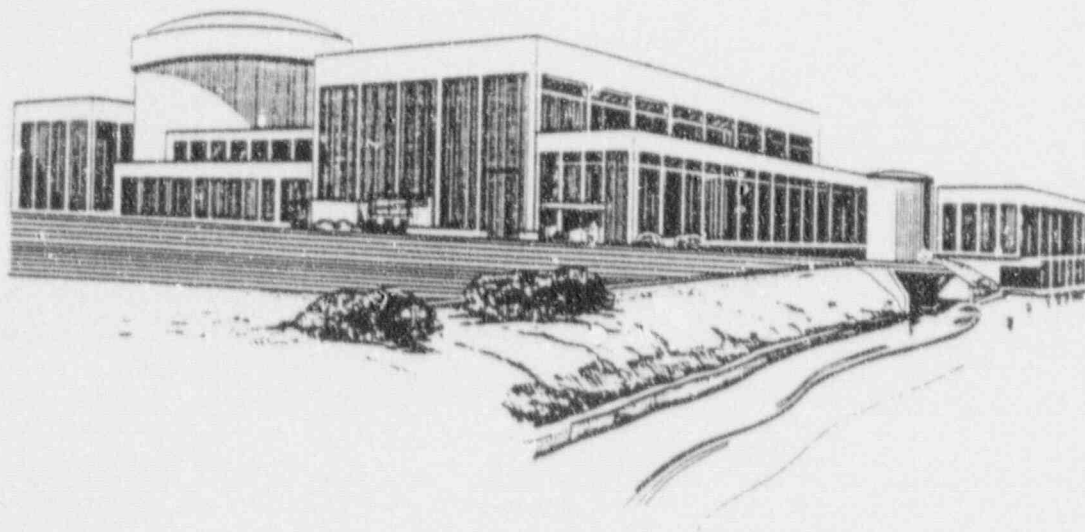


FORT CALHOUN STATION PERFORMANCE INDICATORS

FEBRUARY 1992



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*

FEBRUARY 1992

ABSTRACT

PURPOSE

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

SCOPE

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

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

- 1) Data was selected which most effectively monitors Fort Calhoun's performance in key areas.
- 2) Established corporate goals and industry information were included for comparison.
- 3) Formal definitions were developed for each performance parameter to ensure consistency in future reports and allow comparison with industry averages where appropriate.

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

REFERENCES

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

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

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

FOREWORD

This report is being produced in an abbreviated form during the Cycle 14 Refueling Outage to allow many performance indicator data sources to devote more time to outage activities. Publication of all indicators will resume in the May 1992 report.

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INPO INDUSTRY KEY PARAMETERS

PAGE

	<u>INDUSTRY</u> <u>MEDIAN</u>	<u>OPPD</u> <u>GOAL</u>	<u>OPPD</u> <u>THIS MONTH</u>	<u>OPPD</u> <u>LAST MONTH</u>	<u>TREND</u>	
SAFETY SYSTEM PERFORMANCE:						
EMERGENCY AC POWER SYSTEM	0.017	0.24	0	0	I	3
COLLECTIVE RADIATION EXPOSURE (Man-Rem) 277/YR	250/YR	65.5	3.97	NA		5
VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE (Cubic Ft.)	4,060/YR	3,000/YR	0	0	NA	6
INDUSTRIAL SAFETY ACCIDENT RATE/DISABLING INJURY/ILLNESS FREQUENCY RATE	0.72	0.3	0	0	I	7

OPERATIONS

PAGE

	<u>INDUSTRY</u> <u>MEDIAN</u>	<u>OPPD</u> <u>GOAL</u>	<u>OPPD</u> <u>THIS MONTH</u>	<u>OPPD</u> <u>LAST MONTH</u>	<u>TREND</u>	
UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)	0	0	0	0	I	1
UNPLANNED SAFETY SYSTEM ACTUATIONS - (NRC DEFINITION)	0	0	0	0	I	2
PLANNED CAPABILITY LOSS FACTOR	17.8%	28.3%	100%	0%	NA	4
OPERATIONS AND MAINTENANCE BUDGET	NA	NA	NA	NA	NA	8
DOCUMENT REVIEW	NA	NA	NA	NA	NA	9

MAINTENANCE

PAGE

	<u>INDUSTRY</u> <u>MEDIAN</u>	<u>OPPD</u> <u>GOAL</u>	<u>OPPD</u> <u>THIS MONTH</u>	<u>OPPD</u> <u>LAST MONTH</u>	<u>TREND</u>	
DIESEL GENERATOR UNAVAILABILITY	NA	NA	NA	NA	NA	10
AGE OF OUTSTANDING MAINTENANCE WORK ORDERS (CORRECTIVE NON-OUTAGE)	NA	NA	NA	NA	NA	11
MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE)	NA	NA	NA	NA	NA	12
CORRECTIVE MAINTENANCE BACKLOG GREATER THAN 3 MONTHS OLD (NON-OUTAGE)	NA	NA	58%	44.8%	NA	13
RATIO OF PREVENTIVE TO TOTAL MAINTENANCE (NON-OUTAGE)	NA	65%	80.8%	67.8%	I	14
NUMBER OF OUT-OF-SERVICE CONTROL ROOM INSTRUMENTS	NA	<13	11	24	I	15

MAINTENANCE (cont'd)

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
MAINTENANCE OVERTIME	NA	10%	38.2%	7.9%	NA	16
PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)	NA	NA	0	0	I	17
MAINTENANCE WORK ORDER BACKLOG (CORRECTIVE NON-OUTAGE MAINTENANCE)	NA	<350	250	261	I	18
NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS	NA	0	0	0	I	19
MAINTENANCE EFFECTIVENESS	NA	NA	NA	NA	NA	20
CHECK VALVE FAILURE RATE	NA	2.00E-6	.608E-6	6.07E-7	NA	21

CHEMISTRY AND RADIOLOGICAL PROTECTION

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
COLLECTIVE RADIATION EXPOSURE (Man-Rem)	277/YR	250/YR	65.5	3.97	NA	5
VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE (Cubic Ft.)	4,060/YR	3,000/YR	0	0	NA	6
MAXIMUM INDIVIDUAL RADIATION EXPOSURE (mRem)	NA	1,500/YR	772	416	NA	22
TOTAL SKIN AND CLOTHING CONTAMINATIONS	NA	144	30	5	NA	23
DECONTAMINATED RADIATION CONTROLLED AREA	NA	88%	85.0%	87.8%	NA	24
RADIOLOGICAL WORK PRACTICES PROGRAM	NA	NA	15	4	D	25
NUMBER OF HOT SPOTS	NA	NA	64	65	I	26
GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT (curies)	NA	340	358.5	NA	NA	27
LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT (curies)	NA	225	176	NA	I	28

SECURITY

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
LOGGABLE/REPORTABLE INCIDENTS (SECURITY)	NA	NA	75	82	NA	29
SECURITY NON-SYSTEM FAILURES	NA	NA	NA	NA	NA	30

SECURITY (cont'd)

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
SECURITY SYSTEM FAILURES	NA	NA	NA	NA	NA	31

MATERIALS AND OUTSIDE SERVICES

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
EXPEDITED PURCHASES	NA	0.5%	0.76%	0.2%	NMA	32

DESIGN ENGINEERING

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
TEMPORARY MODIFICATIONS (EXCEPT SCAFFOLDING)	NA	0	32	25	NA	33
ENTERING ASSISTANCE (EXCEPT EAR) BREAKDOWN	NA	NA	153	143	NA	34
ENGINEERING CHANGE NOTICE STATUS	NA	NA	154	156	NA	35

INDUSTRIAL SAFETY

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
DISABLING INJURY/ILLNESS FREQUENCY RATE	0.72	0.3	0	0	I	7
RECORDABLE INJURY/ILLNESS CASES FREQUENCY RATE	NA	2.0	1.0	2.37	I	36

HUMAN RESOURCES

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
NUMBER OF PERSONNEL ERRORS REPORTED IN LERs	NA	NA	2	1	D	37
LER ROOT CAUSE BREAKDOWN	NA	NA	NA	NA	NA	38
STAFFING LEVEL	NA	NA	NA	NA	NA	39

TRAINING AND QUALIFICATION

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
LICENSED OPERATOR REQUALIFICATION TRAINING	NA	NA	NA	NA	NA	40
LICENSE CANDIDATE EXAMS	NA	NA	NA	NA	NA	41
HOTLINE TRAINING MEMOS	NA	NA	NA	NA	NA	42

REFUELING OUTAGE

PAGE

	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
EMERGENT MWOs APPROVED FOR INCLUSION IN THE CYCLE 14 REFUELING OUTAGE	NA	NA	NA	NA	A	43

QUALITY ASSURANCE

PAGE

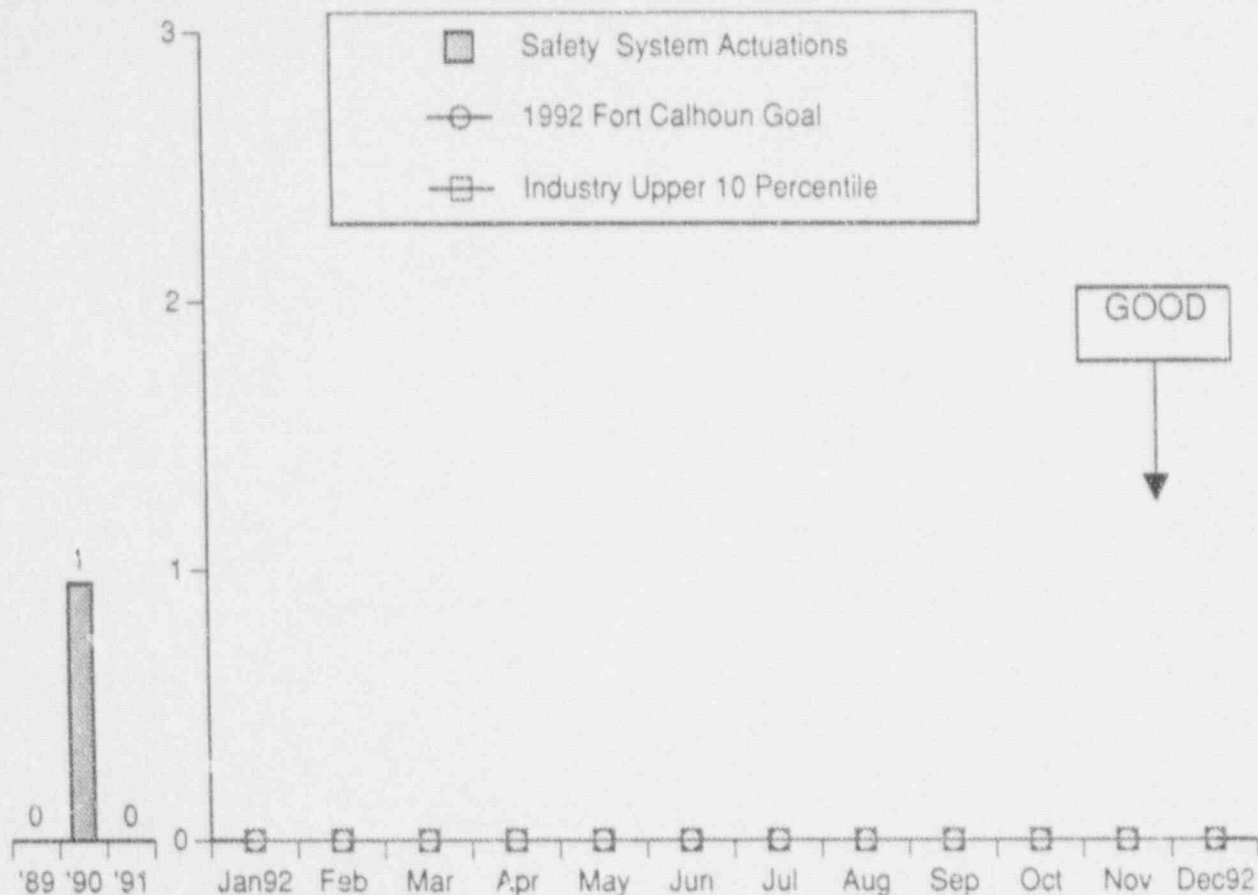
	INDUSTRY MEDIAN	OPPD GOAL	OPPD THIS MONTH	OPPD LAST MONTH	TREND	
VIOLETIONS PER 1,000 INSPECTION HOURS	NA	1.5	1.52	1.24	NMA	44
CUMULATIVE VIOLATIONS AND NCVs (TWELVE-MONTH RUNNING TOTAL)	NA	NA	6/4	6/3	NA	45
CARs ISSUED vs. SIGNIF. CARs vs. NRC VIOLATIONS ISSUED vs. LERs REPORTED	NA	NA	NA	NA	NA	46
PERFORMANCE INDICATOR DEFINITIONS						47
SAFETY ENHANCEMENT PROGRAM INDEX						51
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PERFORMANCE INDICATOR REPORT IMPROVEMENTS/CHANGES	54

TABLE OF CONTENTS/SUMMARY TREND SYMBOLS

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



UNPLANNED SAFETY SYSTEM ACTUATIONS - (INPO DEFINITION)

There were no unplanned safety system actuations during the month of February 1992.

