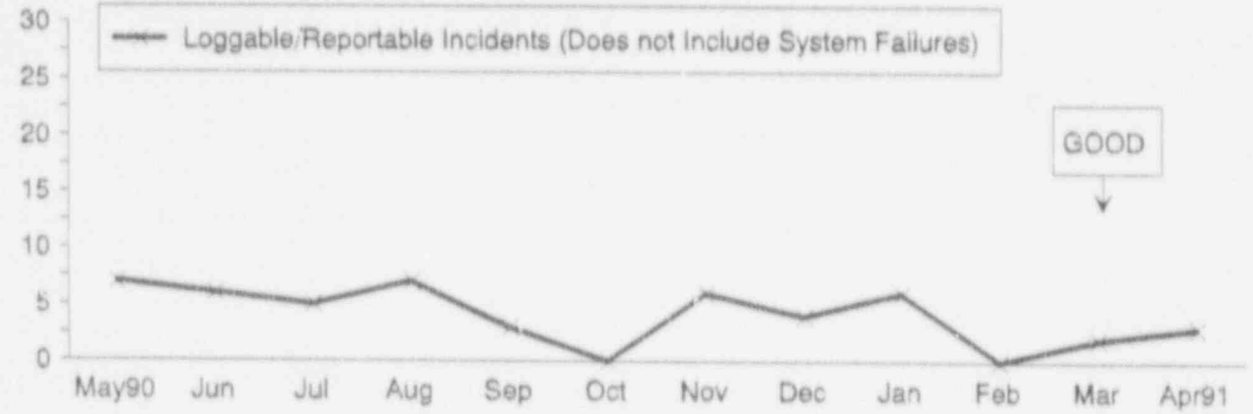
LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

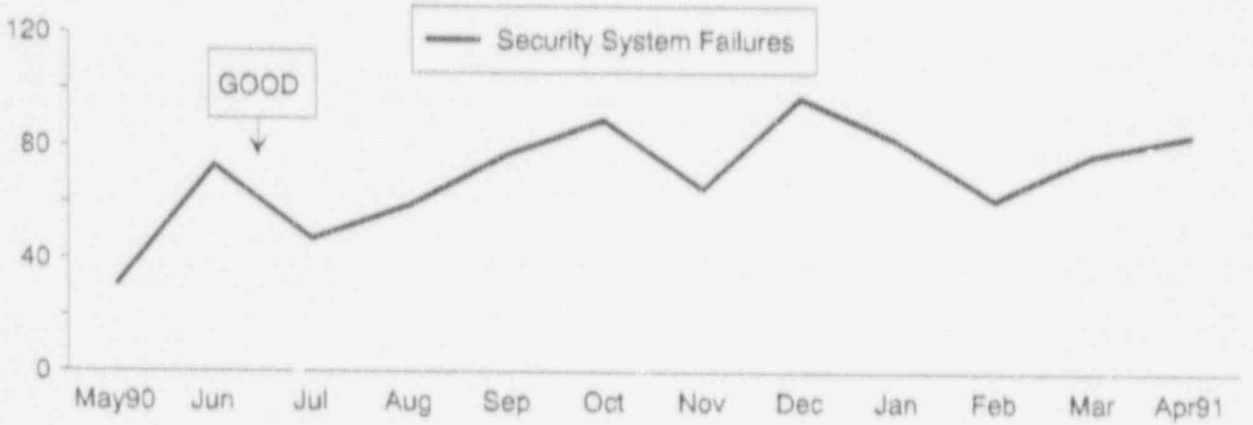
The liquid radioactive waste being discharged to the environment is shown for the months of January 1990 through December 1990. The liquid radioactive waste that was discharged to the environment from all sources totaled 175.5 curies from January through December 1990. The Fort Calhoun Station goal for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

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

Data Source: Franco/Krist (Manager/Source)

Adverse Trend: None





LOGGABLE/REPORTABLE INCIDENTS
(SECURITY)

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

During the month of April 1991, there were 87 loggable/reportable incidents identified. Security system failures accounted for 97% of the loggable/reportable incidents reported this month. There were 3 loggable/reportable incidents concerning the improper use and handling of security badges by plant personnel. Microwave Alarm non environmental failures were higher this month primarily due to Security Services personnel conducting vulnerability testing on the system. This testing detected several areas of concern which are now being or have been corrected. The environmental failures were primarily due to the poor weather conditions experienced during this reporting period.

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None

SEP 58

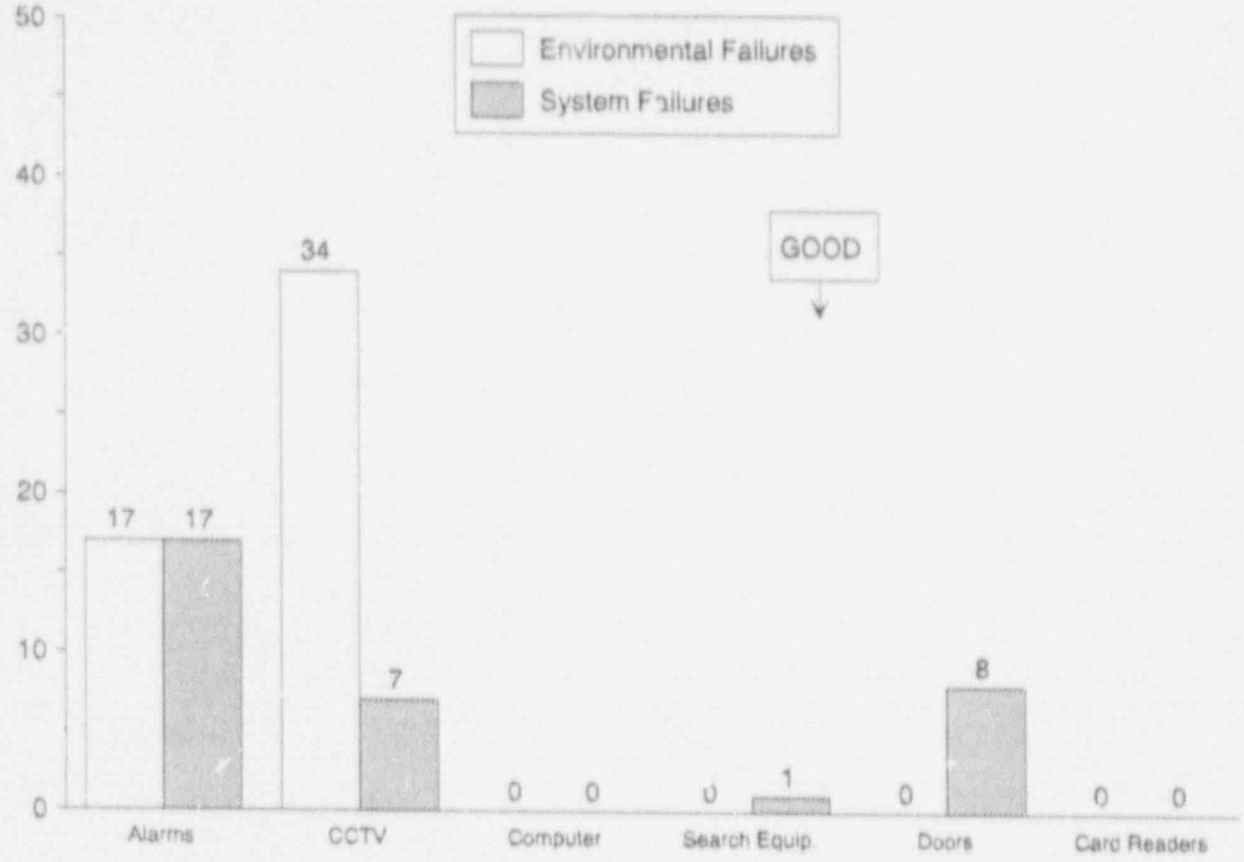
SECURITY INCIDENT BREAKDOWN

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

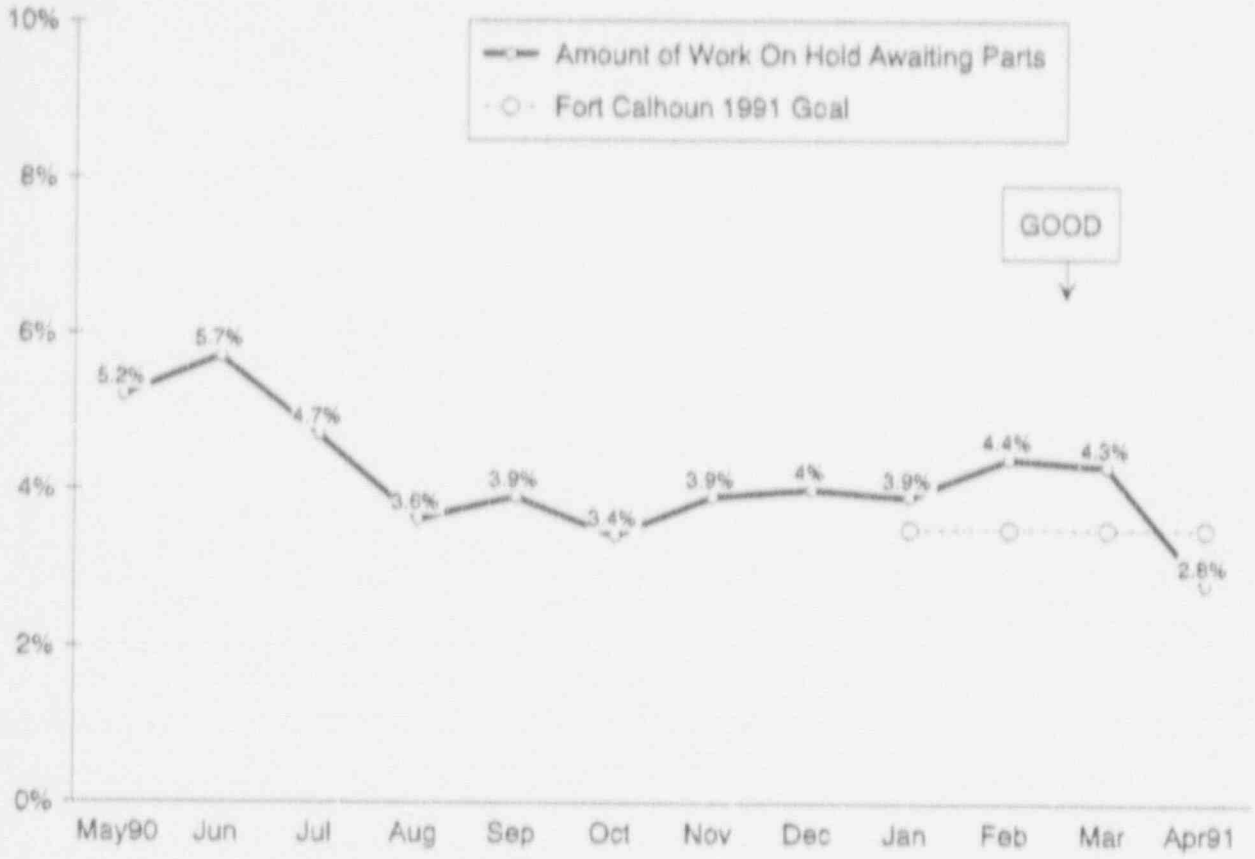
This indicator shows the number of incidents concerning the following items for the reporting month: Alarm System Failures, CCTV failures, Security Computer Failures, Search Equipment Failures, Door Hardware Failures, and Card Reader Failures. Alarm systems and CCTV failures will now be divided into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

Number of Incidents:	Mar 91		Apr 91	
System Failures	Env. Fail.	Equip. Fail.	Env. Fail.	Equip. Fail.
Alarm Systems	10	6	17	17
CCTV	43	5	34	7
Computer	n/a	8	n/a	0
Search Equipment	n/a	0	n/a	1
Door Hardware	n/a	5	n/a	8
Card Reader	n/a	0	n/a	0
Total	53	24	51	33

Data Source: Sefick/Woerner (Manager/Source)

Adverse Trend: None

SEP 58



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

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

There was a total of 745 open, non-outage, maintenance items with 21 of these items 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 maintenance items awaiting parts.

Data Source: Willrett/CHAMPS (Manager/Source)

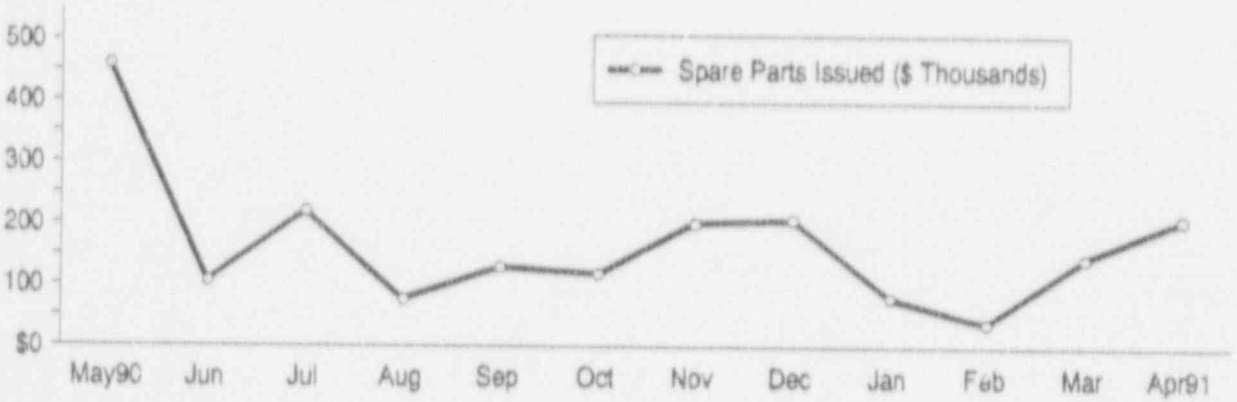
Adverse Trend: None

SPARE PARTS INVENTORY VALUE

The spare parts inventory value at the Fort Calhoun Station at the end of April was reported as $12,397,306.