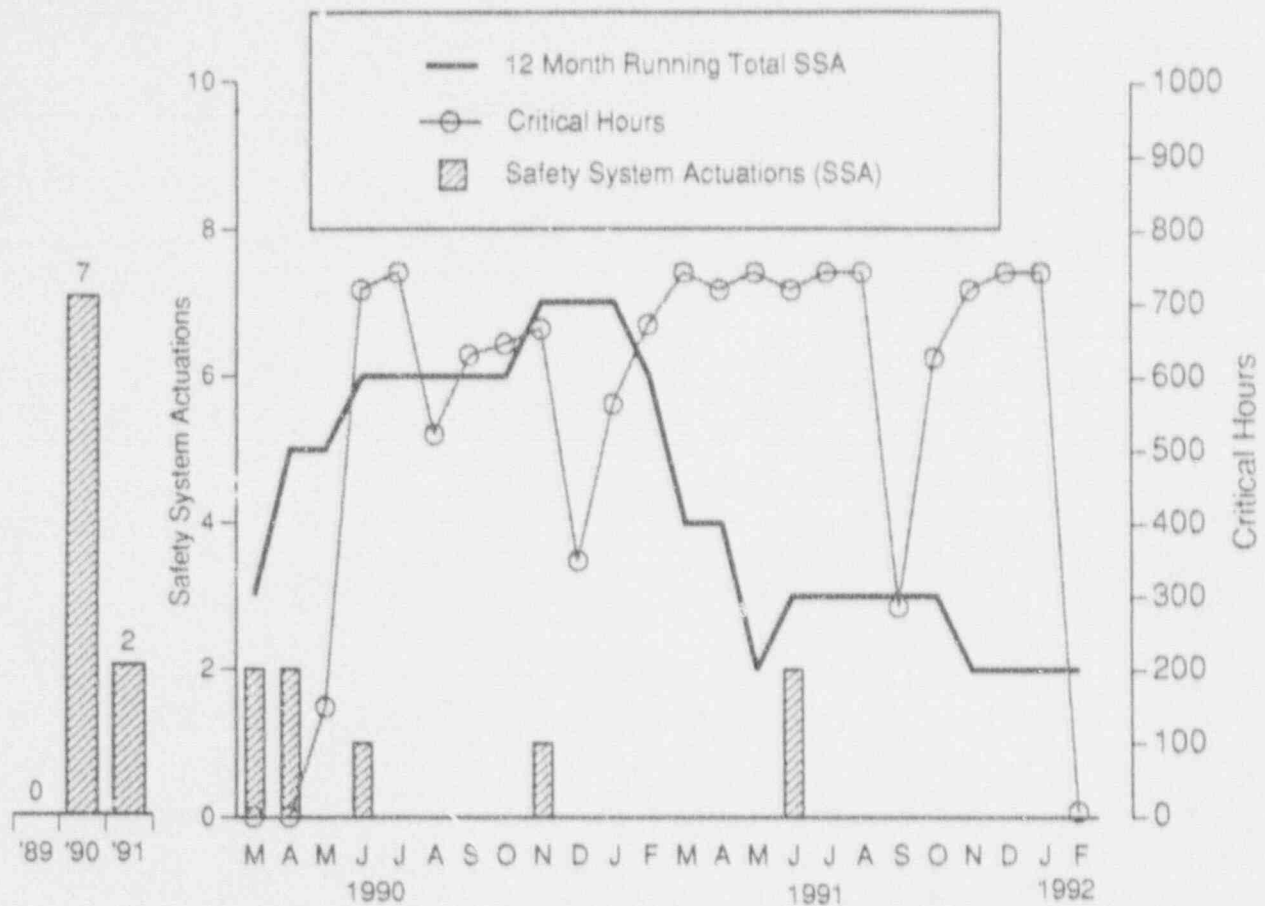
The 1992 goal for the number of unplanned safety system actuations is zero.

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

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

Accountability: Jaworski/Foley/Ronning

Adverse Trend: None



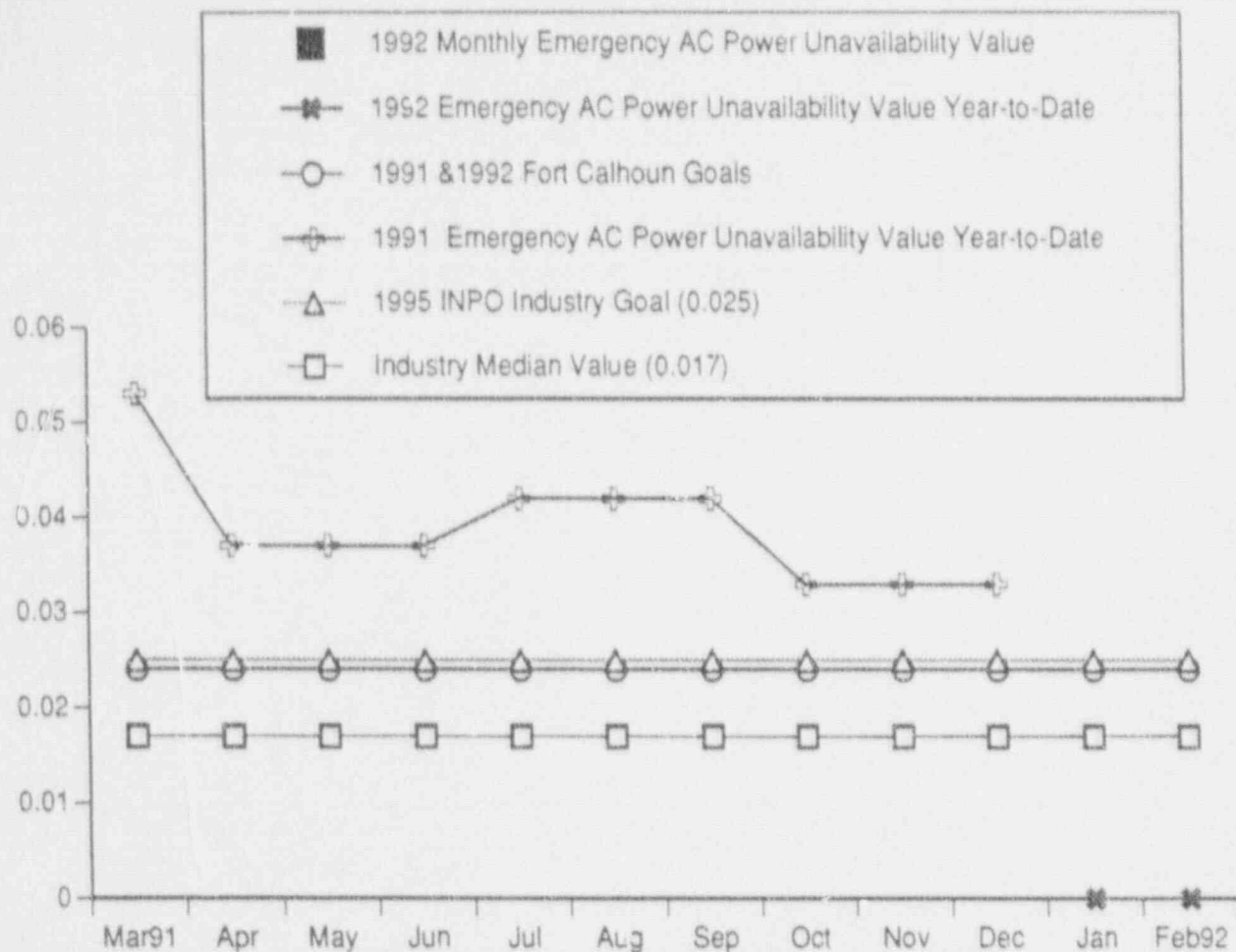
UNPLANNED SAFETY SYSTEM ACTUATIONS - (NRC DEFINITION)

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

The last event of this type occurred in June 1991 when there were two anticipatory signal starts for DG-2. The first start occurred after a control relay was bumped causing a momentary loss of power to safety bus 1A4. DG-2 started a second time when a breaker trip occurred during DG-1 breaker synchronization. DG-2 was not required to provide power to the safety bus in either of these situations.

The majority of SSAs displayed above were related to 1990 Refueling Outage activities and are currently being reviewed under the Safety System Actuation Reduction Program. The goal of the Program is to reduce the number of SSAs at Fort Calhoun. The 1992 Fort Calhoun goal for this indicator is a maximum of three.

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



EMERGENCY AC POWER SYSTEM SAFETY SYSTEM PERFORMANCE

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

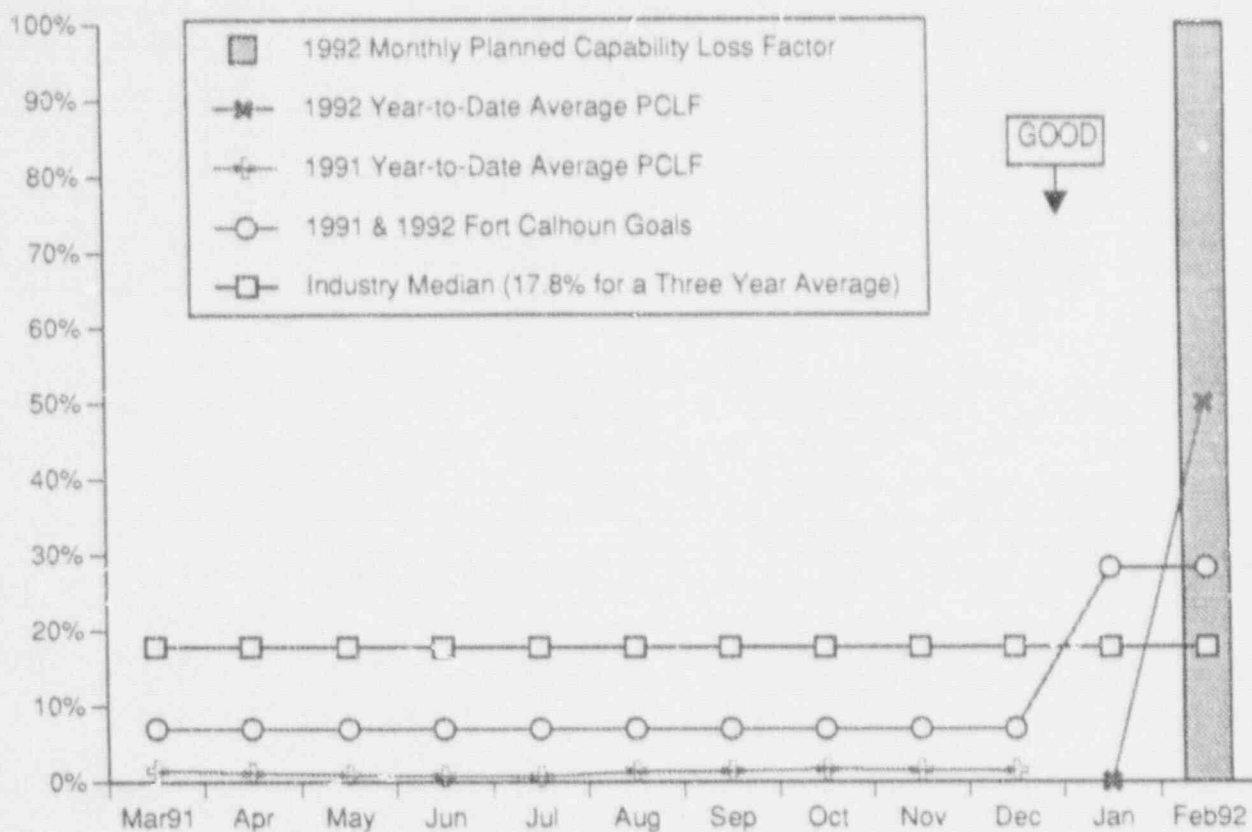
The Emergency AC Power System unavailability value for February 1992 is zero. The Emergency AC Power System unavailability value year-to-date is zero.

The 1992 and 1991 Fort Calhoun year-end goals for this indicator are 0.024. The 1995 INPO industry goal is 0.025 and the industry median value (for the three year period from 7/88 through 6/91) is 0.017.

Data Source: Jaworski/Ronning

Accountability: Jaworski/Ronning

Adverse Trend: None



PLANNED CAPABILITY LOSS FACTOR

This indicator shows the plant monthly Planned Capability Loss Factor (PCLF) and the Fort Calhoun yearly average PCLF goals for 1991 and 1992. Planned Capability Loss Factor is defined as the ratio of the planned energy losses during a given period of time, to the reference energy generation (the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions), expressed as a percentage.

The PCLF was reported as 100% for the month of February 1992 due to the Cycle 14 Refueling Outage.

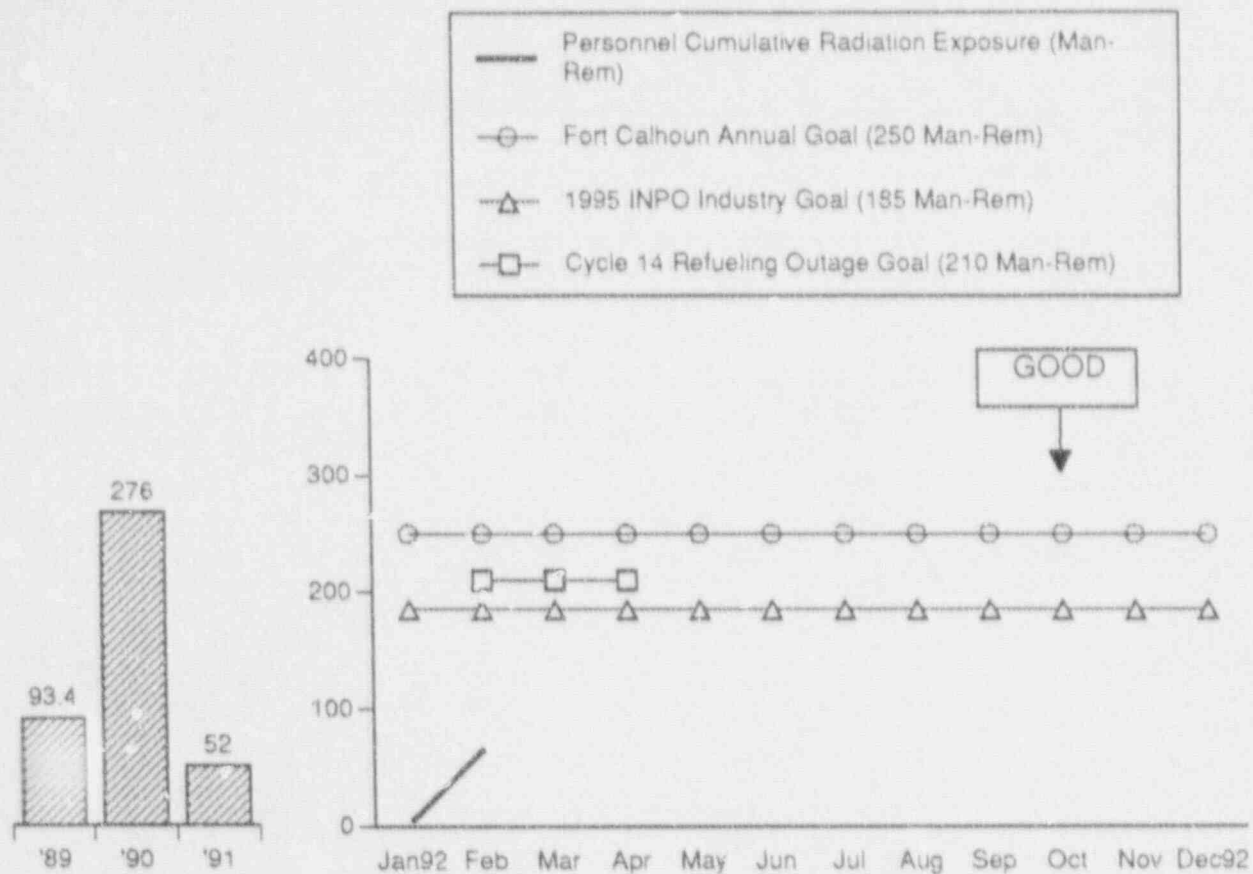
The 1992 Fort Calhoun yearly average Planned Capability Loss Factor goal is 28.3%. The 1991 goal was 7%.

The industry median value (for the three year period from 7/88 through 6/91) is 17.8%.

Data Source: Generation Totals Report & Monthly Operating Report

Accountability: Patterson

Adverse Trend: None



COLLECTIVE RADIATION EXPOSURE

During February 1992, 61.579 man-rem was recorded by TLDs worn by personnel while working at the Fort Calhoun Station. The year-to-date exposure is 65.554 man-rem.

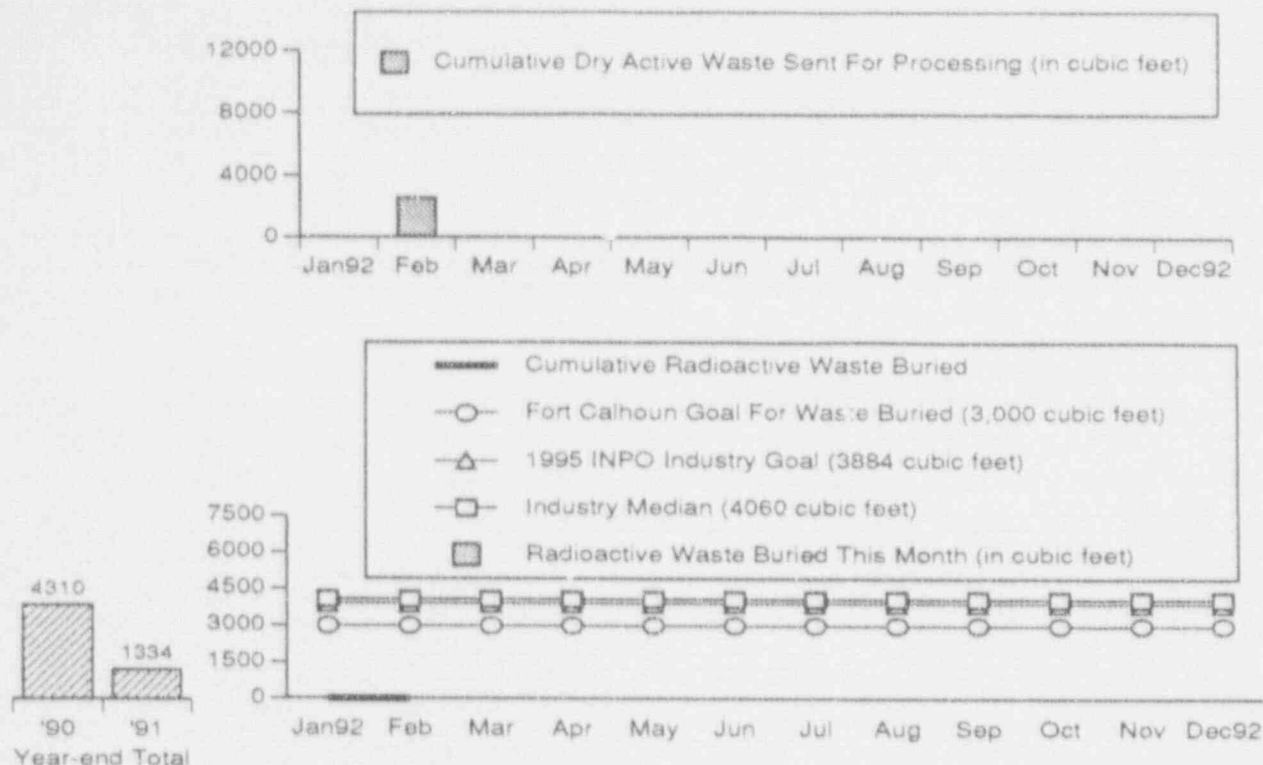
The Fort Calhoun goal for personnel radiation exposure (cumulative) during 1992 is 250 man-rem. The total Cycle 14 refueling outage goal is 210 man-rem. The 1995 INPO industry goal is 185 man-rem per year.

Data Source: Patterson/Williams (Manager/Source)

Accountability: Patterson/Lovett

Adverse Trend: None

SEP 54



VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

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

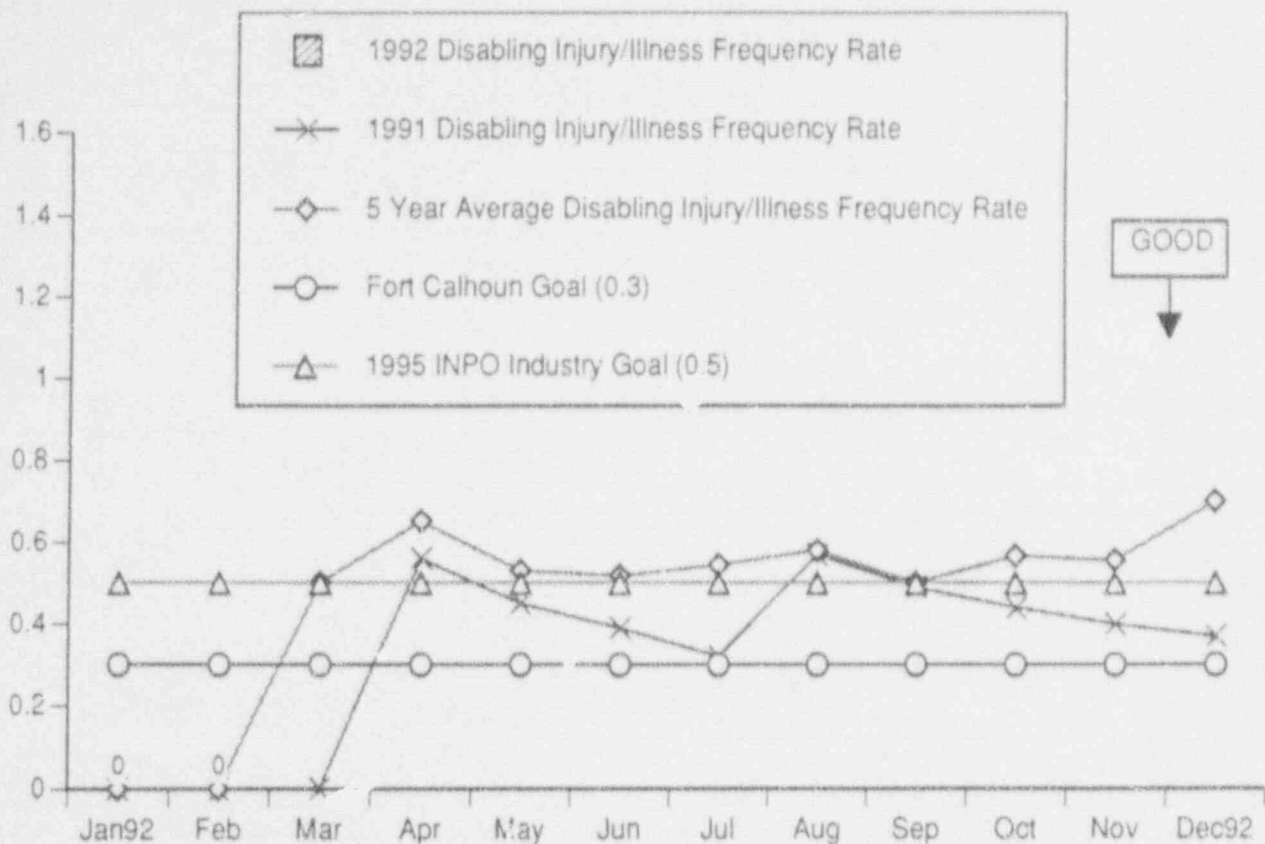
The monthly and cumulative volumes of radioactive waste which were buried during the month of February 1992 have been revised. These revisions are due to the delay involved in the shipping for processing, the processing, and the burying of radioactive waste.

Cumulative amount of solid radwaste shipped off-site for processing (cubic feet)	2,560
Volume of solid radioactive waste which was buried during the month of February (cubic feet)	0.0
Cumulative volume of solid radioactive waste buried in 1992 (cubic feet)	0.0
Amount of solid radioactive waste in temporary storage (cubic feet)	0.0

The 1992 Fort Calhoun goal for the volume of solid radioactive waste which has been buried is 3,000 cubic feet. The 1995 INPO industry goal is 110 cubic meters (3,884 cubic feet) per year. The industry median value is 115 cubic meters (4,060 cubic feet) per year.

Data Source: Patterson/Breuer (Manager/Source)
 Accountability: Patterson/Bilau
 Adverse Trend: None

SEP 54



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

This indicator shows the 1992 monthly disabling injury/illness frequency rate in column form. The 1991 disabling injury/illness frequency rate and the 5 year average (from 1987 through 1991) of the corresponding monthly disabling injury/illness frequency rates are also shown.

There were no (zero) lost time accidents reported at the Fort Calhoun Station in February 1992. The total number of lost time accidents that have been reported during 1992 is zero. The 1992 disabling injury/illness frequency rate goal was set at 0.3. The 1995 INPO Industry goal is 0.50.