Data Source: Steele/Huliska (Manager/Source)

Adverse Trend: None

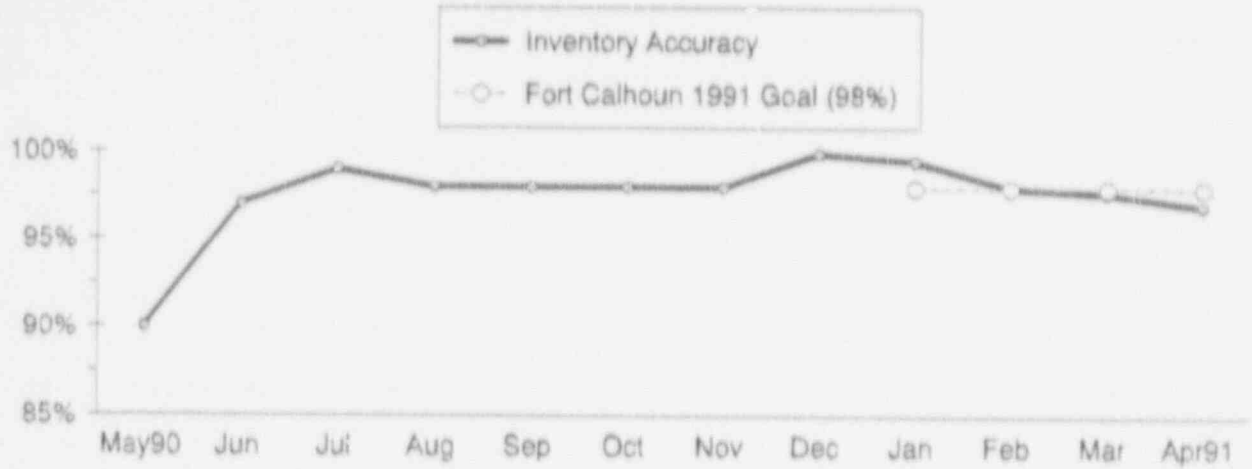


SPARE PARTS ISSUED

The value of the spare parts issued during April totaled $208,851.

Data Source: Steele/Miser (Manager/Source)

Adverse Trend: None

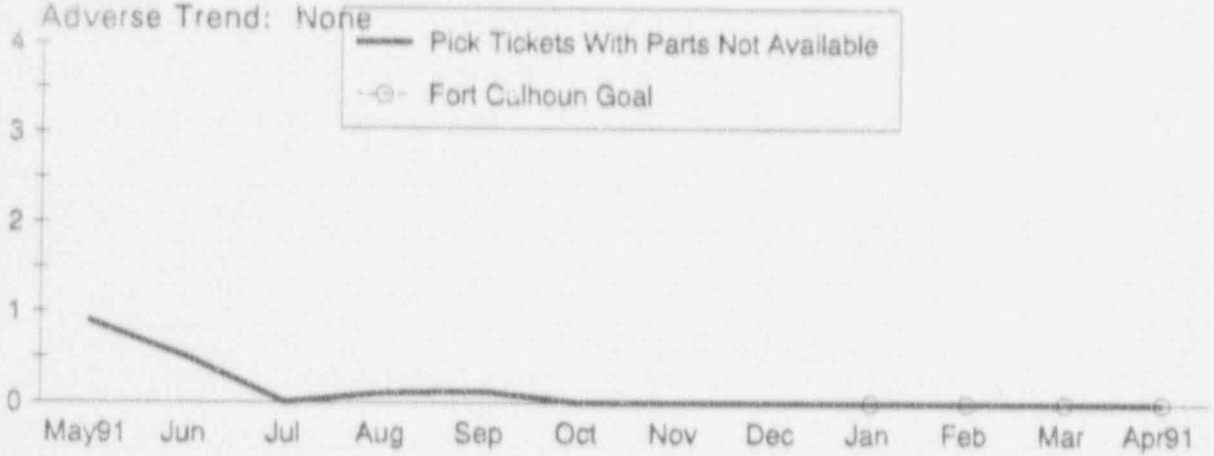


INVENTORY ACCURACY

This indicator shows the accuracy of the [illegible] parts count for the warehouse compared to the counts contained in the [illegible] computer system for the reporting month.
During April, 560 different line items [illegible]ted in the warehouse. Of the 560 line items counted, 17 items needed [illegible]stments. The inventory accuracy for the month of April was reported as [illegible]. The Fort Calhoun goal for this indicator is 98%.

Data Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None



STOCKOUT RATE

This indicator shows the percentage of the number of Pick Tickets generated with no parts available during the reporting month.
During April, a total of 903 Pick Tickets were generated. Of the 903 Pick Tickets generated, 0 Pick Tickets were generated with no parts available.
The Fort Calhoun 1991 Goal is 0%.

Data Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None

EXPEDITED PURCHASES

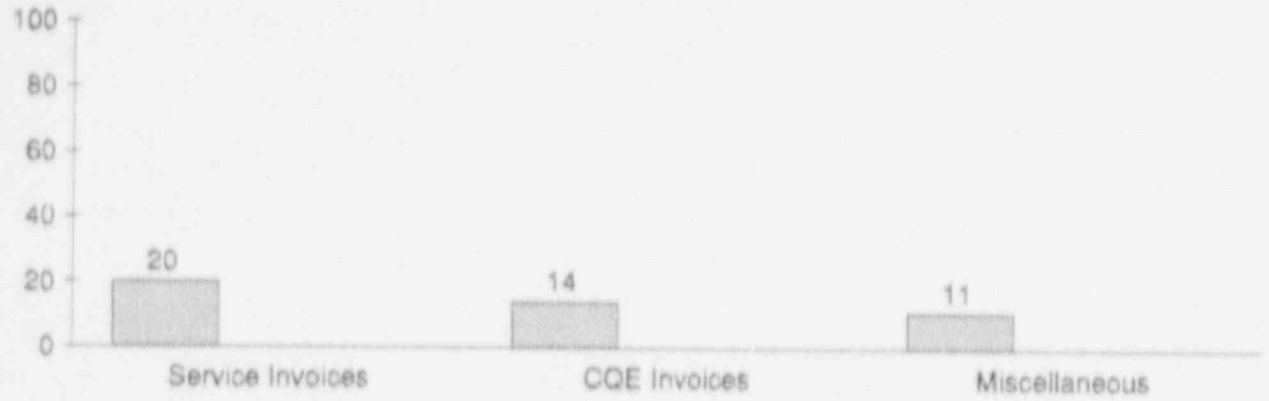
This indicator shows the percentage of expedited purchases compared to the total number of purchase orders generated during the reporting month.

During April, there was a total of 268 purchase orders generated. Of the 268 purchase orders generated, there were 0 expedited purchases.

The Fort Calhoun goal for this indicator 0.5%.

Data Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None

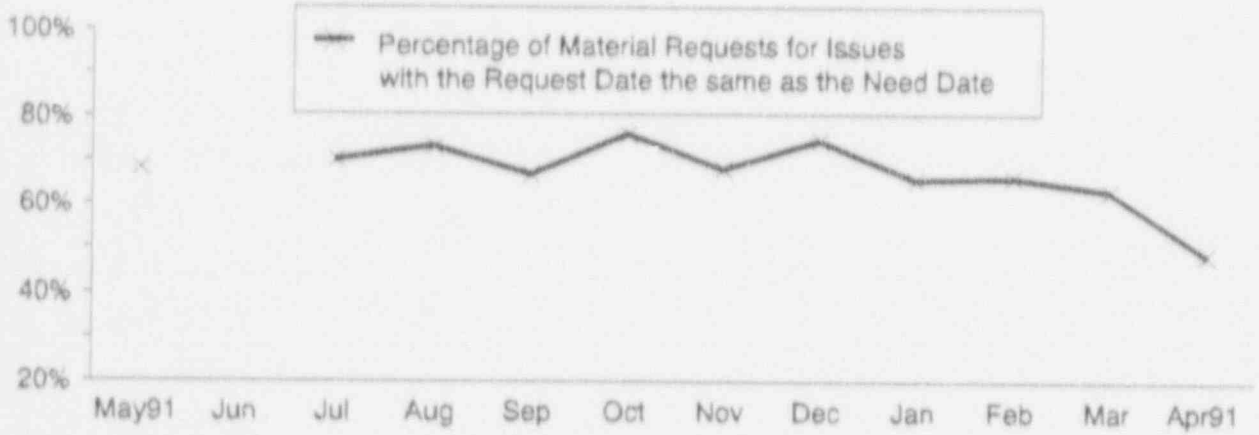


INVOICE BREAKDOWN

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

Data Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None



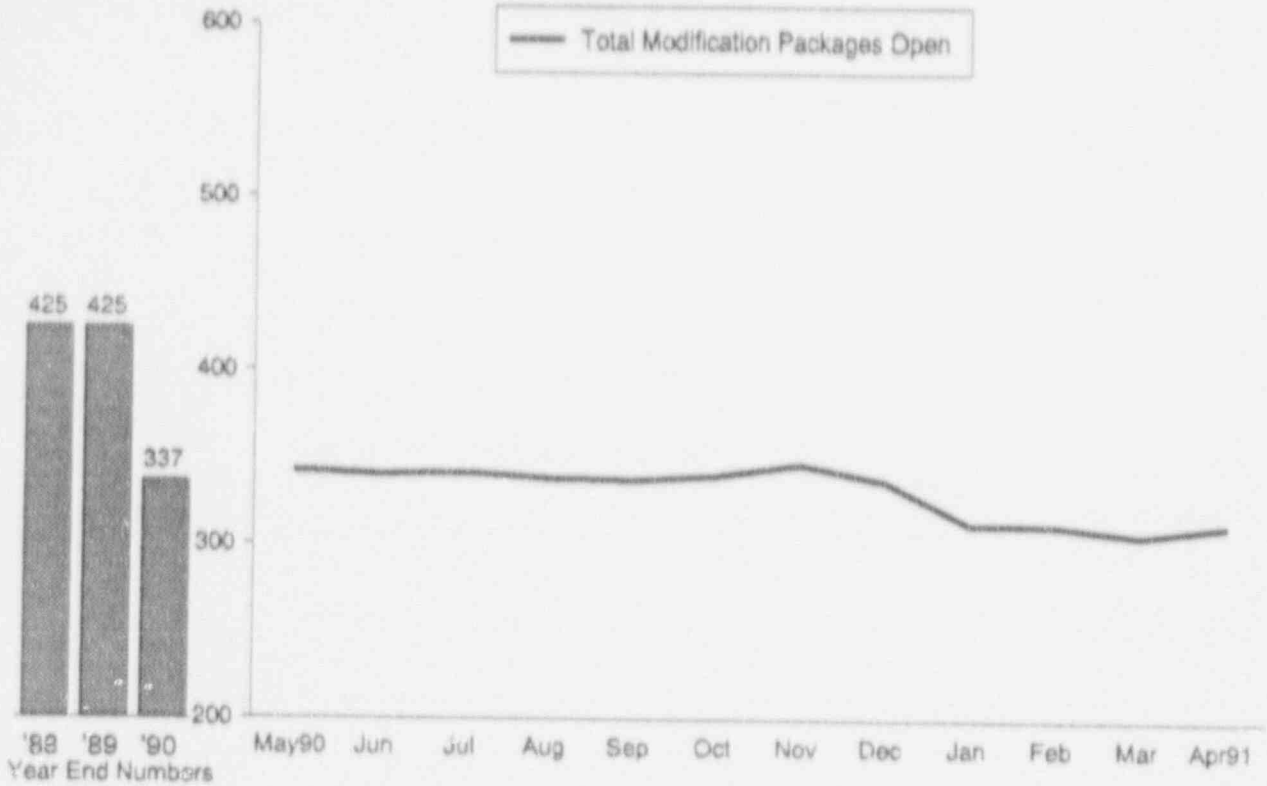
MATERIAL REQUEST PLANNING

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

During the month of April, a total of 903 MR's were received by the warehouse. Of the 903 total MR's received by the warehouse, 404 MR's were for issues with their request date the same as their need date.

Data Source: Willrett/Fraser (Manager/Source)

Adverse Trend: None



OUTSTANDING MODIFICATIONS

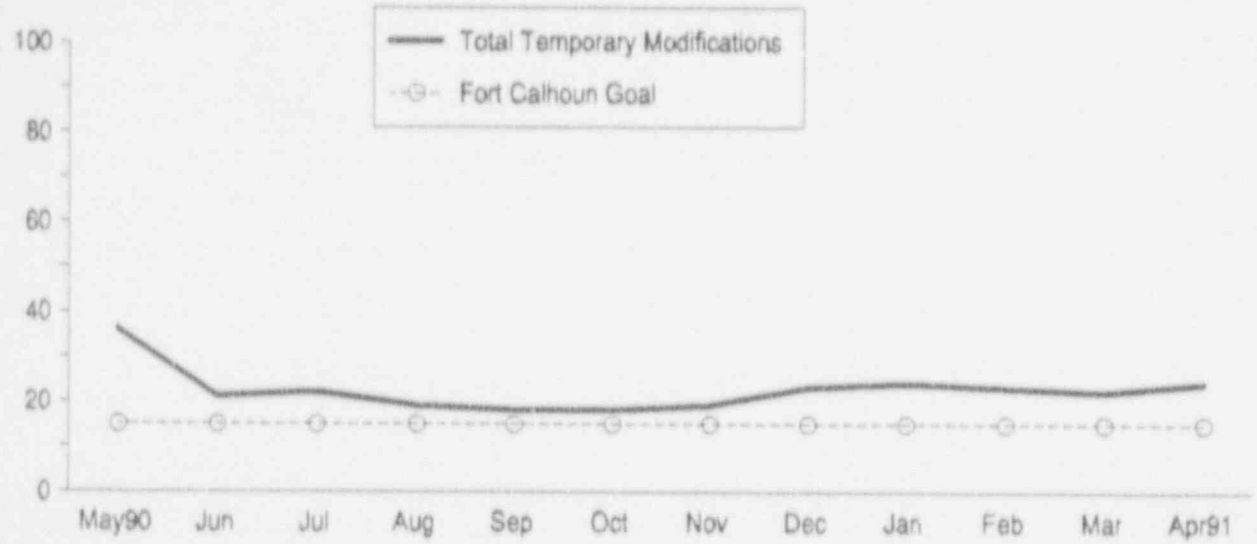
This indicator shows the total number of outstanding modifications (excluding outstanding modifications which are proposed to be cancelled).