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

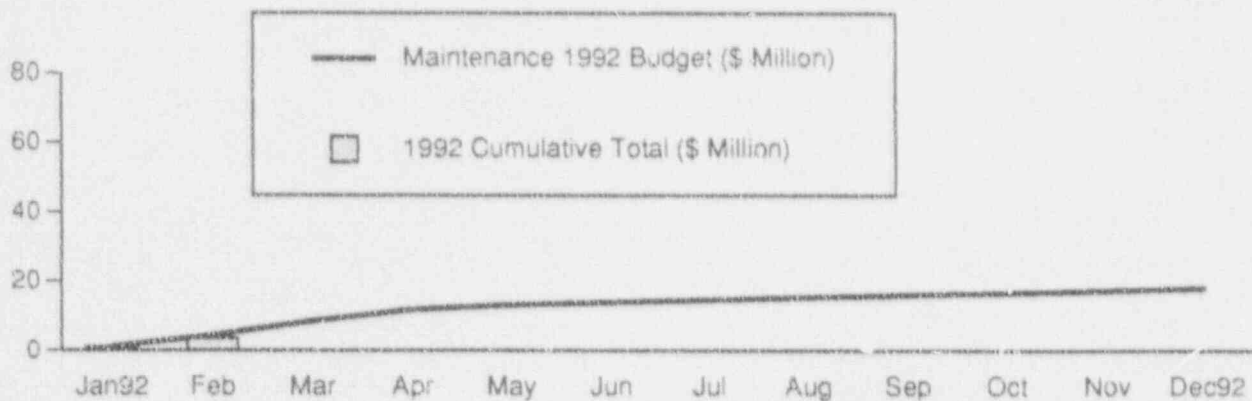
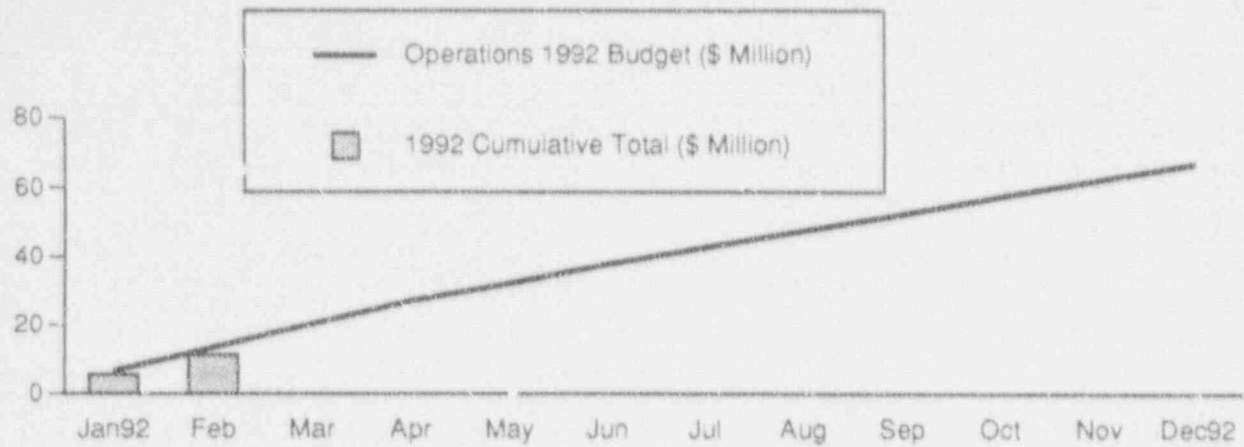
Year	Year-End Rate
1989	0.4
1990	0.5
1991	0.4

Data Source: Sorenson/Skaggs (Manager/Source)

Accountability: Patterson/Richard

Positive Trend

SEP 25 & 26



OPERATIONS AND MAINTENANCE BUDGET

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

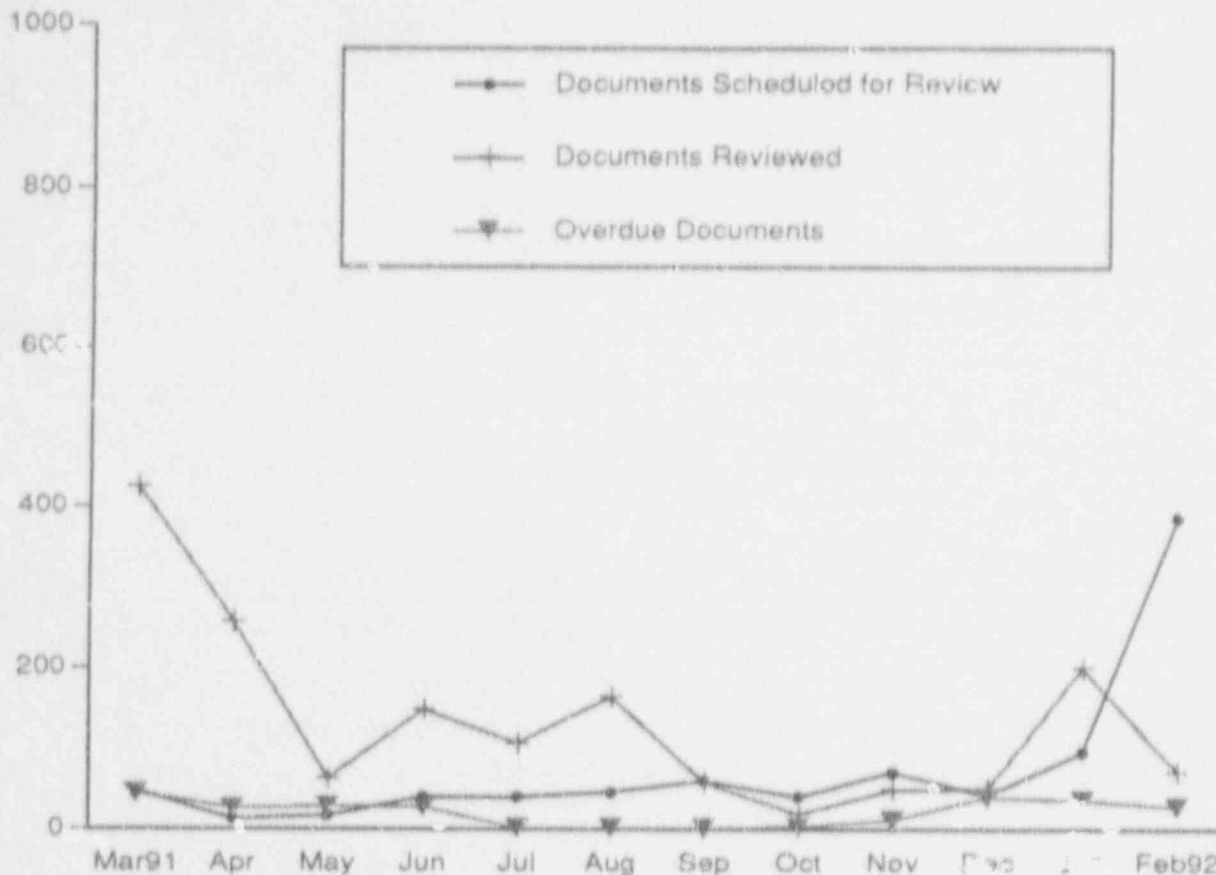
The budget year-to-date for Operations was 2,282,300 dollars for February 1992 while the actual cumulative expenditures through February totaled 11,320,745 dollars.

The budget year-to-date for Maintenance was 4,352,800 dollars for February 1992 while the actual cumulative expenditures through February totaled 3,595,311 dollars.

Data Source: Gleason/Parent (Manager/Source)

Accountability: Scofield

Adverse Trend: None



DOCUMENT REVIEW

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

During February 1992 there were 72 document reviews completed while 387 document reviews were scheduled. At the end of February, there were 28 document reviews overdue.

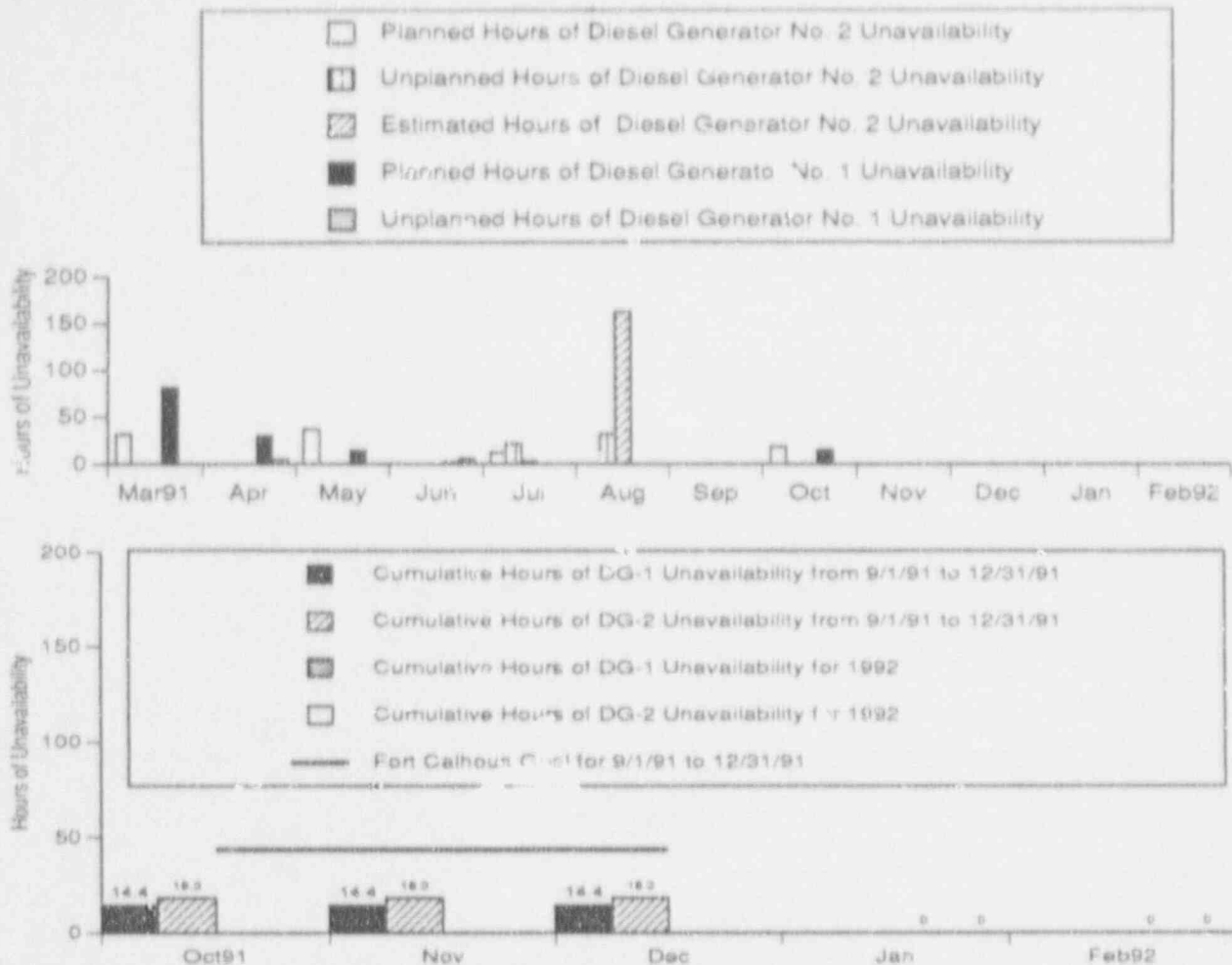
During the month of February there were 94 new or renamed documents reviewed. These new or renamed documents will need to be reviewed again in 1994.

Data Source: Patterson/McKay (Manager/Source)

Accountability: Patterson/Jeworski

Adverse Trend: None

SEP 46



DIESEL GENERATOR UNAVAILABILITY

This indicator provides a monthly illustration of diesel generator unavailability. The top graph shows the diesel generator planned, unplanned, and estimated unavailable hours for DG-1 and DG-2 for each month. The lower graph shows the cumulative hours of unavailability for each diesel generator for two time periods: from October through December 1991 and for January through February 1992.

There were zero unavailable hours for DG-1 and DG-2 during the month of February 1992. The 1992 Fort Calhoun yearly goal is not to exceed 210.24 unavailable hours per diesel generator.

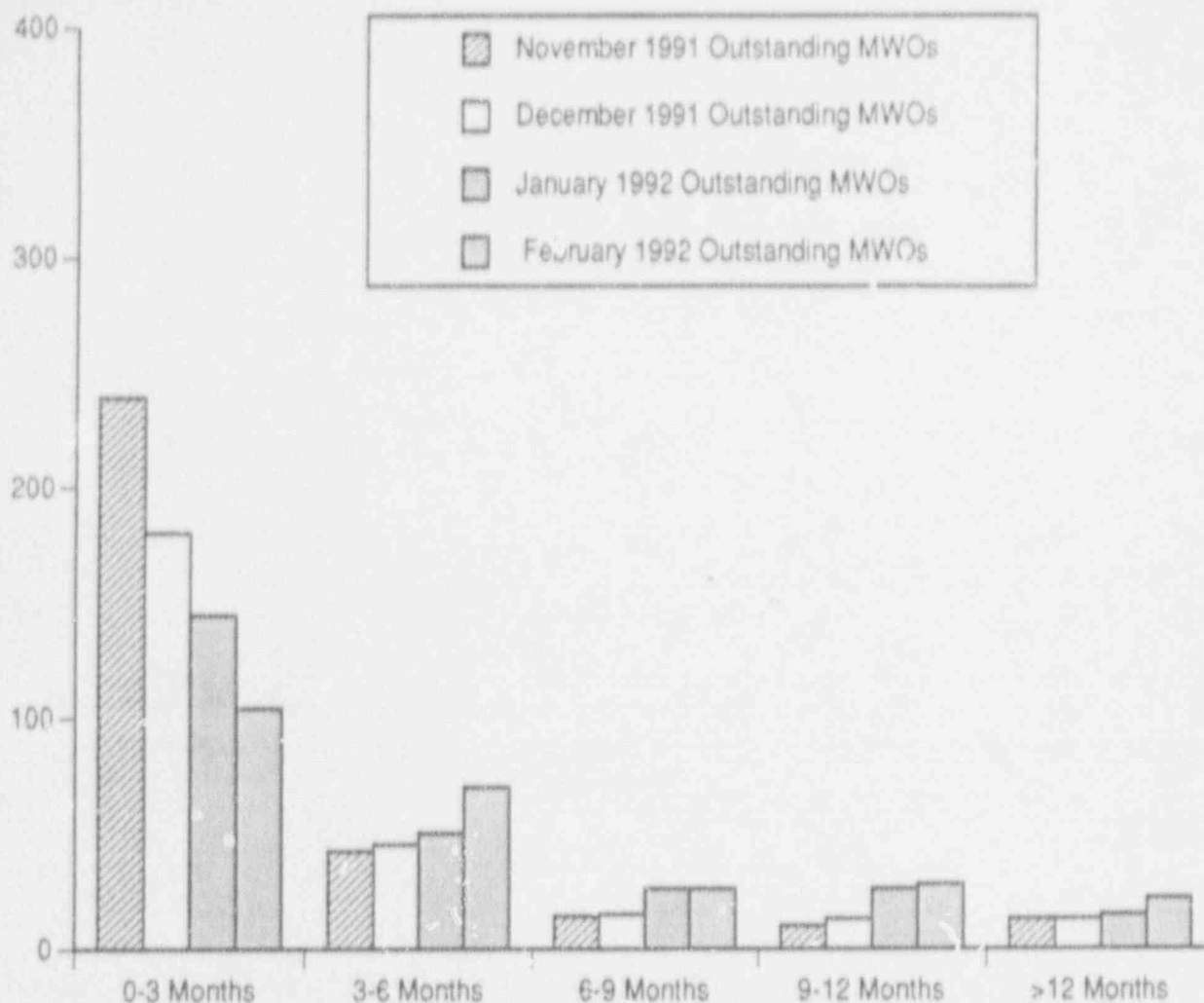
Fort Calhoun met the goal of 43.8 unavailable hours per DG for the last four months of 1991. This goal is based on the 1990 INPO industry median value for diesel generator unavailable hours.

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

Data Source: Jaworski/Ronning (Manager/Source)

Accountability: Jaworski/Ronning

Adverse Trend: None



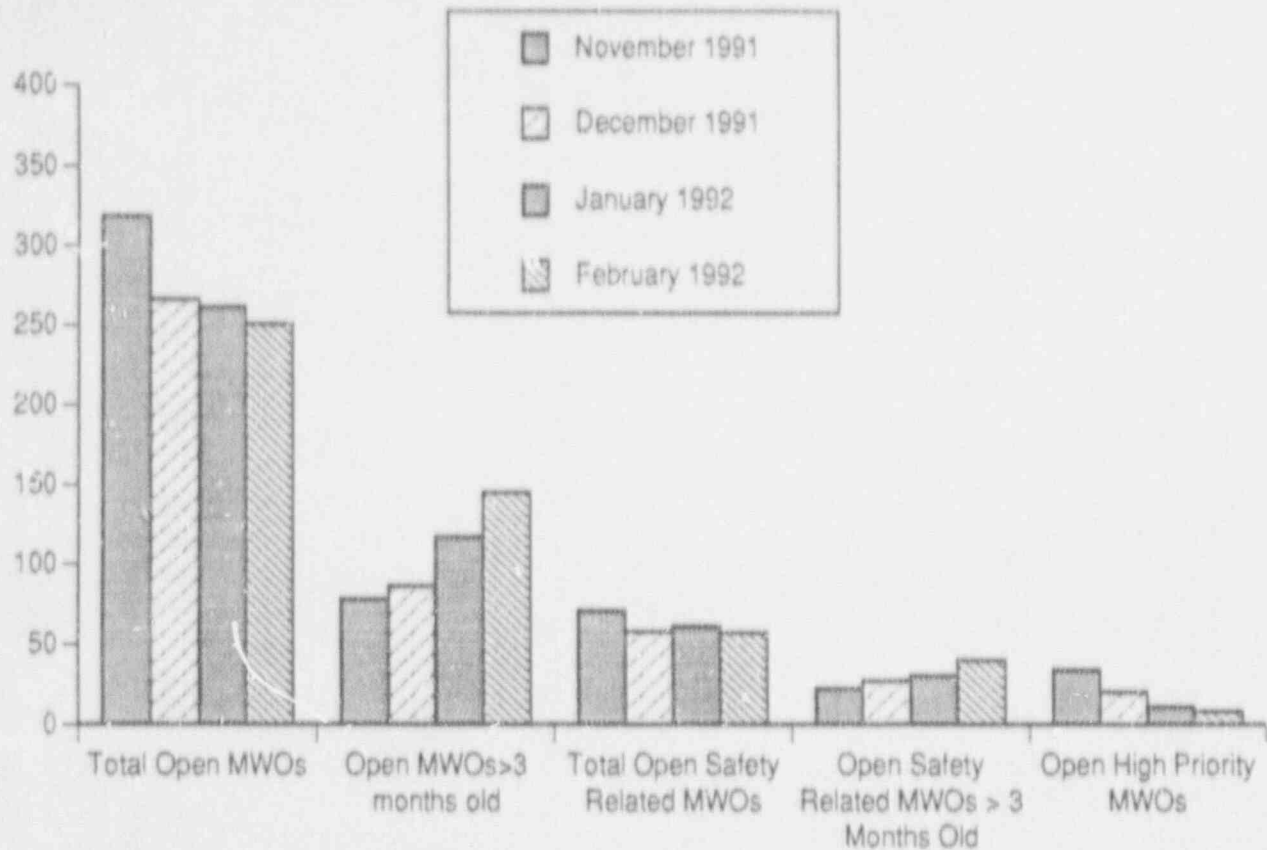
AGE OF OUTSTANDING MAINTENANCE WORK ORDERS (CORRECTIVE NON-OUTAGE)

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

Data Source: Patterson/Schmitz (Manager/Source)

Accountability: Patterson/ Bobba

Adverse Trend: Because we are currently in the Cycle 14 Refueling Outage, an adverse trend is not indicated based on three consecutive months of increasing values for corrective non-outage MWOs 3 - 6 months old and MWOs 9 - 12 months old.



MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE)

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

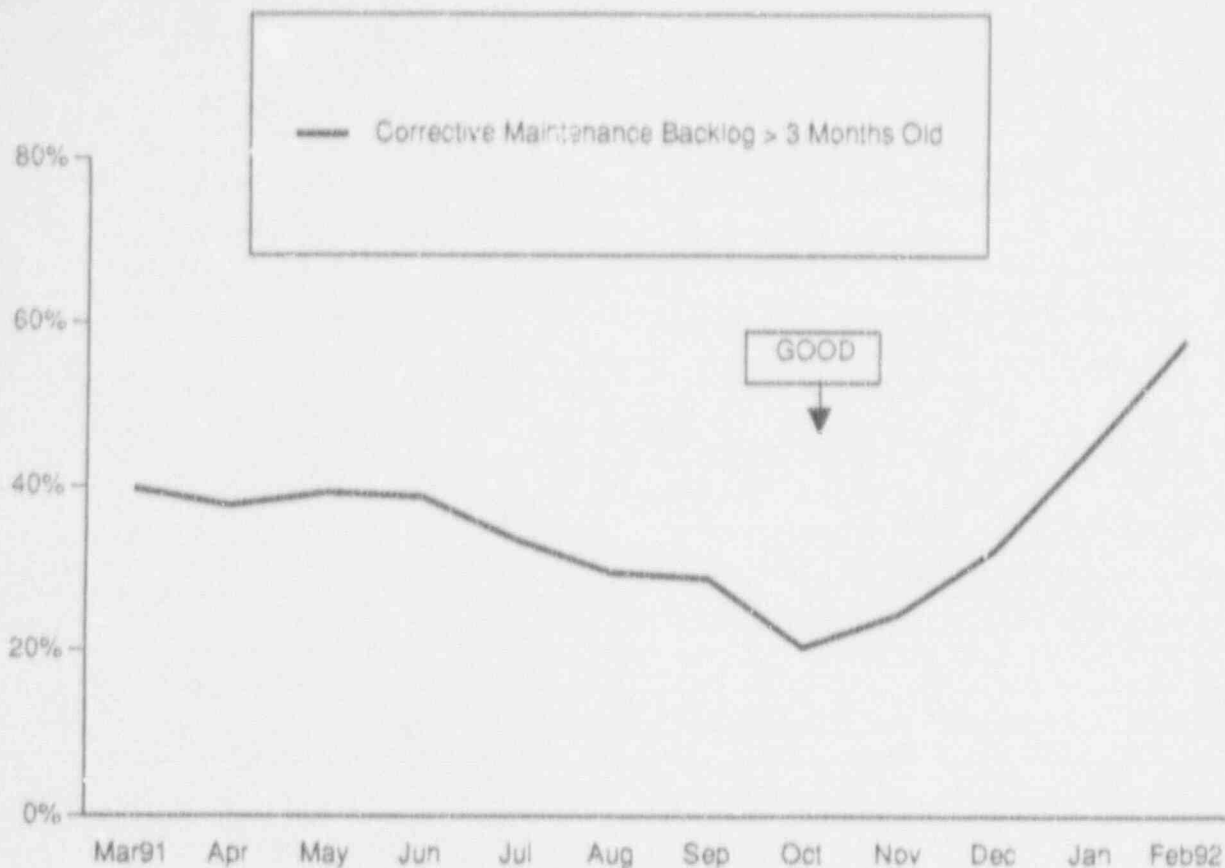
The number of open MWOs > 3 months old is increasing because on-line activities must be scheduled beyond the end of the Cycle 14 Refueling Outage.

Data Source: Patterson/Schmitz (Manager/Source)

Accountability: Patterson/ Bobba

Adverse Trend: Because we are currently in the Cycle 14 Refueling Outage, an adverse trend is not indicated based on increasing values for three consecutive months for corrective non-outage Open MWOs > 3 months old and Open Safety Related MWOs > 3 months old.