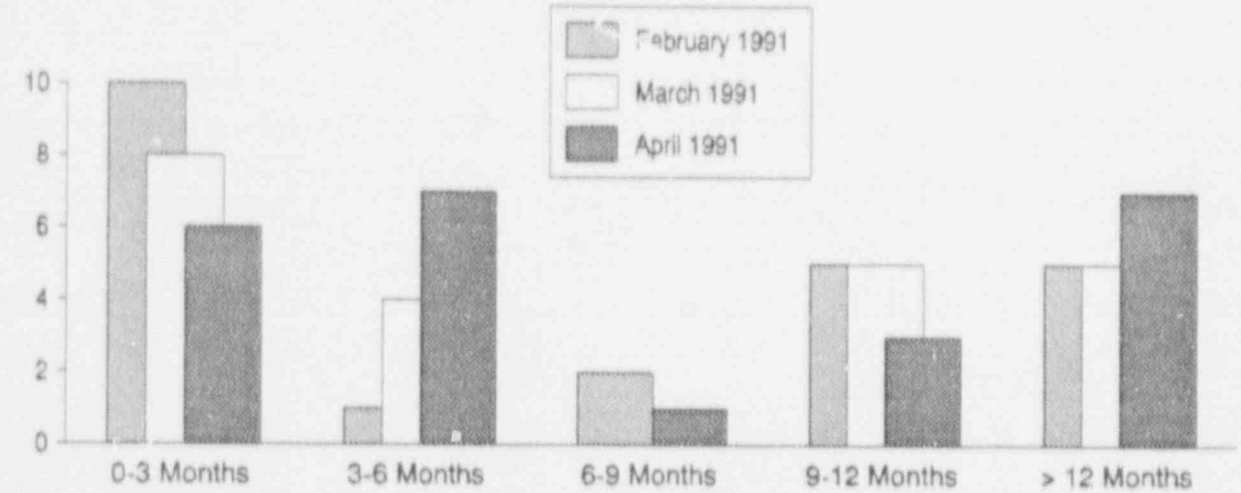
Category	Reporting Month
Form FC-1133 Backlog/In Progress	15
Mod Requests Being Reviewed	97
Design Engr. Backlog/In Progress	103
Construction Backlog/In Progress	27
Design Engr. Update Backlog/In Progress	70
Total	312

As of the end of April, 13 additional modification requests have been issued this year and 4 modification requests have been cancelled. The Nuclear Projects Review Committee (NPRC) has completed 12 backlog modification request reviews this year. The Nuclear Projects Committee (NPC) has completed 10 backlog modification request reviews this year.

Data Source: Jaworski/Turner (Manager/Source)
Scofield/Lounsberry (Manger/Source)

Adverse Trend: None





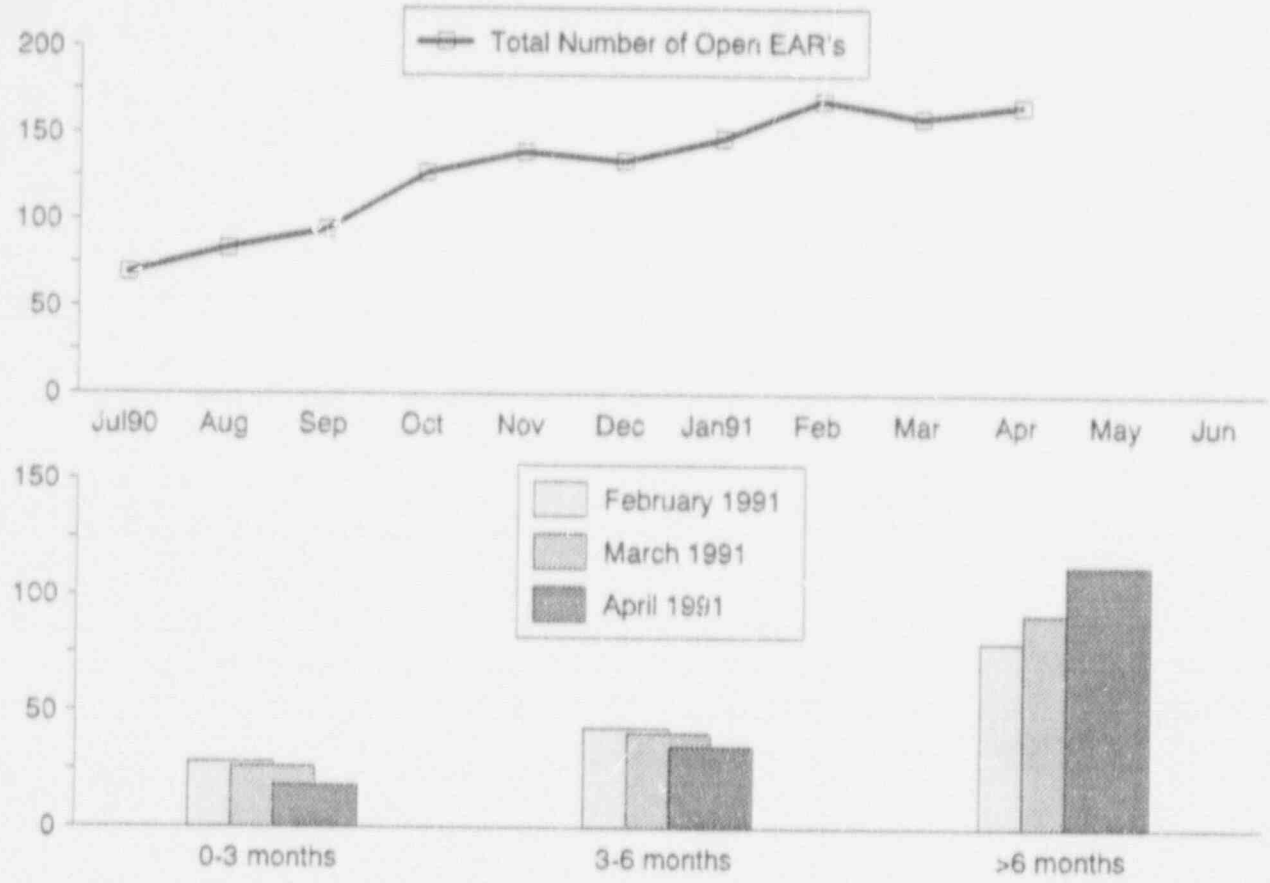
TEMPORARY MODIFICATIONS
(EXCLUDING SCAFFOLDING)

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

At the end of April, there was a total of 24 TM's installed in the Fort Calhoun Station. As of the end of the reporting month, 9 of the 24 installed TM's require an outage for removal. The current Fort Calhoun goal for the total number of installed TM's is less than 15.

Data Source: Jaworski/Turner (Manager/Source)

Adverse Trend: None SEP 62 & 71



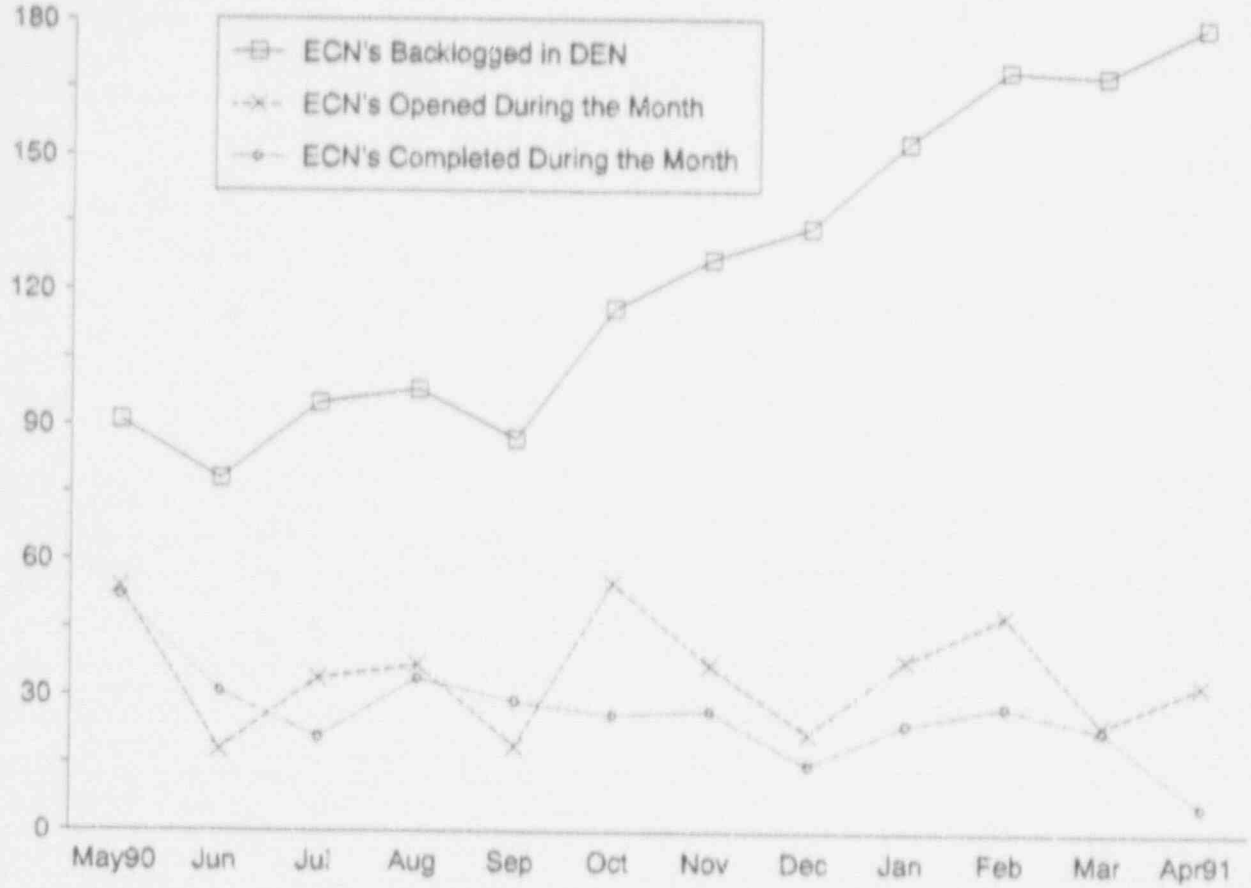
OUTSTANDING ENGINEERING ASSISTANCE REQUESTS (EAR's)

The top graph shows the total number of open EAR's at the end of the reporting month. The bottom graph shows the total number of open EAR's broken down by their age in months.

There was a total of 166 open EAR's at the end of April.

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

Adverse Trend: Although the total number of open EAR's is indicating an acceptable trend, the EAR's open over 6 months still have an adverse trend. EAR's are being closed in accordance of assigned priority. The increasing total number is the result of lower priority EAR's not being completed as rapidly as newer or higher priority EAR's.



ENGINEERING CHANGE NOTICE STATUS

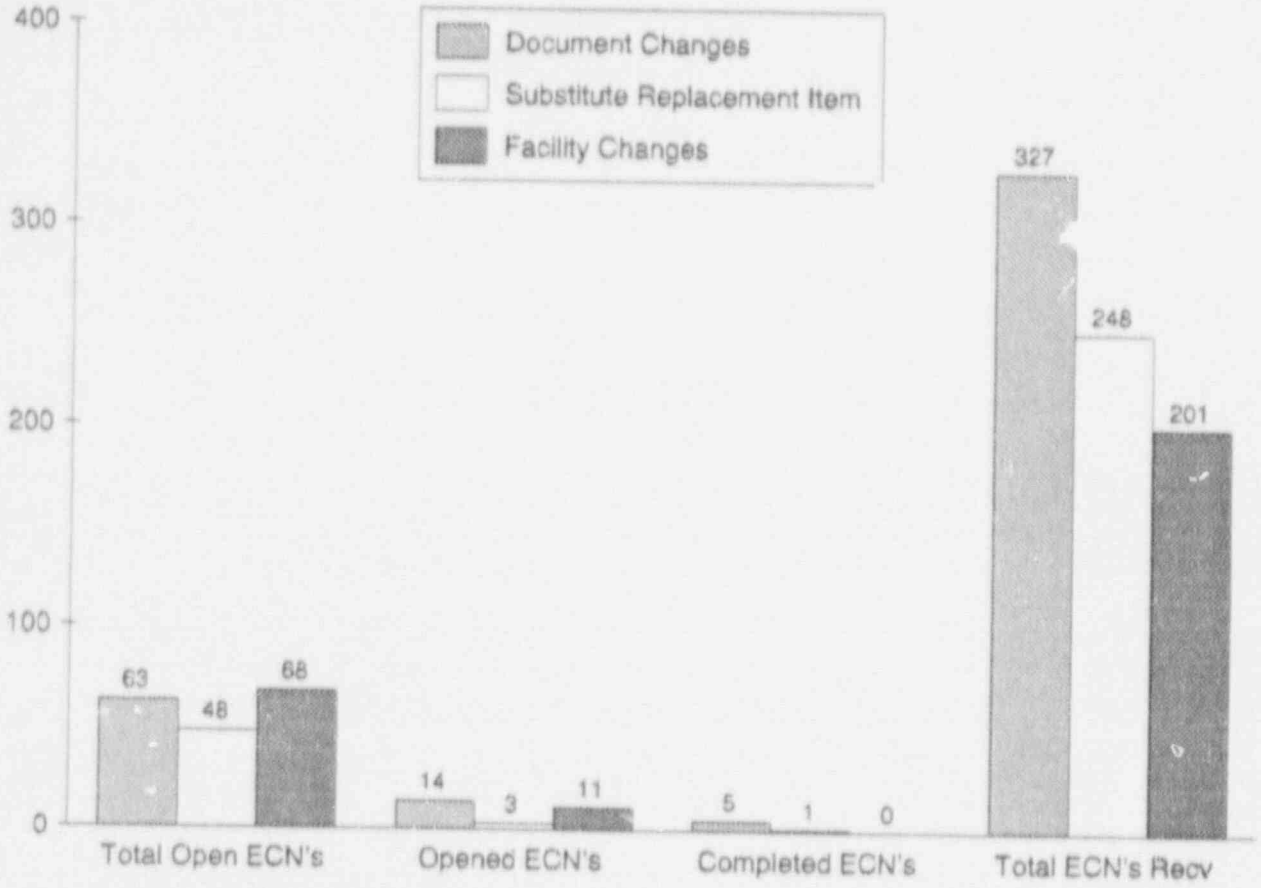
This indicator shows the number of Engineering Change Notices (ECN's) awaiting completion by DEN, the number of ECN's opened during the reporting month, and the number of ECN's completed by DEN during the reporting month.

At the end of April 1991, there was a total of 179 DEN backlogged open ECN's. There were 33 ECN's opened, and 6 ECN's completed during the month.