SEP 36



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

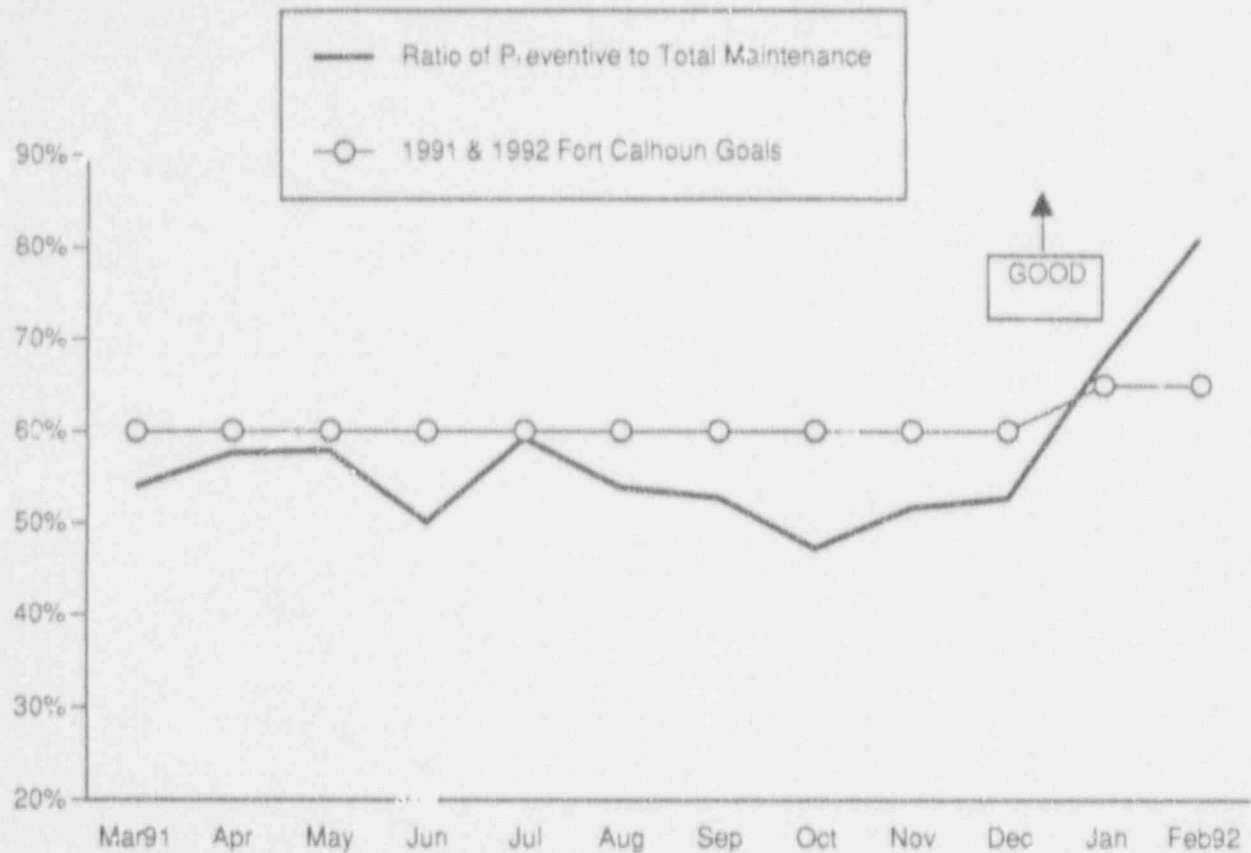
This indicator shows the percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of the reporting month.

The percentage of open corrective non-outage maintenance work orders that were greater than three months old at the end of February 1992 was reported as 58%.

Data Source: Patterson/Schmitz (Manager/Source)

Accountability: Patterson/ Bobba

Adverse Trend: Because we are currently in the Cycle 14 Refueling Outage, an adverse trend is not indicated based on increasing values for open corrective non-outage MWOs for four consecutive months.



RATIO OF PREVENTIVE TO TOTAL MAINTENANCE (NON-OUTAGE)

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

The ratio of preventive to total maintenance was 80.8% in February 1992. The values for this indicator decreased during September and October 1991 due to a greater emphasis being placed on completion of MWO work during the battery outage.

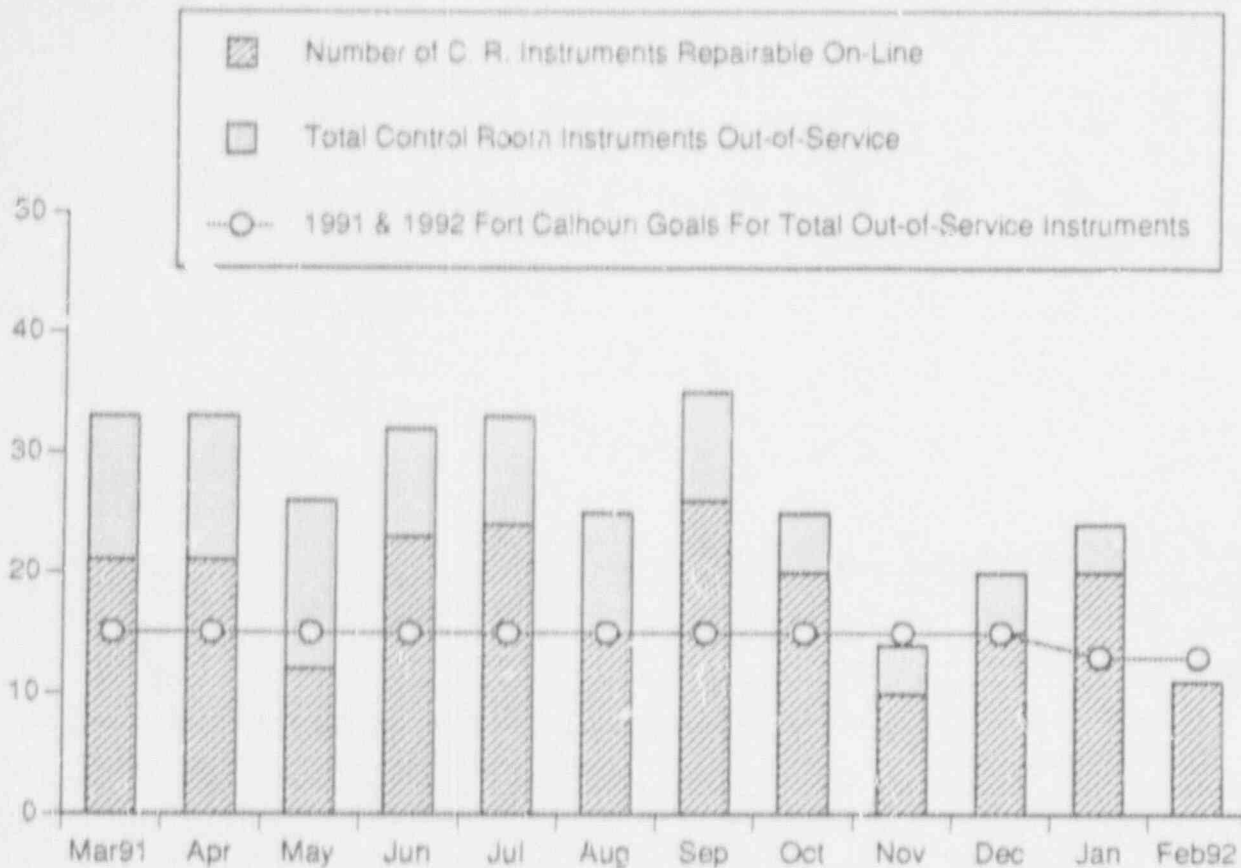
The 1992 Fort Calhoun goal is to attain a ratio of preventive to total maintenance greater than 65%. The 1991 Fort Calhoun goal was to attain a ratio of preventive to total maintenance greater than 60%.

Accountability: Patterson/ Bobba

Data Source: Patterson/Schmitz (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.

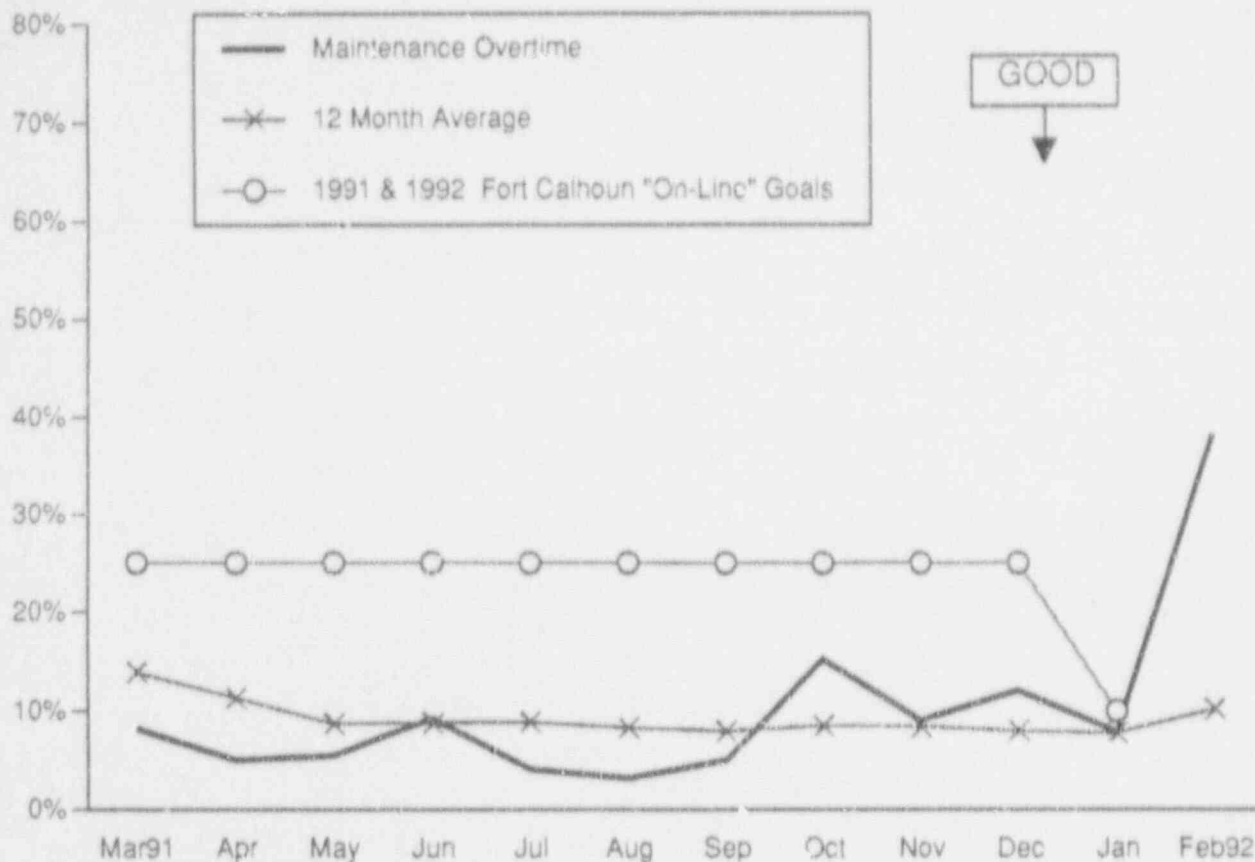
There was a total of 11 out-of-service control room instruments at the end of February 1992. None of these instruments require a plant outage to repair.

The 1992 Fort Calhoun goal is to have less than 13 out-of-service control room instruments. The 1991 Fort Calhoun goal was to have less than 14 out-of-service control room instruments.

Data Source: Patterson/Spilker (Manager/Source)

Accountability: Patterson/ Bobba

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.

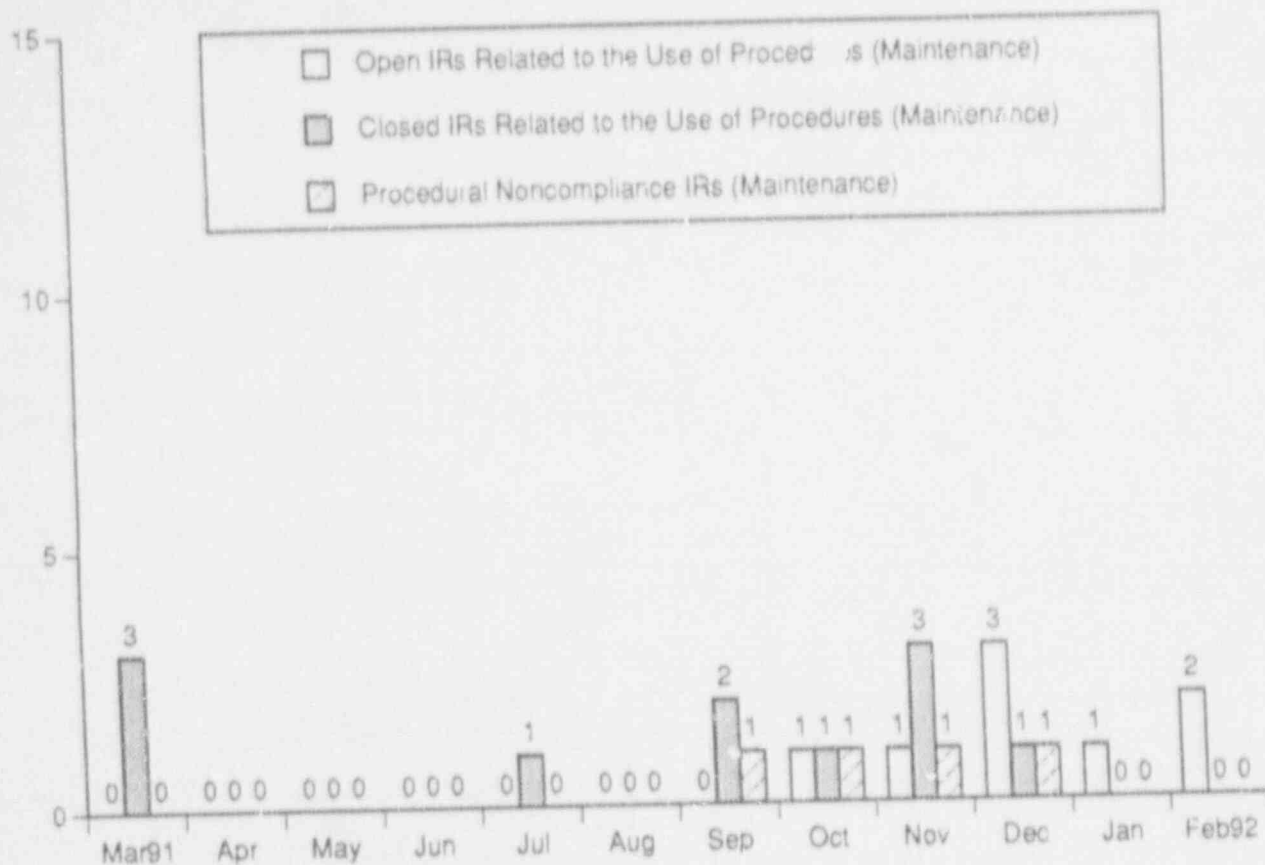
The percent of overtime hours with respect to normal hours was reported as 38.2% during the month of February 1992. The 12 month average percentage of overtime hours with respect to normal hours was reported as 10.2%.