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

Data Source: Phelps/Bera (Manager/Source) SEP 62

Adverse Trend: None



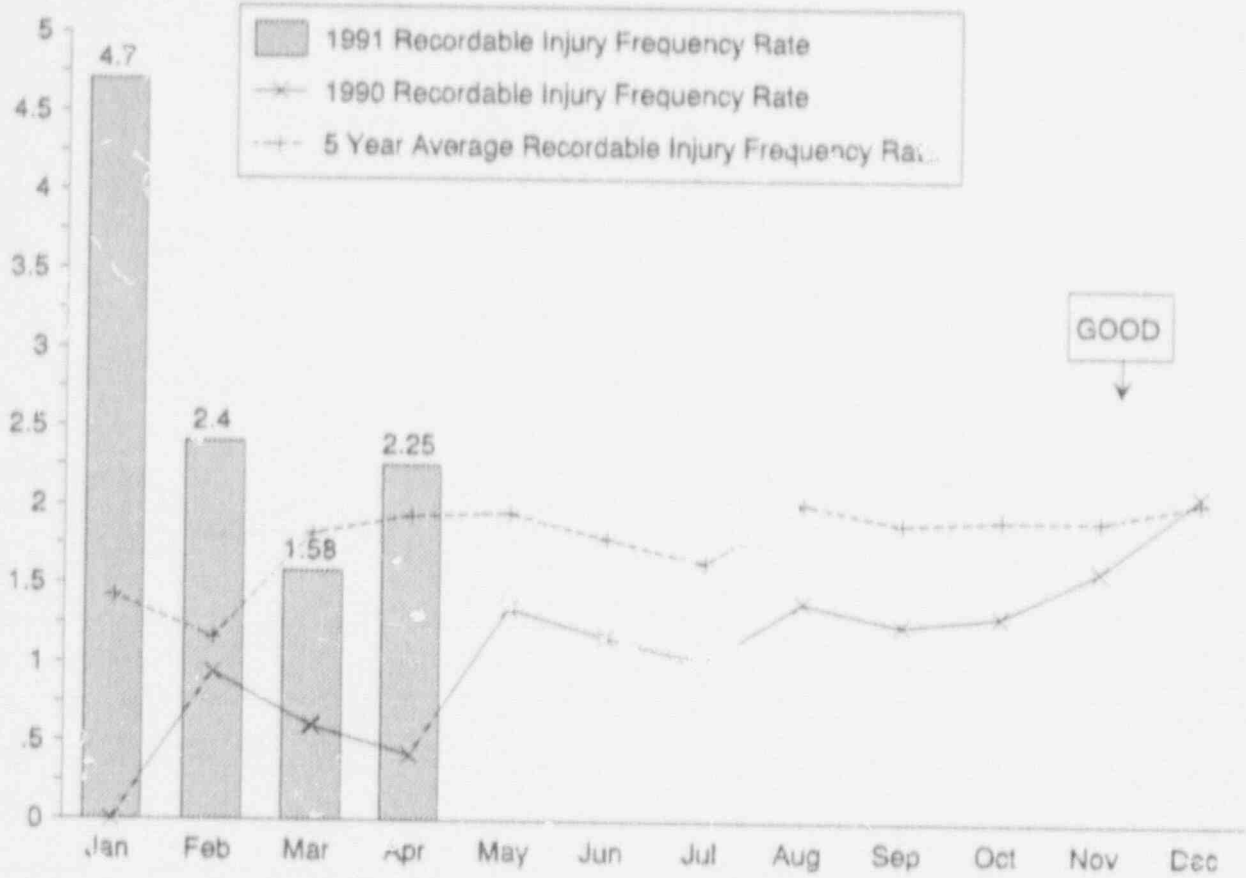
ENGINEERING CHANGE NOTICE BREAKDOWN

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

Data Source: Phelps/Bera (Manager/Source)

Adverse Trend: None

SEP 62



RECORDABLE INJURY CASES FREQUENCY RATE

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

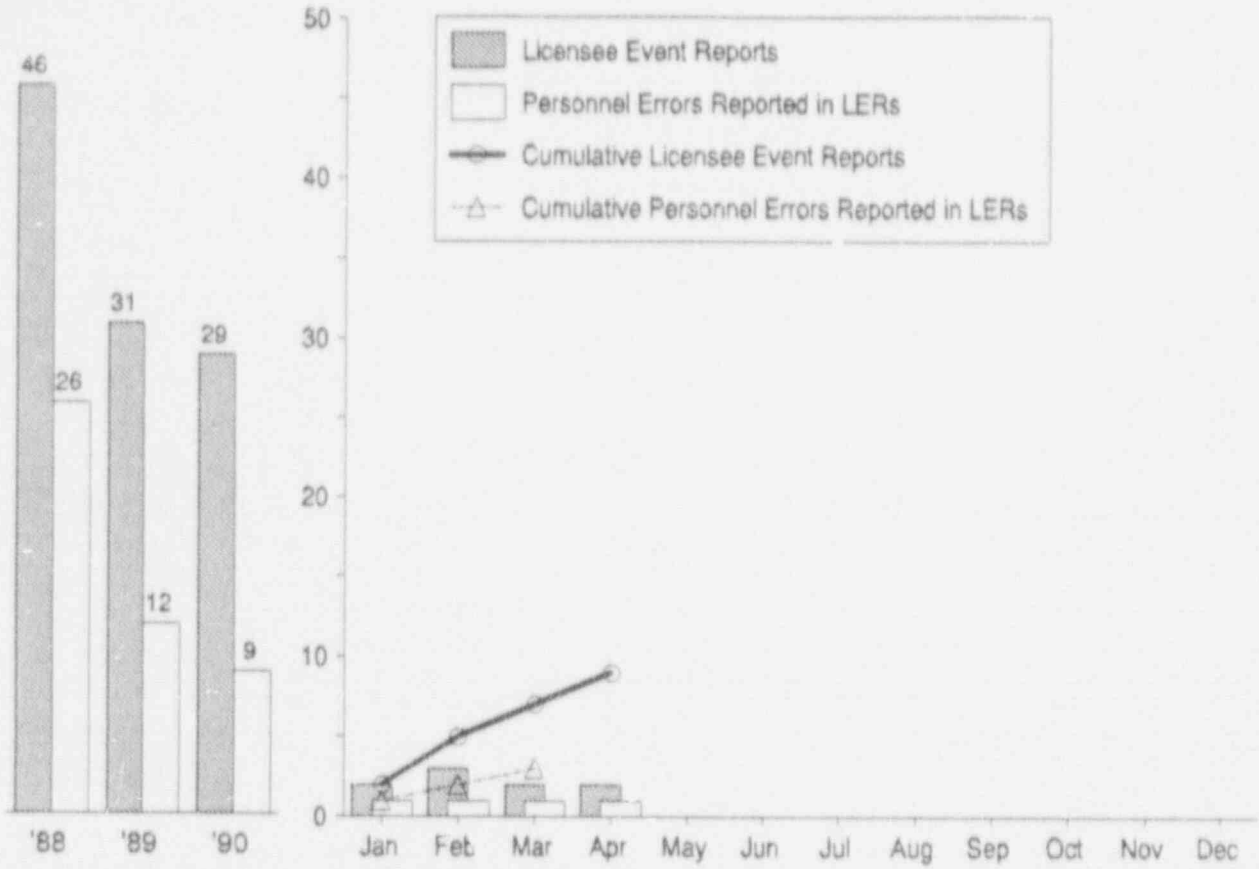
A recordable injury/illness case is reported if Nuclear Operations Division personnel are injured on the job and require corrective medical treatment. The recordable cases frequency rate is computed on a year-to-date basis.

There were 2 recordable injury/illness cases reported during the month of April. There has been a total of 4 recordable injury/illness cases so far in 1991.

Year	Recordable Cases	Year-End Rate
1988	11	2.6
1989	11	2.2
1990	13	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 & 26



NUMBER OF PERSONNEL ERRORS
REPORTED IN LER'S

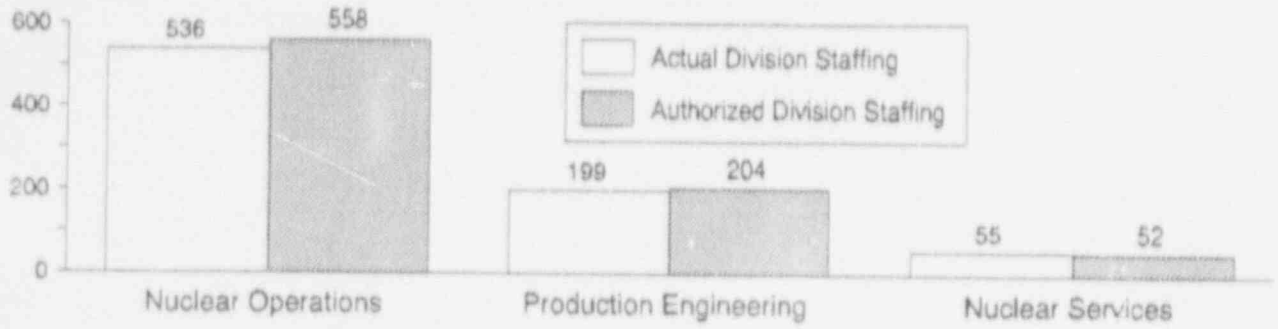
This indicator shows the number of Licensee Event Reports (LER's) with event dates during the reporting month, the LER's attributed to personnel errors, and the cumulative total of both. The year-end totals for the three previous years are also shown.

In April 1991, there were 2 LER's reported. 1 of these LER's was attributable to personnel error.

There have been 9 LER's reported so far in 1991 and 4 of these LER's have been attributable to personnel error.

Data Source: Thorkildsen/Howman (Manager/Source)

Adverse Trend: None SEP 15

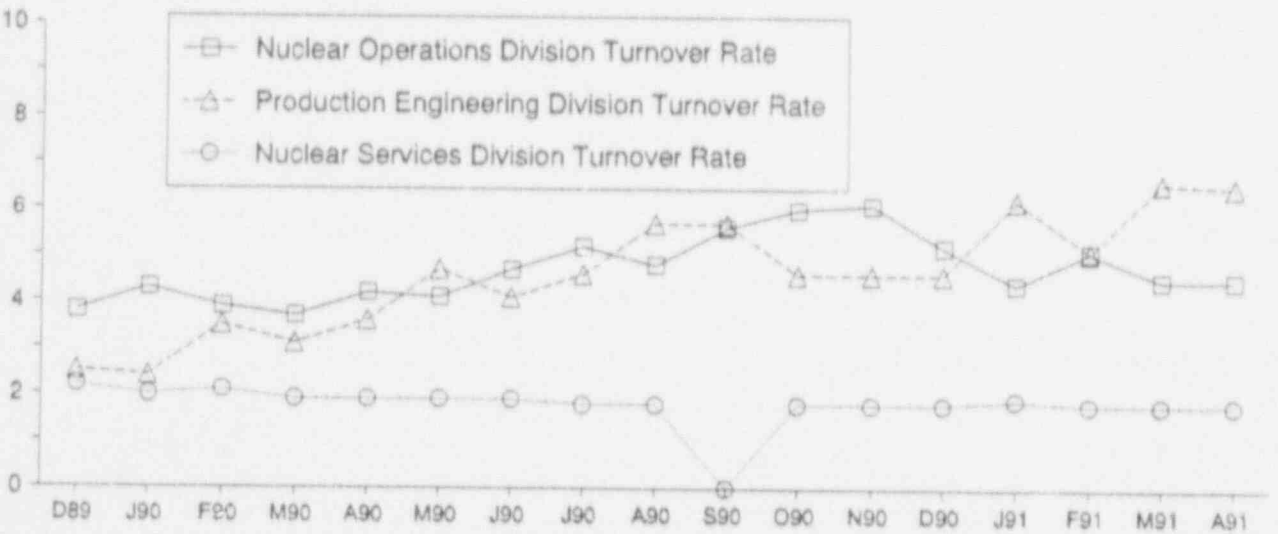


STAFFING LEVEL

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

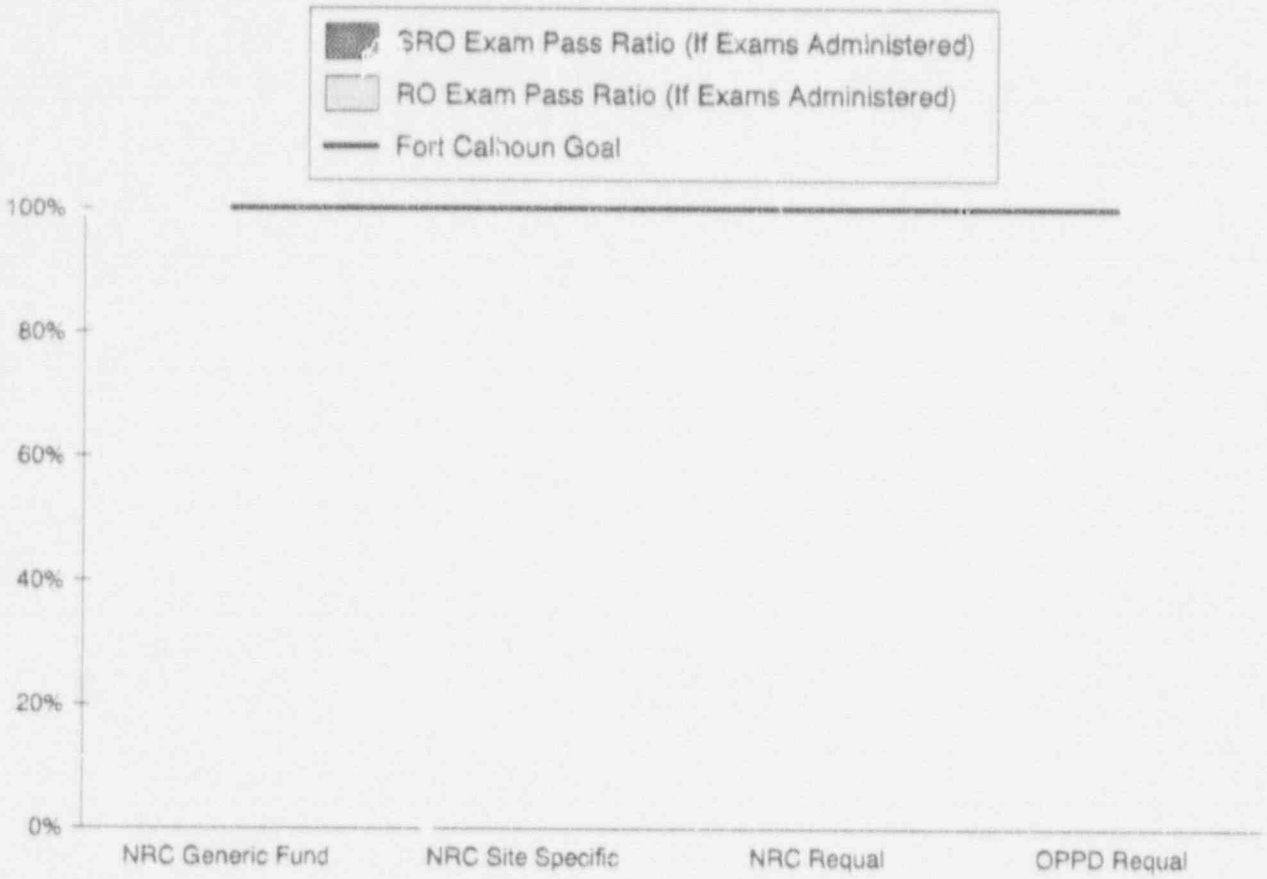
The turnover rates for the three Divisions are calculated using only resignations from OPPD.

Division	Turnover Rate
NOD	4.5%
PED	6.5%
NSD	1.8%

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

Data Source: Sorenson/Burke (Manager/Source)

Adverse Trend: None



SRO AND RO LICENSE EXAMINATION PASS RATIO

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

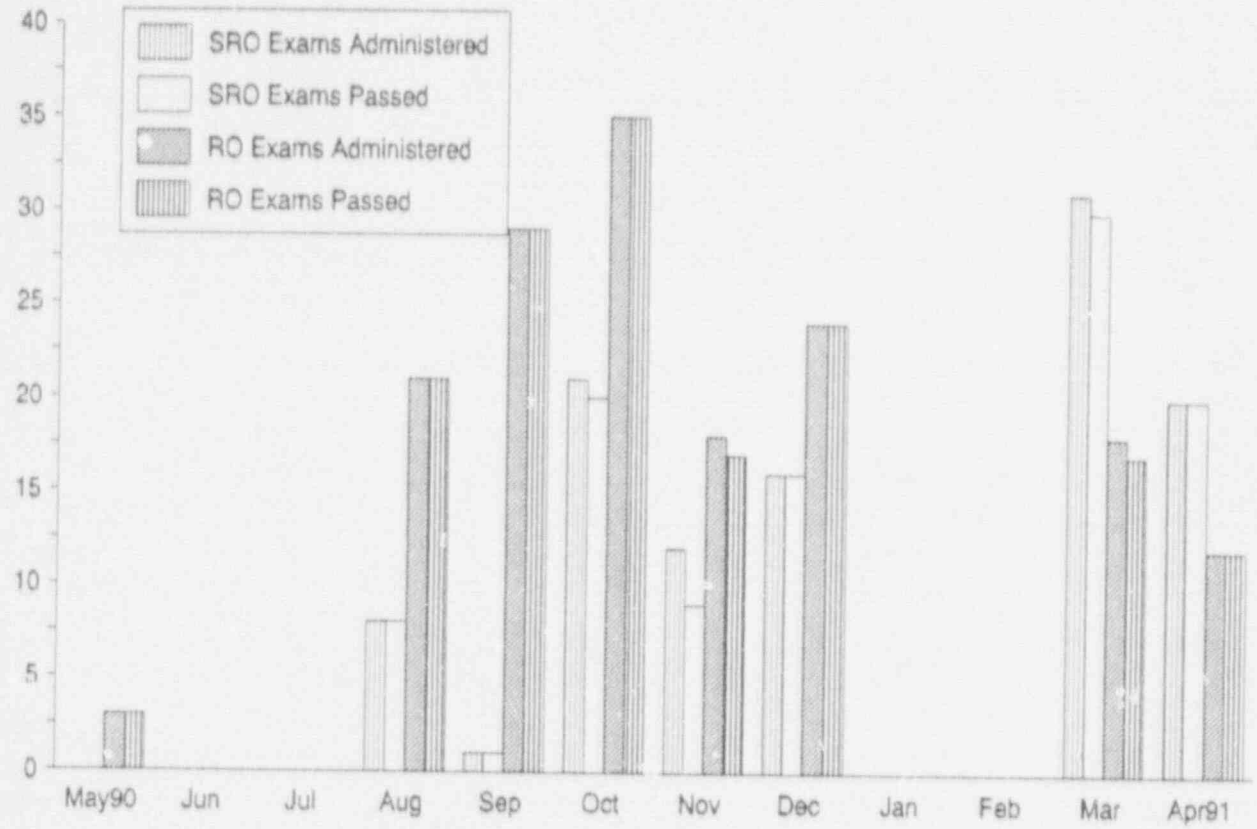
RO License Examination Pass Ratio
The Reactor Operator (RO) License Examination Pass Ratio Indicator shows the number of NRC administered Generic Fundamentals Exams (GFE's), the number of NRC administered Site Specific Exams, the number of NRC administered license requalification exams, and the number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

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

No tests were administered during the reporting month.

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.

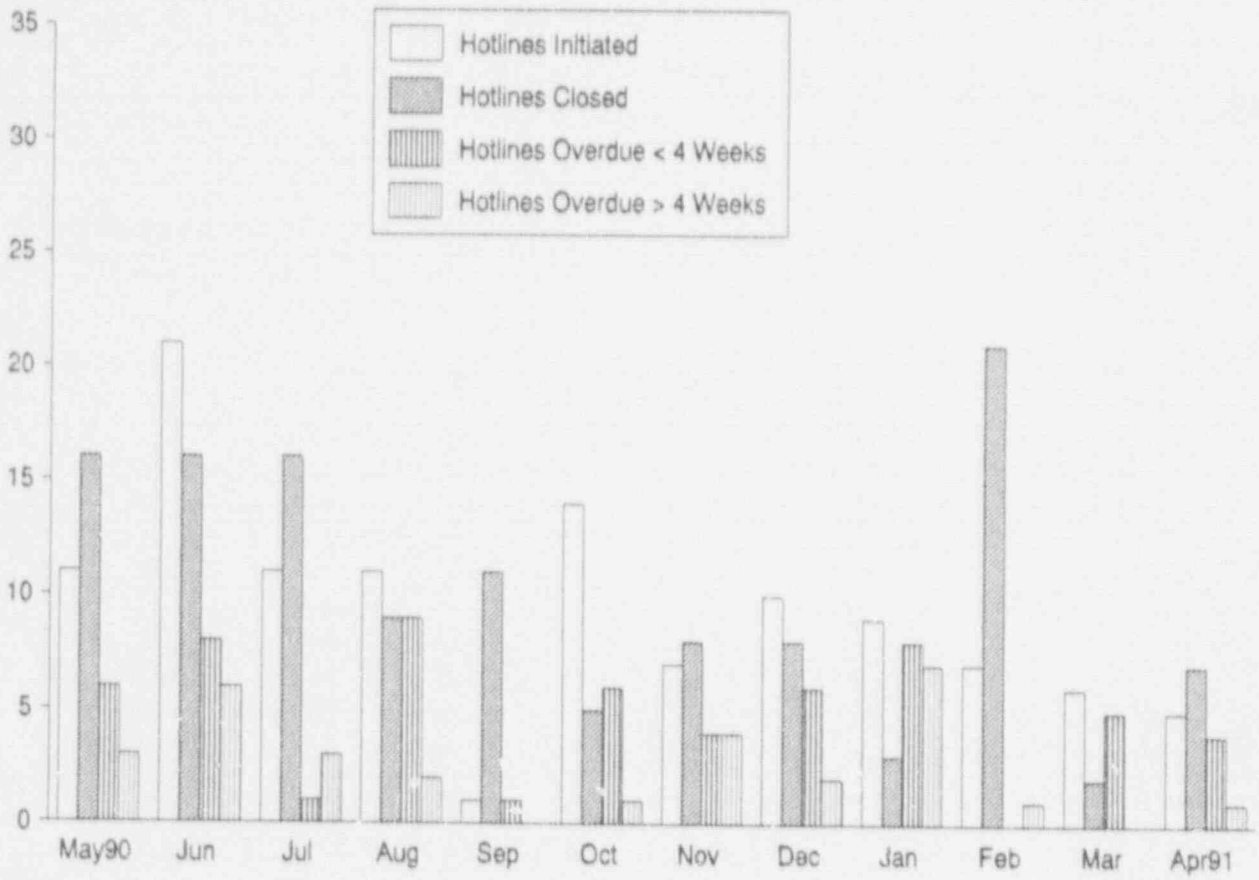
During the month of April 1991, 20 SRO quizzes/exams were administered and 20 of these SRO quizzes/exams were passed.

During the month of April 1991, 12 RO quizzes/exams were administered and 12 of these RO quizzes/exams were passed.

Data Source: Gasper/Herman (Manager/Source)

Adverse Trend: None

SEP 68



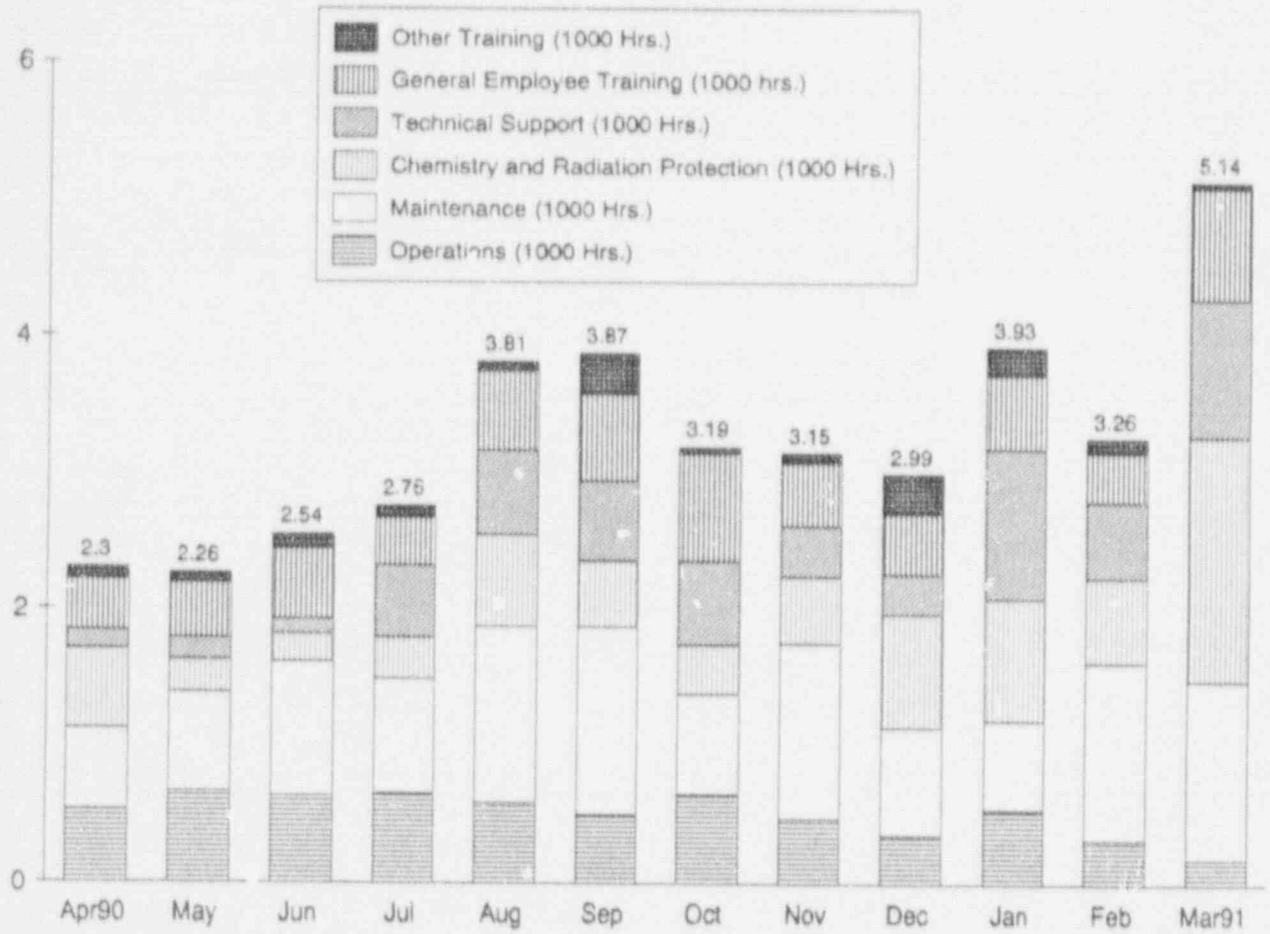
HOTLINE TRAINING MEMOS

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.

April 1991	
Initiated Hotlines	05
Closed Hotlines	07
Hotlines Overdue < 4 wks.	04
Hotlines Overdue > 4 wks.	01

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



TOTAL INSTRUCTION HOURS

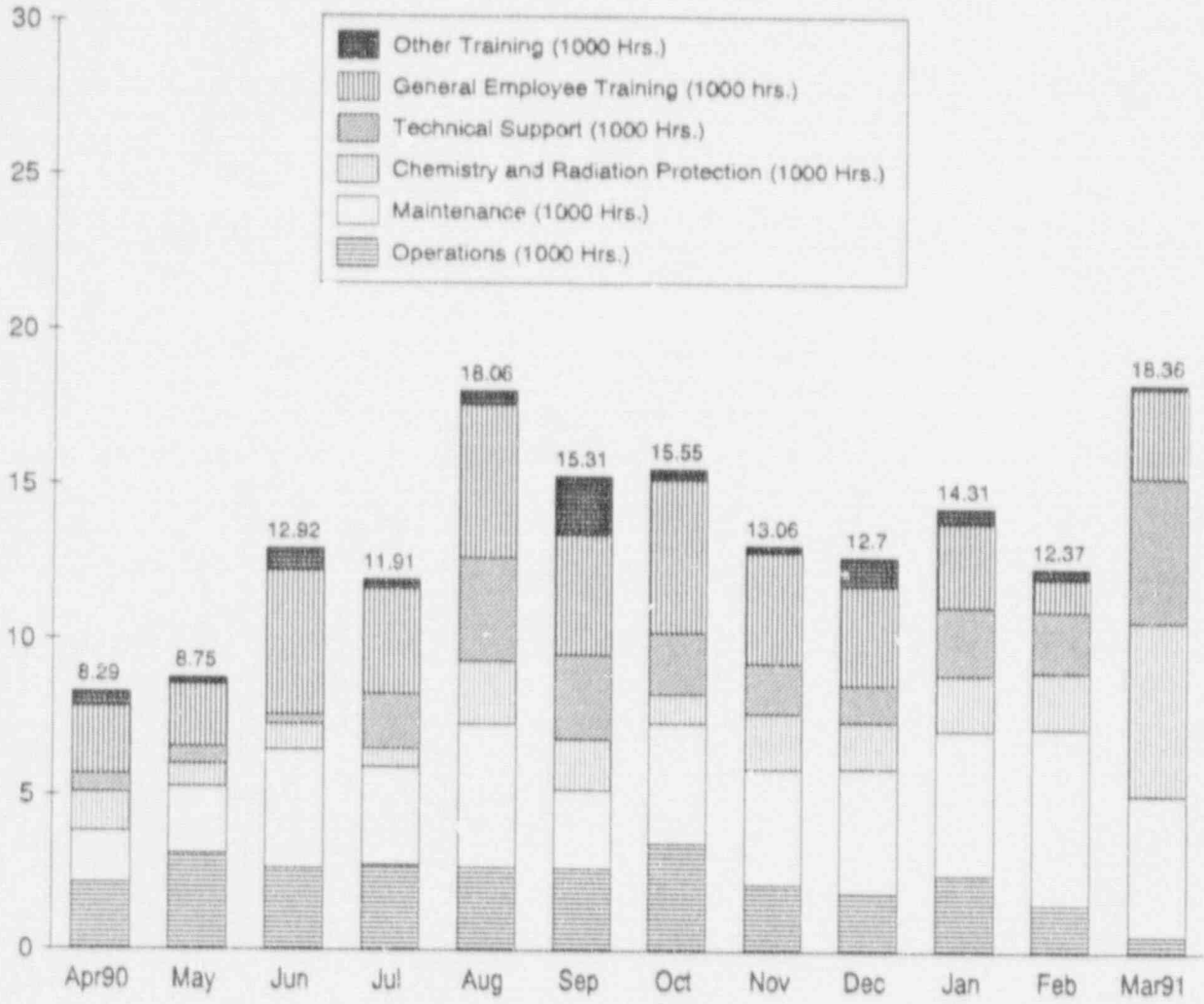
This indicator displays the training instruction hours administered to the listed departments for the reporting month.