The 1992 Fort Calhoun goal for the "on-line" percentage of maintenance overtime hours worked is 10%.

Data Source: Patterson/Schmitz (Manager/Source)

Accountability: Patterson/ Bobba

Adverse Trend: None



PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

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

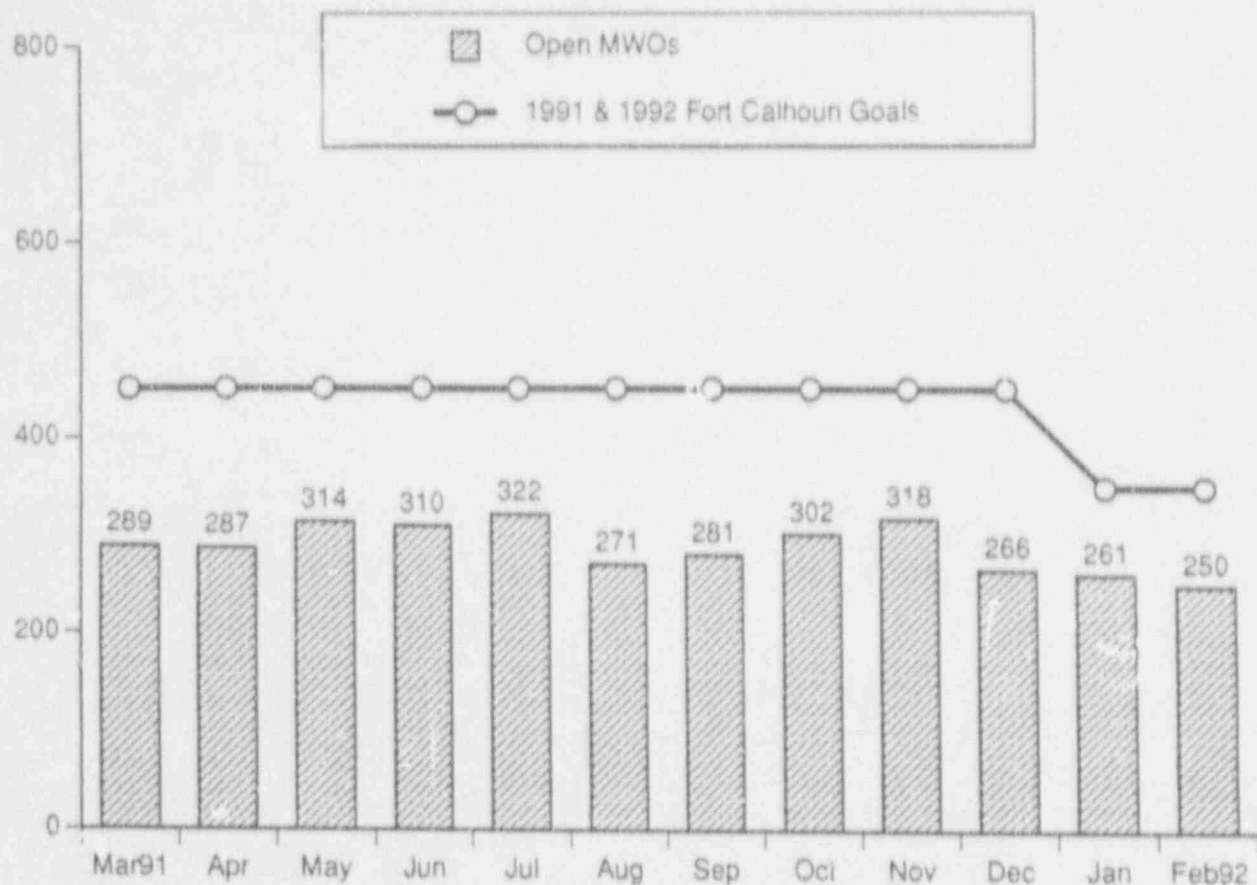
There were no procedural noncompliance incidents for maintenance reported for the month of February 1992.

Data Source: Patterson/McKay (Manager/Source)

Accountability: Patterson/Bobba

Adverse Trend: None

SEP 15, 41 & 44



MAINTENANCE WORK ORDER BACKLOG (CORRECTIVE NON-OUTAGE MAINTENANCE)

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

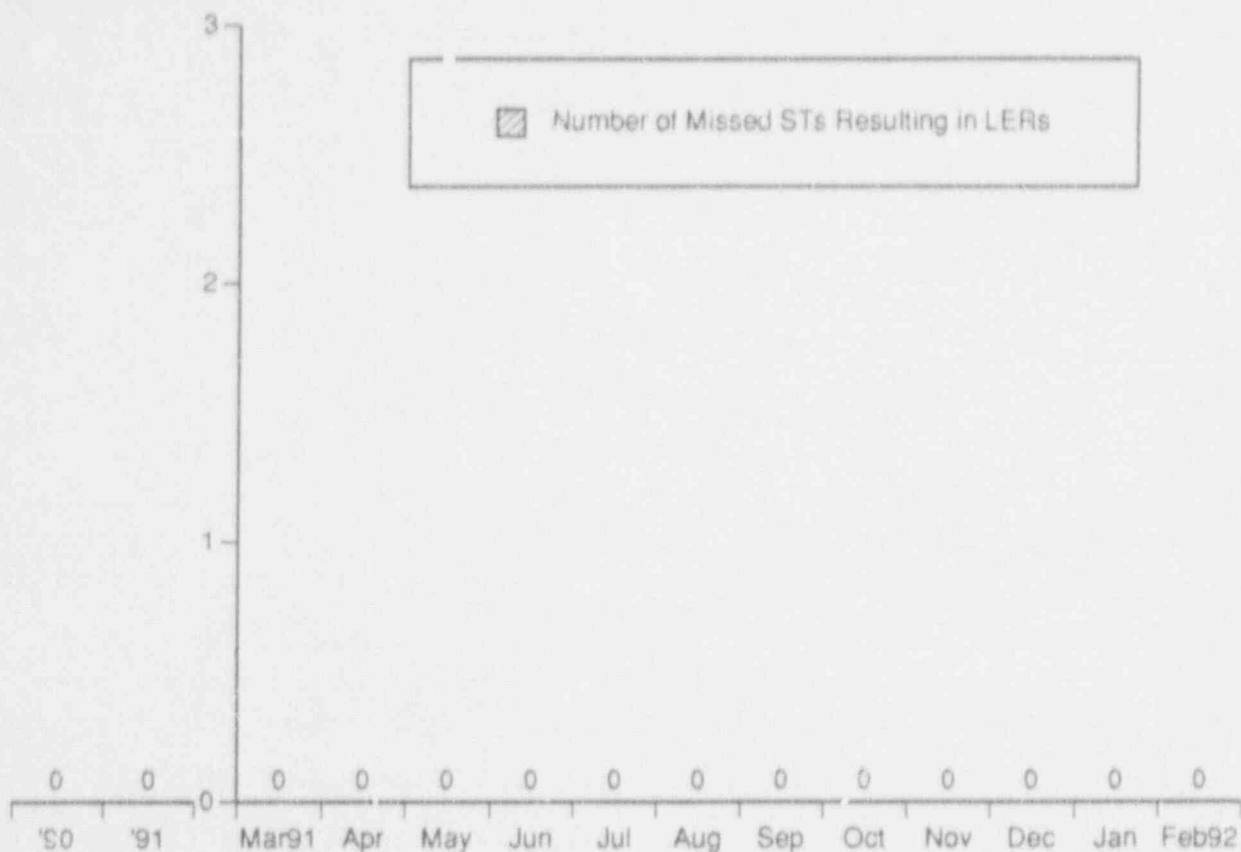
The 1992 goal for this indicator is to have less than 350 corrective non-outage maintenance work orders remaining open. The 1991 goal for this indicator was to have less than 450 corrective non-outage maintenance work orders remaining open.

Data Source: Patterson/Schmitz (Manager/Source)

Accountability: Patterson/Bobba

Adverse Trend: None

SEP 36



NUMBER OF MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS

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

During the month of February 1992, there were no missed STs that resulted in LERs.

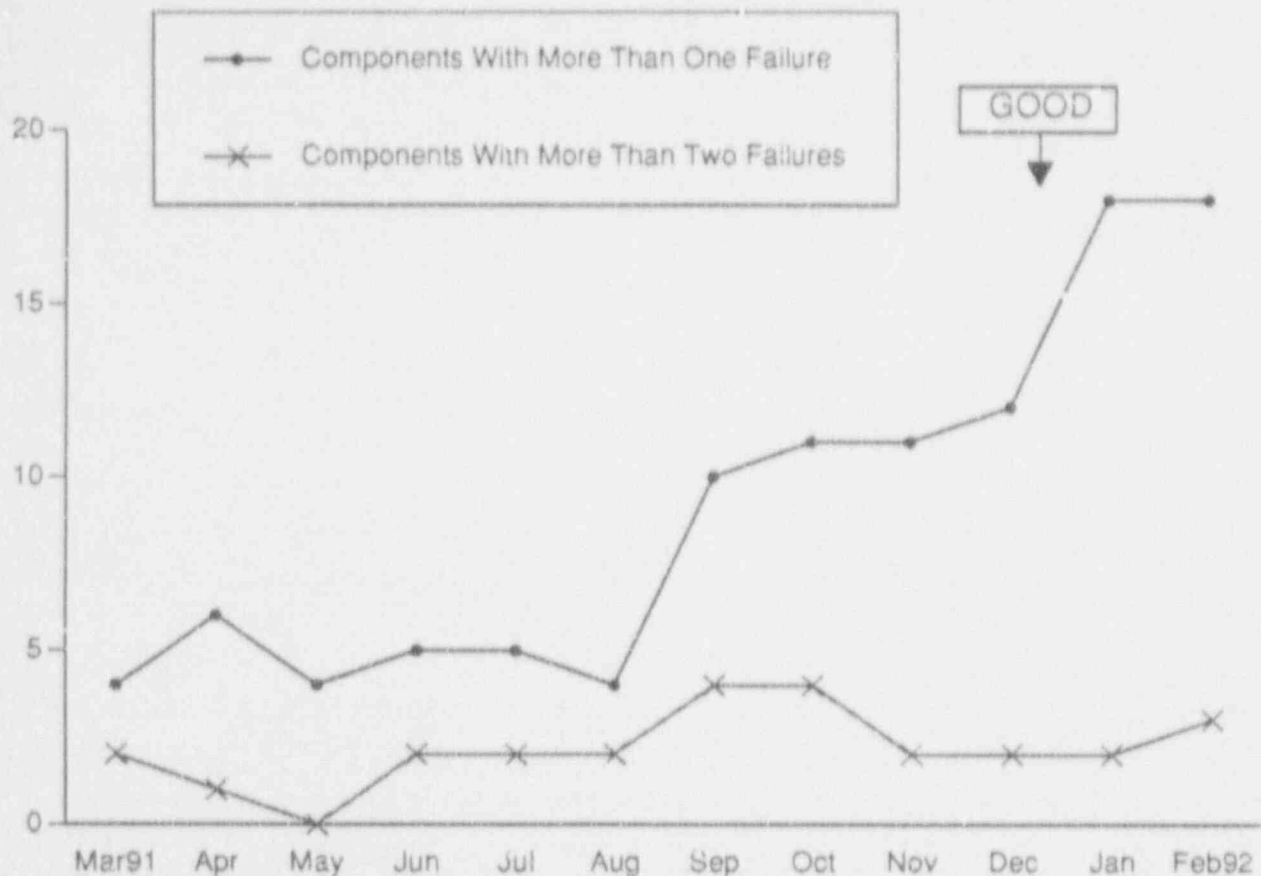
The 1991 & 1992 Fort Calhoun goals for this indicator are zero.