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

DEPARTMENT	FEB 91	Total Hours	MAR 91
Operations	329		187
Maintenance	1300		1313
Chemistry and Radiation Protection	610		1776
Technical Support	558		1004
General Employee Training	369		822
Other	96		39
Total	3262		5141

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



TOTAL HOURS OF STUDENT TRAINING

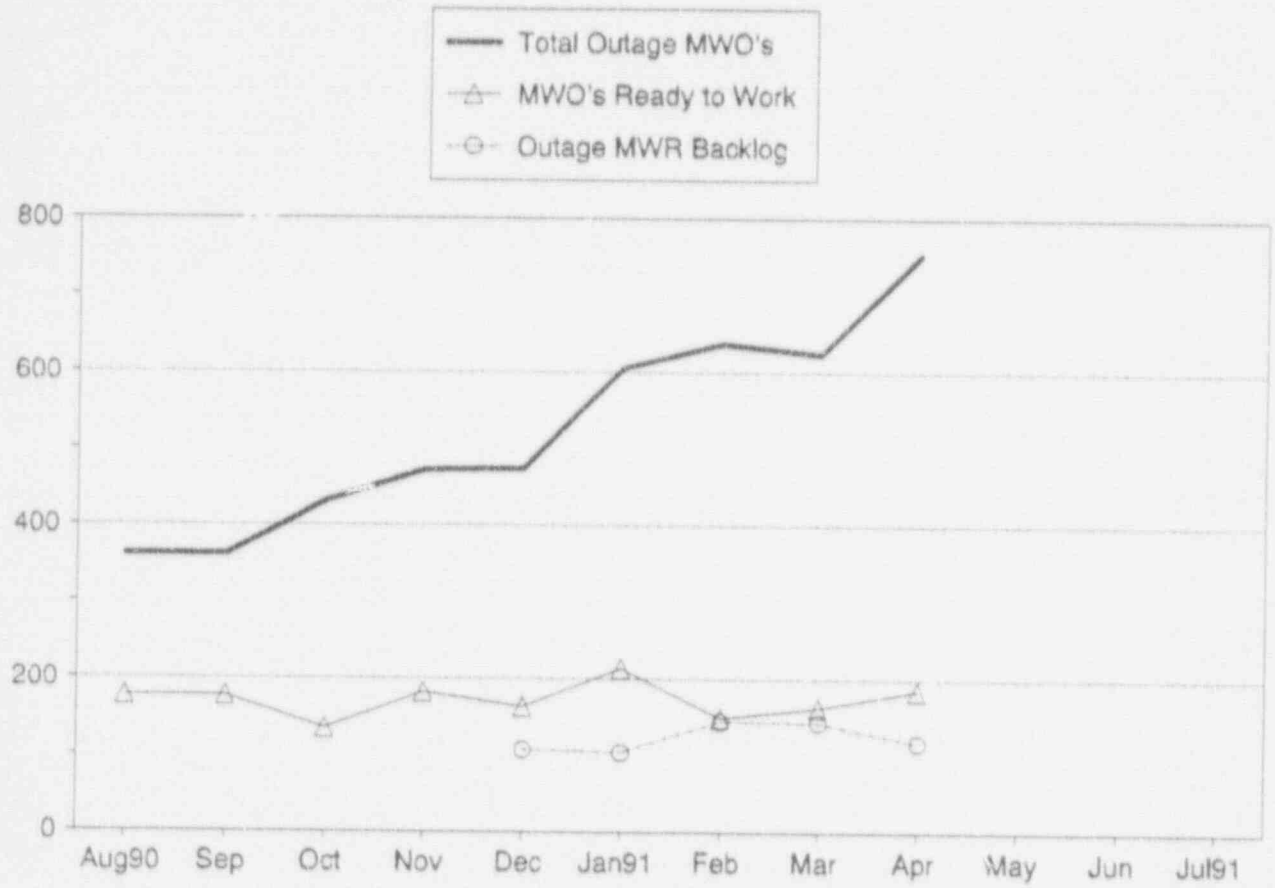
This indicator shows the total number of student hours for Operations, Maintenance, Chemistry and Radiation Protection, Technical Support, General Employee Training, and Other training conducted for the Fort Calhoun Station.

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

DEPARTMENT	FEB 91	Total Hours	MAR 91
Operations	1518		524
Maintenance	5711		4579
Chemistry and Radiation Protection	1805		5543
Technical Support	1947		4694
General Employee Training	1047		2905
Other	338		112
Total	12366		18357

Data Source: Gasper/Newhouse (Manager/Source)

Adverse Trend: None



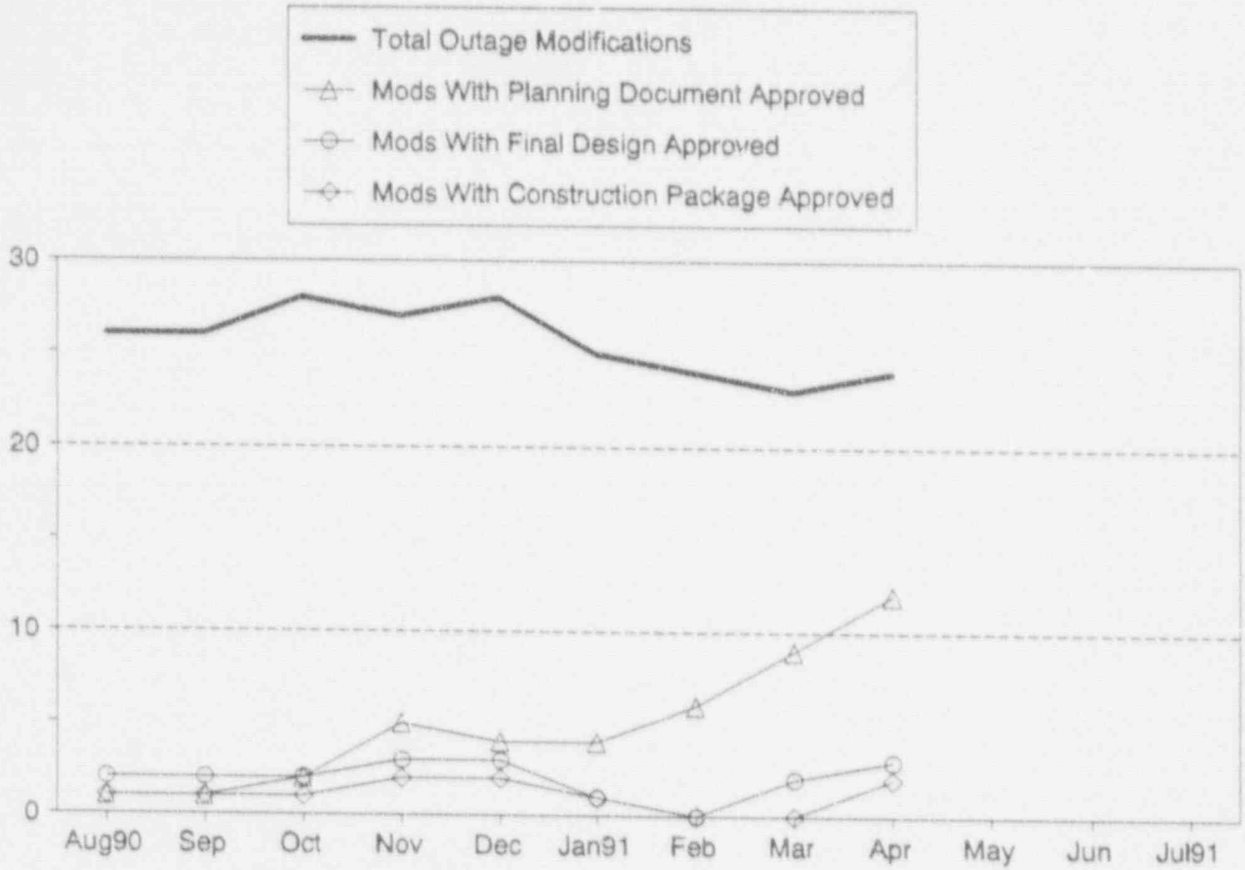
MWO OVERALL STATUS
(CYCLE 13 REFUELING OUTAGE)

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

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

Data Source: Patterson/Hyde (Manager/Source)

Adverse Trend: None SEP 31



PROGRESS OF CYCLE 13 OUTAGE MODIFICATION PLANNING

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

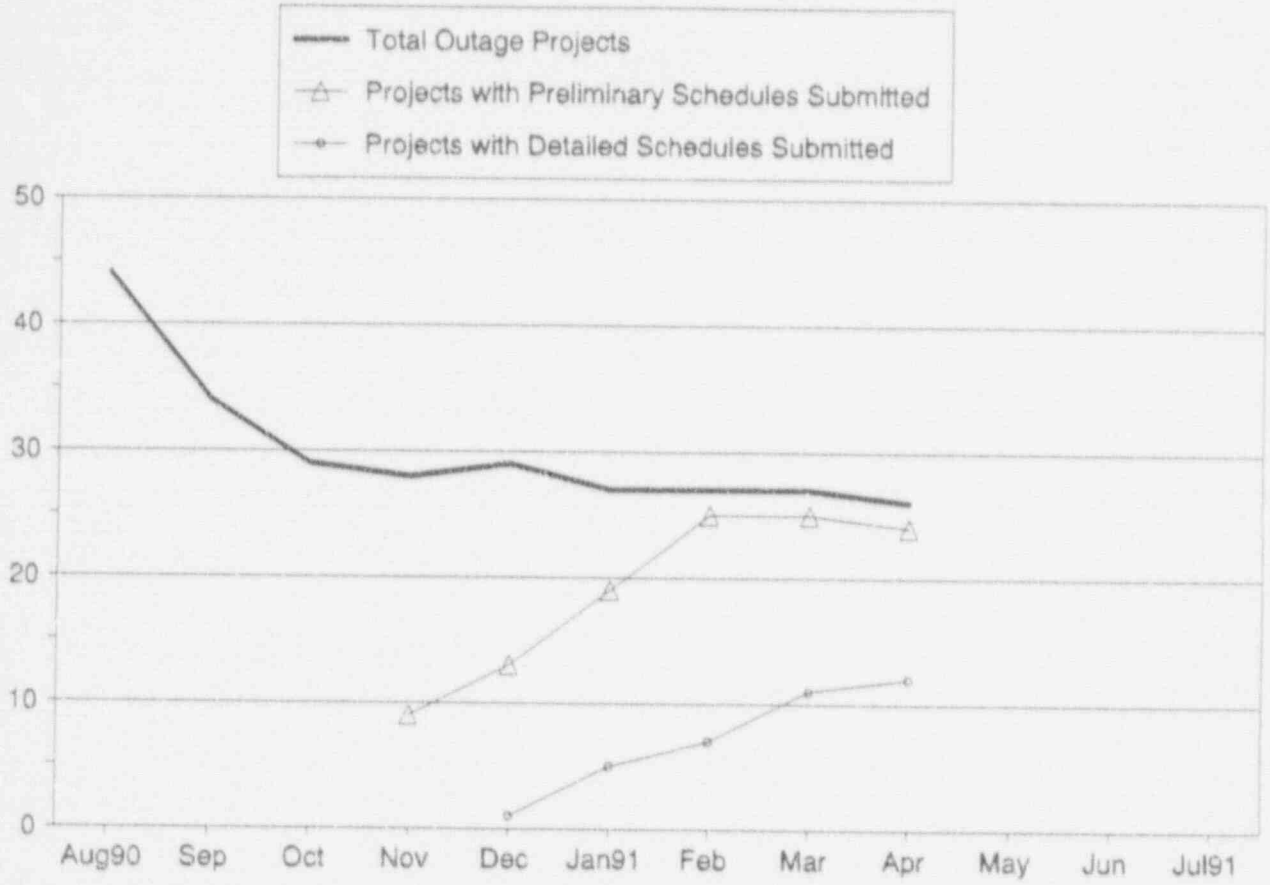
The current schedule for completion of the modification phases of the Cycle 13 Refueling Outage is as follows.

Outage Scope Freeze*	Oct 1, 1990
Planning Documents Approved*	Feb 22, 1991
Final Designs Approved*	Apr 24, 1991
Construction Packages Approved*	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 Jan 92 refueling outage start date. A forced outage after Nov 91 could result in an early start date of the Cycle 13 RFO.

Data Source: Patterson/Hyde (Manager/Source)

Adverse Trend: None SEP 31



OVERALL PROJECT STATUS
(CYCLE 13 REFUELING OUTAGE)

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

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

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

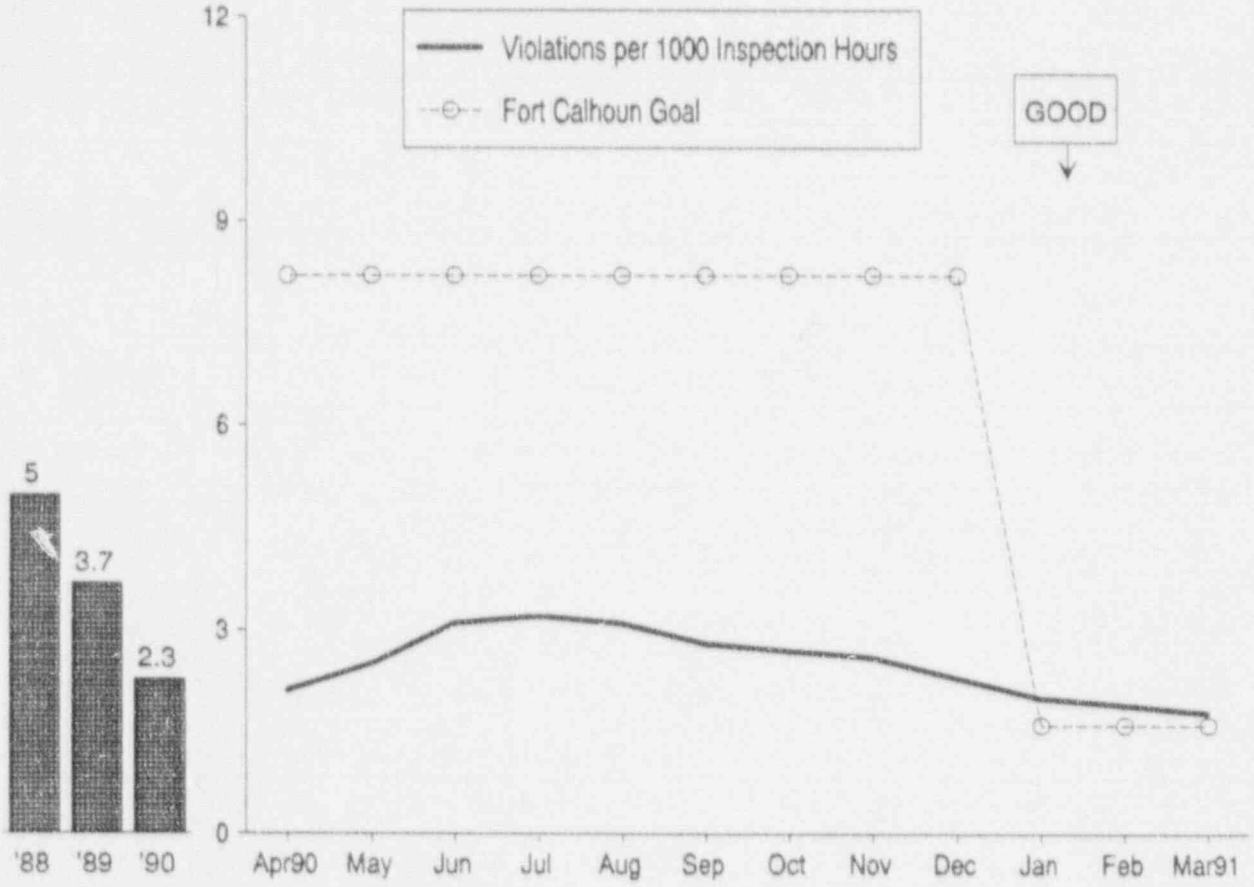
The schedule for the Cycle 13 Refueling Outage projects is as follows:

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

Data Source: Patterson/Hyde (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.

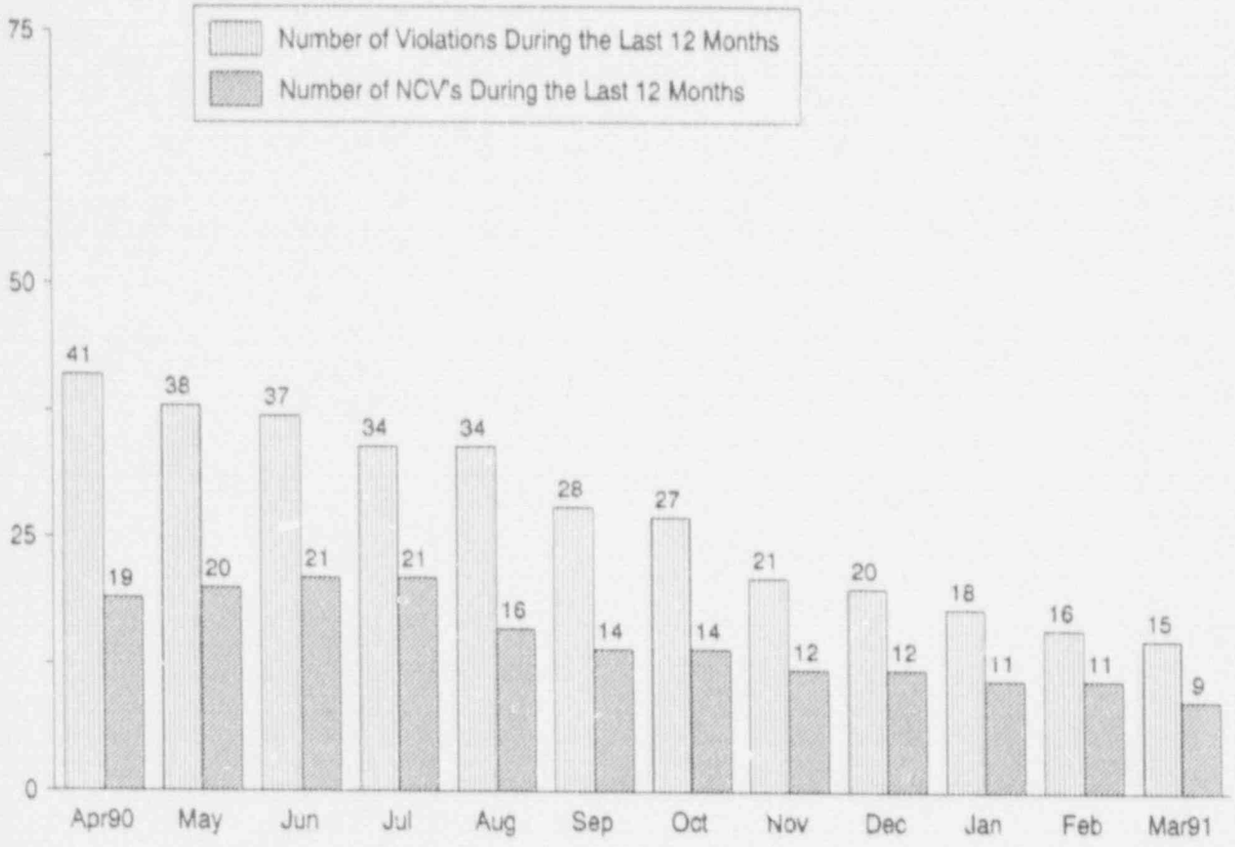
The violations per 1000 inspection hours indicator was reported as 1.78 for the month of March 1991.

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

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

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None



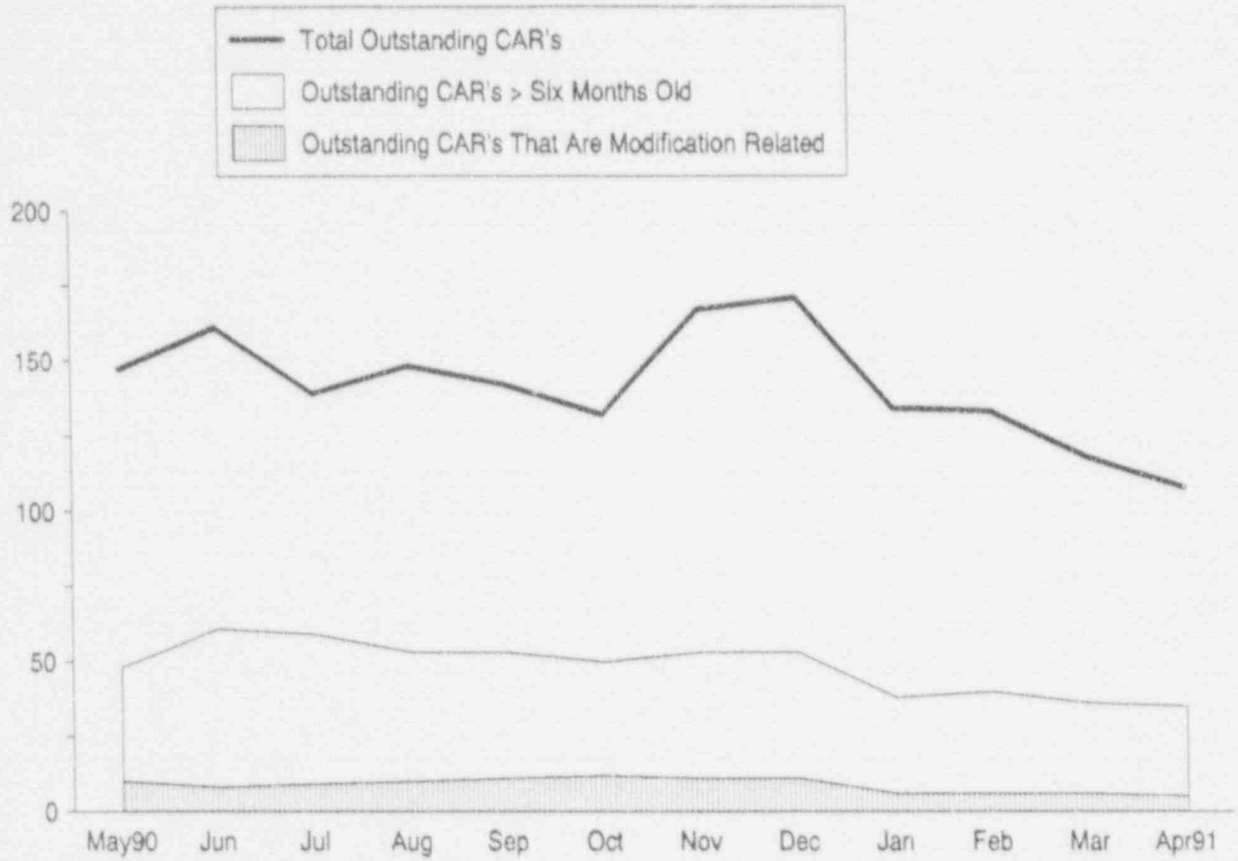
CUMULATIVE VIOLATIONS AND NCV's
(TWELVE-MONTH RUNNING TOTAL)

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

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

Data Source: Therkildsen/Howman (Manager/Source)

Adverse Trend: None



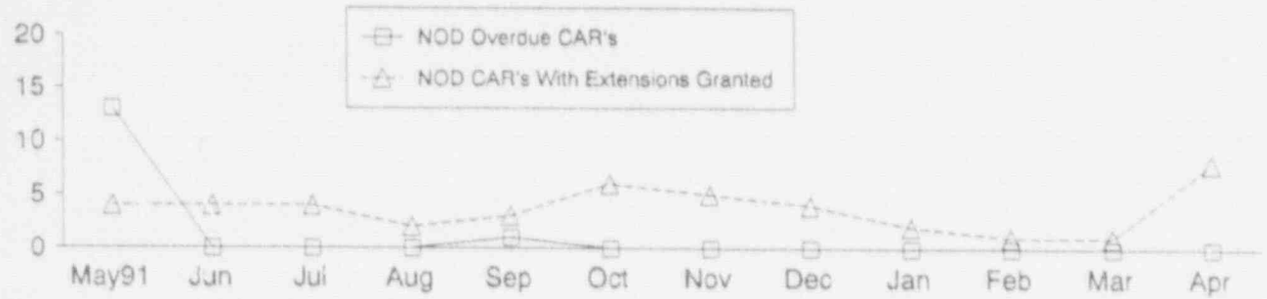
OUTSTANDING CORRECTIVE ACTION REPORTS

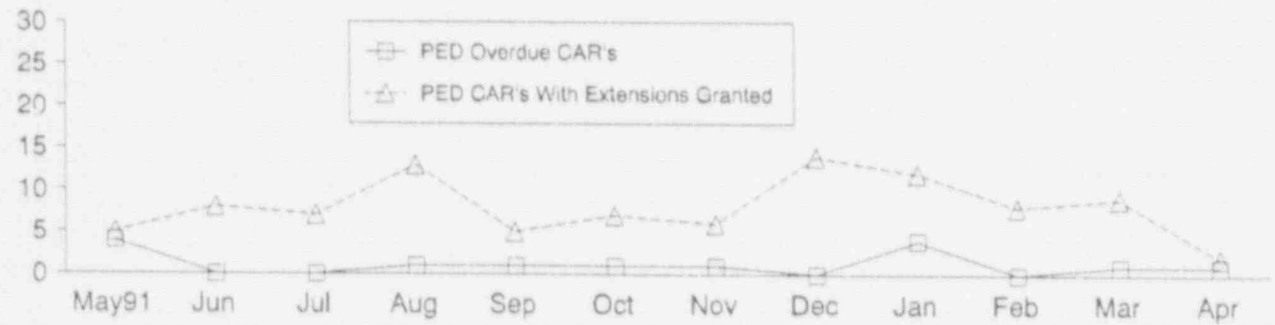
This indicator shows the total number of outstanding Corrective Action Reports (CAR's), the number of outstanding CAR's that are greater than six months old, and the number of outstanding CAR's that are modification related.

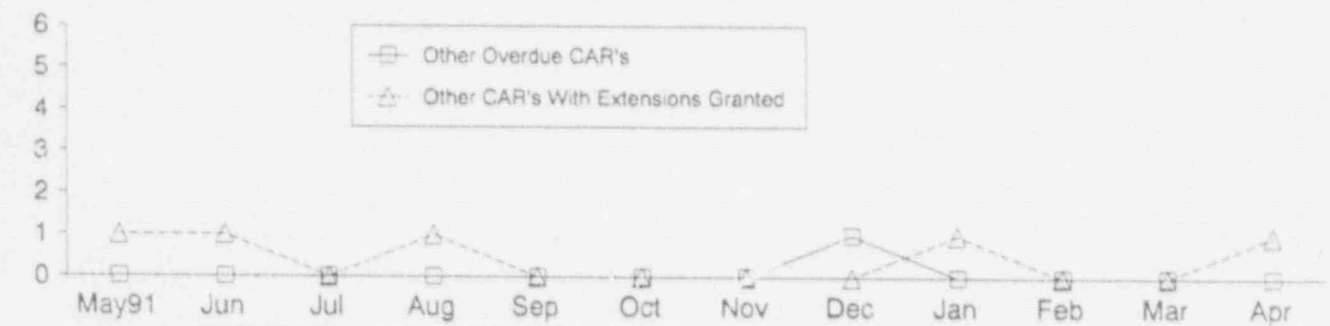
As of the end of April 1991, there were 108 outstanding CAR's, 35 CAR's that are greater than six months old, and 5 CAR's that are modification related.

Data Source: Orr/Gurtis (Manager/Source)

Adverse Trend: None







OVERDUE AND EXTENDED CORRECTIVE ACTION REPORTS

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

Overdue CAR's

	February 91	March 91	April 91
NOD	0	0	0
PED	0	1	1
Others	0	0	0
Total	0	1	1

Extended CAR's

	February 91	March 91	April 91
NOD	1	1	8
PED	8	9	2
Others	0	0	1
Total	9	10	11

Data Source: Orr/Gurtis (Manager/Source)

Adverse Trend: None

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

*Revised because a pending violation was later categorized as a non cited violation.

1991 SALP Funct. Area	CAR's	Signif. CAR	NRC Viola.	LER's
A) Plant Operations	11 (1)	1	0	12 (1)
B) Radiolog. Controls	7 (0)	0	0	0
C) Maint/Surveil.	34 (4)	0	0	3 (1)*
D) Emergency Preparedness	3 (3)	0	0	0*
E) Security	1	0	0	1
F) Engr/Tech Support	33 (3)	0	0	3
G) Safety Assess/Qual. Verif.	10 (7)	0	0	1
H) Other	0	0	0	0
Total	99 (18)	1	0	9 (2)

Note: ( ) indicate value for reporting month
*Two LER's were incorrectly attributed to Emergency Preparedness during March. The LER's should have been attributed to Maint/Surveil.

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

The above matrix shows the number of Corrective Action Reports (CARs) issued by the Nuclear Services Division (NSD) vs the number of Significant CARs issued by NSD vs the number of violations issued by the NRC for the Fort Calhoun Station in 1990 and 1991. Included in this table is the number of Licensee Event Reports (LERs) identified by the Station each year. The number of NRC violations reported is one month behind the reporting month due to the time involved in collecting and processing the violations. There were 0 violations due to personnel errors during the month previous to the reporting month.

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

Adverse Trend: None SEP 15, 20, 21

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.

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

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.

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

ENGINEERING CHANGE NOTICE (ECN) STATUS

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

EQUIPMENT FORCED OUTAGES PER 1000 CRITICAL HOURS

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

EQUIVALENT AVAILABILITY FACTOR

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

EXPEDITED PURCHASES

The percentage of expedited purchases which occurred during the reporting month compared to the total number of purchase orders generated.

FORCED OUTAGE RATE

This indicator is defined as the percentage of time that the unit was unavailable due to forced events compared to the time planned for electrical generation. Forced events are failures or other unplanned conditions that require removing the unit from service before the end

of the next weekend. Forced events include startup failures and events initiated while the unit is in reserve shutdown (i.e., the unit is available but not in service).

FUEL RELIABILITY INDICATOR

This indicator is defined as the steady-state primary coolant I-131 activity, corrected for the tramp uranium contribution and normalized to a common purification rate.

Tramp uranium is fuel which has been deposited on reactor core internals from previous defective fuel or is present on the surface of fuel elements from the manufacturing process.

Steady state is defined as continuous operations above 85 percent power for at least seven days.

This INPO indicator uses an industry normalized letdown purification rate. The FRI has also been calculated using Fort Calhoun's actual letdown purification rate. These calculations revealed that the use of the plant's actual rate would result in an approximate 45% increase in FRI data.

GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

This indicator displays the total number of Curies of all gaseous radioactive nuclides released from the Fort Calhoun Station.

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 the Fort Calhoun Station each month.

HOTLINE TRAINING MEMOS

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

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, COE, and miscellaneous reasons.

LICENSE CANDIDATE EXAMS

This indicator shows the number of SRO and/or RO quizzes and exams that are administered and passed each month. The License Candidate Exams Indicator tracks Training performance for SEP #68.

LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

This indicator displays the volume of liquid radioactive waste released from the radioactive waste monitor tanks, to include releases through the plant blowdown if radioactive nuclides are detected in the blowdown system. The curies from all releases from the Fort Calhoun Station 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 Performance Indicators 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 percentage of overtime hours compared to normal hours for maintenance. This includes OPPD personnel as well as contract personnel.

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

MAXIMUM INDIVIDUAL RADIATION EXPOSURE
The total maximum amount of Gamma and Neutron (Whole Body) radiation received by an individual person working at the Fort Calhoun Station on a monthly, quarterly, and annual basis.

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

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

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

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

NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS
The number of Surveillance Tests (ST's) that result in Licensee Event Reports (LER's) during

the reporting month. This indicator tracks missed ST's for SEP's #60 and #61.

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

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

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

OUTSTANDING MODIFICATIONS
The number of Modification Requests (MR'S) in any state between the issuance of a Modification Number and the completion of the drawing update.
1)Form FC-1133 Backlog/In Progress
The Form FC-1133 has not been plant approved.

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

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

PERCENT OF COMPLETED SCHEDULED MAINTENANCE ACTIVITIES
The percent of the number of completed maintenance activities as compared to the number of scheduled maintenance activities each week. This percent is shown for each craft. Maintenance activities include MWR's, MWO's, ST's, PMO's, calibrations, and other miscellaneous activities. These indicators track Maintenance performance for SEP Reference Number 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 percentage of preventive maintenance items in the month that were not completed by the scheduled date plus a grace period equal to 25 percent of the scheduled interval. This indicator tracks preventive maintenance activities for Safety Enhancement Program (SEP) #41.

PRIMARY SYSTEM CHEMISTRY - % OF HOURS OUT OF LIMIT

The percent of hours out of limit are for six primary chemistry parameters divided by the total number of hours possible for the month. The key parameters used are: Lithium, Chloride, Hydrogen, Dissolved Oxygen, Fluoride, and Suspended Solids. EPRI limits are used.

PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

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

PROGRESS OF CYCLE 13 OUTAGE MODIFICATION PLANNING

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

RADIOLOGICAL WORK PRACTICES PROGRAM

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

RATIO OF PREVENTIVE TO TOTAL MAINTENANCE

The ratio of preventive maintenance (including surveillance testing and calibration procedures) to the sum of non-outage corrective maintenance and preventive maintenance completed over the reporting period. The ratio, expressed as a percentage, is calculated based on man-hours. This indicator tracks preventive maintenance activities for Safety Enhancement Program (SEP) #41.

RECORDABLE INJURY CASES FREQUENCY RATE (RECORDABLE INJURY RATE)

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

SECONDARY SYSTEM CHEMISTRY PERFORMANCE INDEX

The Chemistry Performance Index (CPI) is a calculation based on the concentration of key impurities in the secondary side of the plant. These key impurities are the most likely cause of deterioration of the steam generators. The chemistry parameters are reported only for the period of time greater than 30 percent power.

SECONDARY SYSTEM CHEMISTRY PERFORMANCE INDEX (CONTINUED)

The CPI is calculated using the following equation:

$CPI = ((Ka/0.8) + (Na/20) + (O_2/10)) / 3$

Where the following are monthly averages of:

Ka = average blowdown cation 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.

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

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

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

STAFFING LEVEL
The actual staffing level and the authorized staffing level for the Nuclear Operations Division, the Production Engineering Division, and the Nuclear Services Division.

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

STOCKOUT RATE
The total number of Pick Tickets that were generated during the reporting month and the total number of Pick Tickets that were generated during the reporting month with no parts available expressed as a percentage.

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

Calibration Procedures, Special Procedures, or Operating Procedures are not considered as temporary modifications unless the jumper or block remains in place after the test or procedure is complete. Jumpers and blocks installed in test or lab instruments are not considered as temporary modifications.
3)Scaffolding is not considered a temporary modification. Jumpers and blocks which are installed and for which EEAR's have been submitted will be considered as temporary modifications until final resolution of the EEAR and the jumper or block is removed or is permanently recorded on the drawings.
This indicator tracks temporary modifications for SEP's #62 & #71.

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

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

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

UNPLANNED AUTOMATIC REACTOR SCRAMS WHILE CRITICAL
This indicator is defined as the number of unplanned automatic scrams (reactor protection system logic actuations) that occur while the reactor is critical. The indicator is further defined as follows:

1)Unplanned means that the scram was not part of a planned test or evolution.

2)Scram means the automatic shutdown of the reactor by a rapid insertion of all control rods that is caused by actuation of the reactor protection system. The scram signal may have resulted from exceeding a setpoint or may have been spurious.

3)Automatic means that the initial signal that caused actuation of the reactor protection system logic was provided from one of the sensors monitoring plant parameters and conditions, rather than the manual scram switches (or pushbuttons) in the main control room.

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

UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)
This indicator is defined as the sum of the following safety system actuations:

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

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

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

VIOLATIONS PER 1000 INSPECTION HOURS
This indicator is defined as the number of violations sited in NRC inspection reports for the Fort Calhoun Station per 1000 NRC

inspection hours. The violations are reported in the year that the inspection was actually performed and not based on when the inspection report is received. The hours reported for each inspection report are used as the inspection hours.

VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

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

Fort Calhoun Station Performance Indicator Report
Index to SEP Indicators

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

Fort Calhoun Station Performance Indicator
Distribution List

J. C. Adams
R. L. Andrews
G. L. Anglehart
W. R. Bateman
K. L. Belek
A. D. Bilau
B. H. Blome
C. N. Bloyd
J. P. Bobba
C. E. Boughter
M. A. Breuer
C. J. Brunnert
M. W. Butt
C. A. Carlson
J. W. Chase
G. R. Chatfield
A. G. Christensen
A. J. Clark
O. J. Clayton
R. P. Clemens
J. L. Connolley
G. M. Cook
M. R. Core
S. R. Crites
D. W. Dale
R. C. DeMeulmeester
R. D. DeYoung
D. C. Dietz
D. E. Dirrim
K. S. Dowdy
J. A. Drahota
T. R. Dukarski
R. G. Eurich
H. J. Faulhaber
M. A. Ferdig
V. H. Frahm
F. F. Franco
M. T. Frans
H. K. Fraser
J. F. W. Friedrichsen
S. K. Gambhir
J. K. Gasper
W. G. Gates
M. O. Gautier
S. W. Gebers
J. M. Glantz
J. T. Gleason
L. V. Goldberg
D. J. Golden
D. C. Gorence
R. E. Gray
M. J. Guinn
E. P. Gundal
A. L. Gurtis
R. H. Guy
R. M. Hawkins
M. C. Hendrickson
R. R. Henning
K. R. Henry
J. B. Herman
G. J. Hill
K. C. Holthaus
M. A. Howman
L. G. Huliska
C. J. Husk
K. C. Hyde
R. L. Jaworski
R. A. Johansen
W. C. Jones
J. D. Kecy
J. D. Keppler
D. D. Kloock
J. C. Knight
D. M. Kobunski
G. J. Krause
L. J. Kripal
J. G. Krist
J. B. Kuhr
L. T. Kusek
L. E. Labs
M. P. Lazar
R. C. Learch
S. E. Lee
R. E. Lewis
R. C. Liebentritt
C. J. Linden
B. R. Livingston
J. M. Lofshult
J. H. MacKinnon
G. D. Mamoran
J. W. Marcil
N. L. Marfice
D. J. Matthews
T. J. McIvor
R. F. Mehaffey
R. A. Miser
K. J. Morris
D. C. Mueller
R. J. Mueller
W. L. Neal
J. B. Newhouse
M. W. Nichols
C. W. Norris
J. T. O'Connor
W. W. Orr
L. L. Parent
T. L. Patterson
R. L. Phelps
T. M. Reisdorff
A. W. Richard
D. G. Ried
G. K. Samide
T. J. Sandene
B. A. Schmidt
S. T. Schmitz
F. C. Scofield
L. G. Sealock
H. J. Sefick
D. K. Sentel
P. Sepcenko
J. W. Shannon
R. W. Short
J. R. Shuck
C. F. Simmons
E. L. Skaggs
J. L. Skiles
F. K. Smith
R. L. Sorenson
K. E. Steele
W. Steele
H. F. Sterba
G. A. Teeple
M. A. Tesar
T. G. Therkildson
P. L. Thompson
J. W. Tills
D. R. Trausch
P. R. Turner
J. M. Uhland
C. F. Vanecek
G. L. Van Osdel
J. M. Waszak
W. O. Weber
G. R. Williams
S. J. Willrett
W. C. Woerner

ADVERSE TREND REPORT

A Performance Indicator which has data representing three (3) consecutive months of declining performance constitutes an adverse trend. The Adverse Trend Report explains the conditions under which certain indicators are showing adverse trends. Indicators with data showing an apparent adverse trend which is not considered adverse, will have an explanation which defines the reason why an adverse trend does not exist.

Outstanding Engr. Assist. Requests (EAR's) (Page 58)
Although the total number of open EAR's is indicating an acceptable trend, the EAR's open over 6 months still have an adverse trend. EAR's are being closed in accordance with assigned priority. The increasing number is the result of lower priority EAR's not being completed as rapidly as newer or higher priority EAR's.

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

End of Adverse Trend Report.

INDICATORS NEEDING INCREASED MANAGEMENT ATTENTION REPORT

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

Ratio of Preventive to Total Maintenance (Page 21)
The ratio of preventive to total maintenance was reported below the Fort Calhoun goal of 60% and the industry upper quartile value of 57.7%. This ratio decreased in December and January due to the high number of hours in which maintenance was involved in corrective maintenance activities associated with the forced outage. A decrease in the number of scheduled PM related activity hours resulted in the below goal February and March ratio. Improvement is indicated by the April ratio of 57.6%

Number of Out-of-Service Control Room Instruments (Page 23)
The number of out-of-service control room instruments was reported as being above the Fort Calhoun goal of 15 out-of-service control room instruments and above the industry upper quartile value of 7 out-of-service control room instruments. Eleven (11) of the 32 total control room instruments out-of-service require an outage for repair.

Secondary System Chemistry Performance Index (Page 36)
The CPI value for the Fort Calhoun Station has been above the industry upper quartile value of 0.24 since the first CPI value was taken after startup in May of 1990. Part of the reason for the high CPI values is the fact that the Fort Calhoun Station has been involved in various derates and forced outages since startup in May. Another reason for the high CPI values is the fact that the Fort Calhoun Station uses morpholine to control PH. The use of morpholine also raises the CPI values.

Temporary Modifications (Excluding Scaffolding)
(Page 57)
The number of temporary modifications which are installed in the plant is currently above the Fort Calhoun goal of 15 temporary modifications. Part of the reason for the increase in the total number of installed temporary modifications, is the fact that quite a few temporary modifications require a refueling outage for removal. Currently, 9 temporary modifications require a refueling outage for removal.

Violations Per 1000 Inspection Hours
(Page 72)
The number of violations which have been identified per 1000 NRC inspection manhours is currently above the Fort Calhoun goal of 1.6 violations per 1000 manhours of inspection.

End of Management Attention Report.

PERFORMANCE INDICATOR REPORT IMPROVEMENTS/CHANGES

Disabling Injury Frequency Rate
(Page 11)
SEP 25 has been added as a reference. Text has been revised to specify "injury/illness".

Invoice Breakdown
(Page 55)
Indicator has been changed to reflect categories of Service Invoices, CQE Invoices, and Miscellaneous Invoices for the reporting month.

Recordable Injury Cases Frequency Rate
(Page 61)
Text has been revised to specify "injury/illness".

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