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

Accountability: Patterson/Jaworski

Adverse Trend: None

SEP 60 & 61



MAINTENANCE EFFECTIVENESS

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

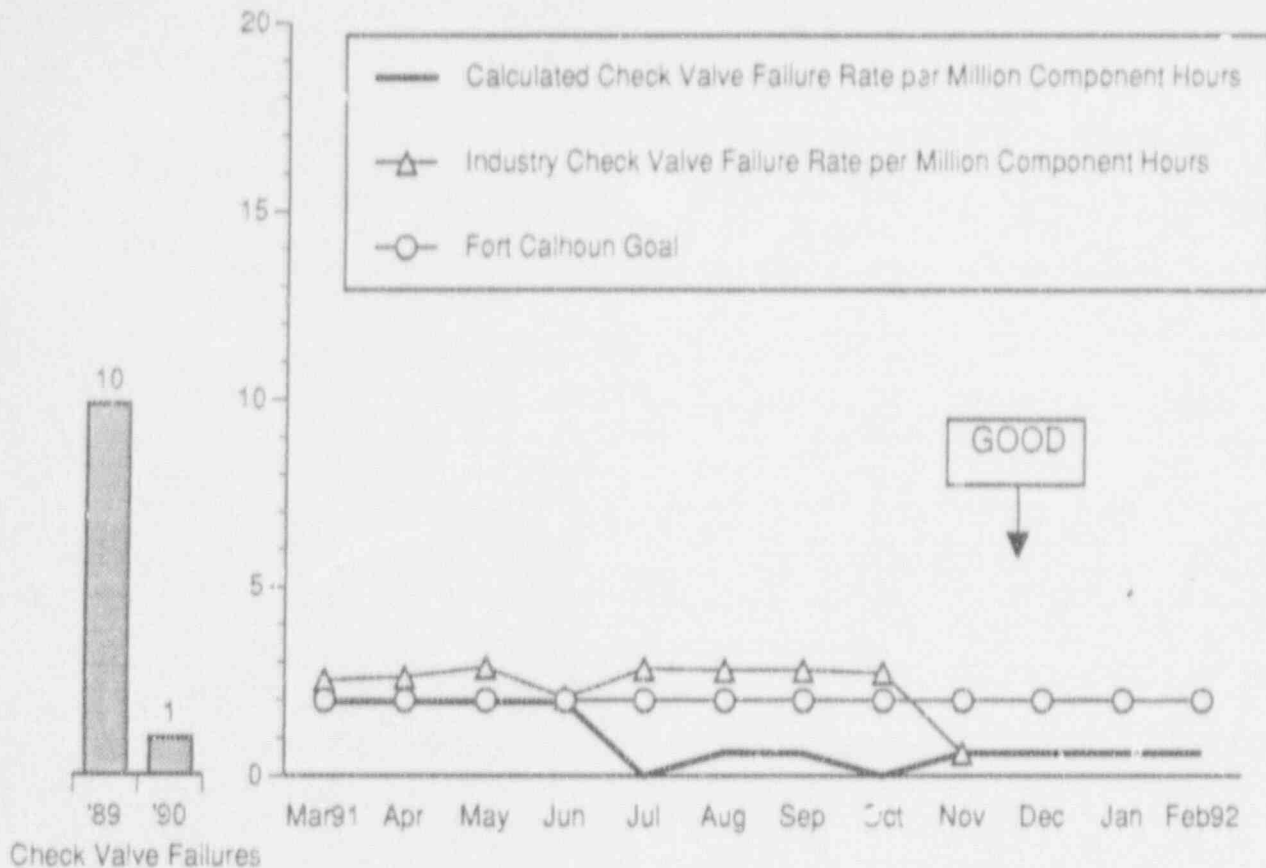
This indicator has been revised to show the number of NPRDS components with more than one failure during the last eighteen months and the number of NPRDS components with more than two failures during the last eighteen months. The number of NPRDS components with more than two failures in an eighteen month period should indicate the effectiveness of plant maintenance. (This change applies only to the September 1991 through February 1992 data. The data for March through August 1991 is based on a twelve month interval.)

During the last 18 reporting months there were 18 NPRDS components with more than 1 failure. 3 of the 18 had more than two failures. The tag numbers of the components with more than two failures are CH-1A, CH-1B, and RC-4.

Data Source: Jaworski/Dowdy (Manager/Source)

Accountability: Patterson/Bobba

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 November 1991, the Fort Calhoun Station reported an actual check valve failure rate of .608 E-6, while the industry reported an actual failure rate of 2.75 E-6. At the end of February 1992, the Fort Calhoun Station reported a calculated check valve failure rate of .608 E-6.

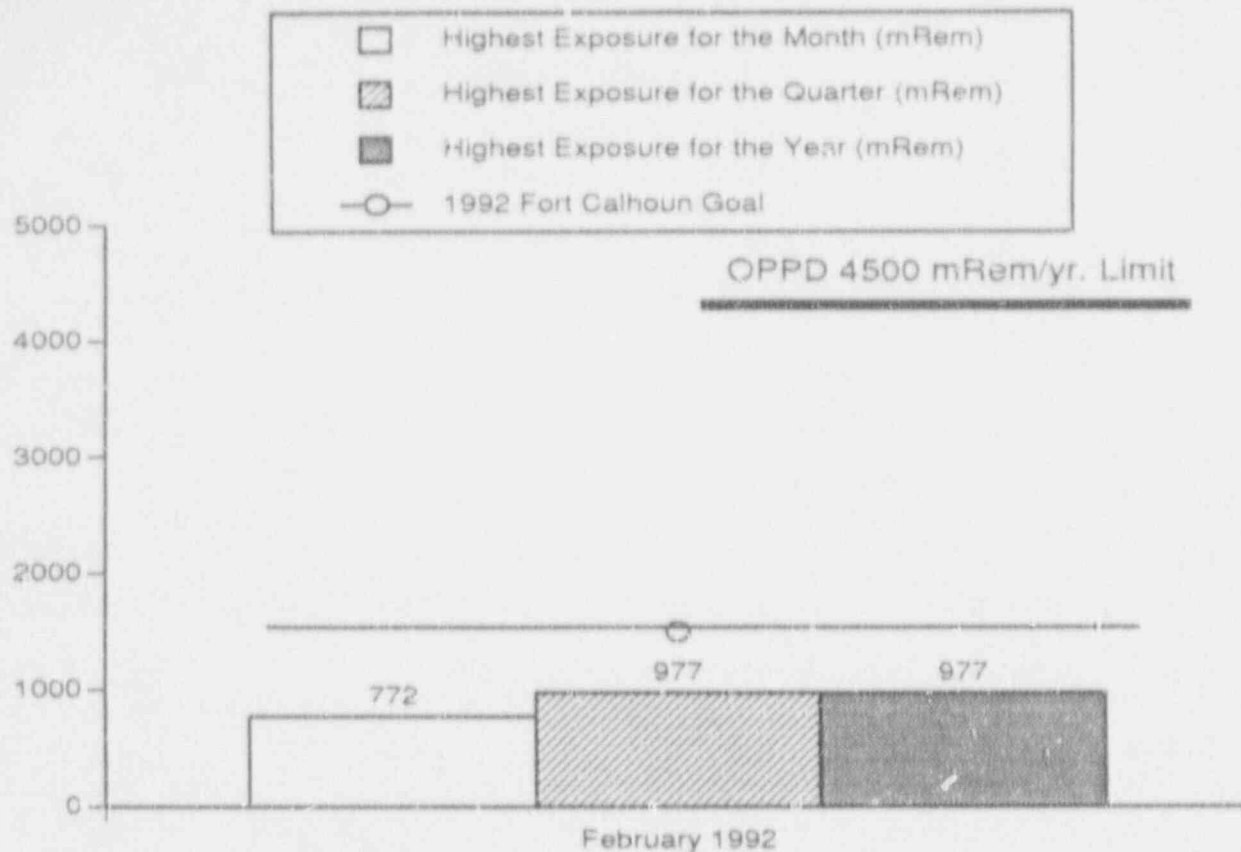
The 1992 Fort Calhoun goal for this indicator is a failure rate of 2.00 E-6.

Data Source: Jaworski/Dowdy (Manager/Source)

Accountability: Jaworski/Rollins

Adverse Trend: None

SEP 43



MAXIMUM INDIVIDUAL RADIATION EXPOSURE

During February 1992, an individual accumulated 772 mRem which was the highest individual exposure for the month.

The maximum individual exposure to date for the first quarter of 1992 was 977 mRem.

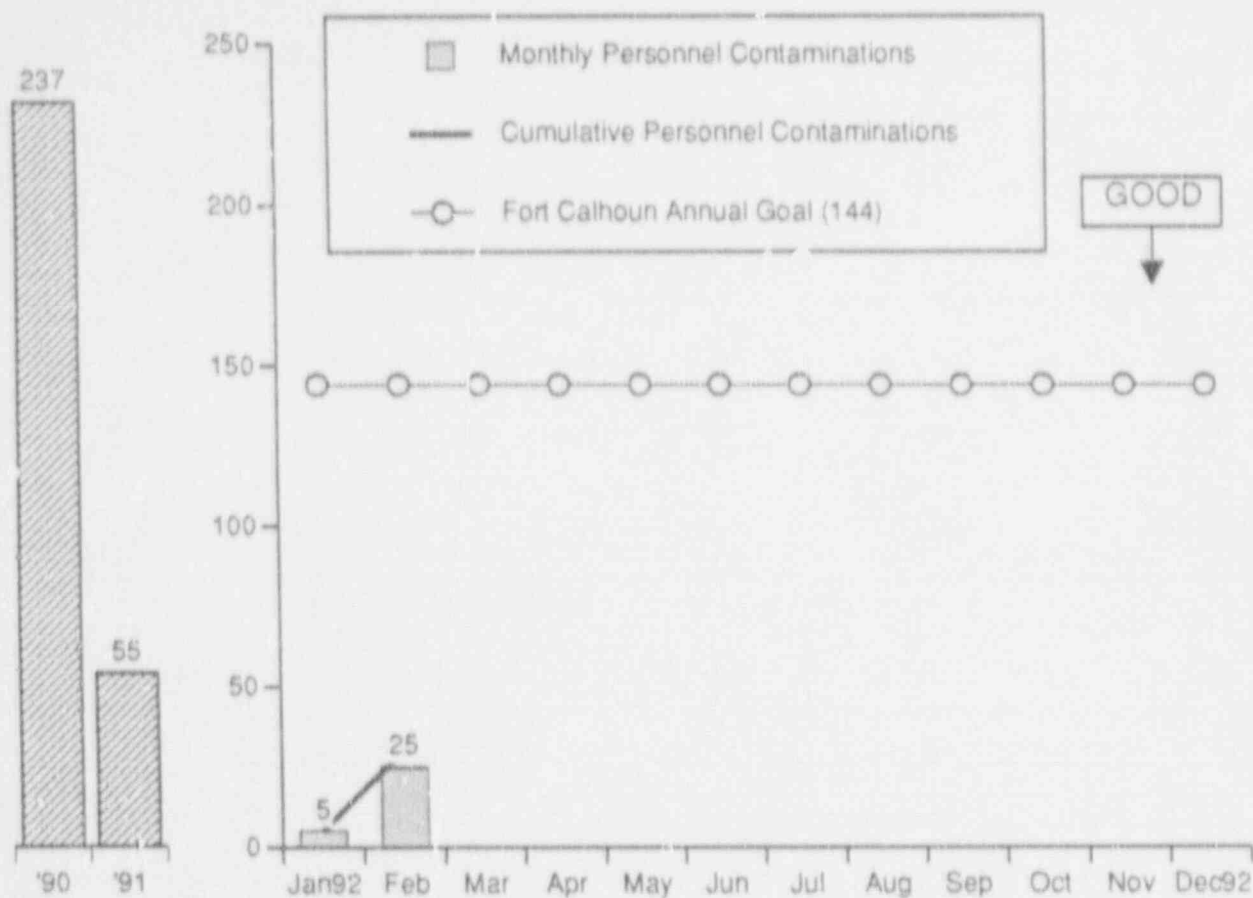
The maximum individual exposure reported for the year 1992 was 977 mRem.

The OPPD limit for the maximum yearly individual radiation exposure is 4,500 mRem/year. The 1992 Fort Calhoun goal is 1,500 mRem/year.

Date Source: Patterson/Williams (Manager/Source)

Accountability: Patterson/Lovett

Adverse Trend: None



TOTAL SKIN AND CLOTHING CONTAMINATIONS

This indicator shows the number of skin and clothing contaminations for the reporting month. A total of 30 contaminations have occurred during 1992.

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

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

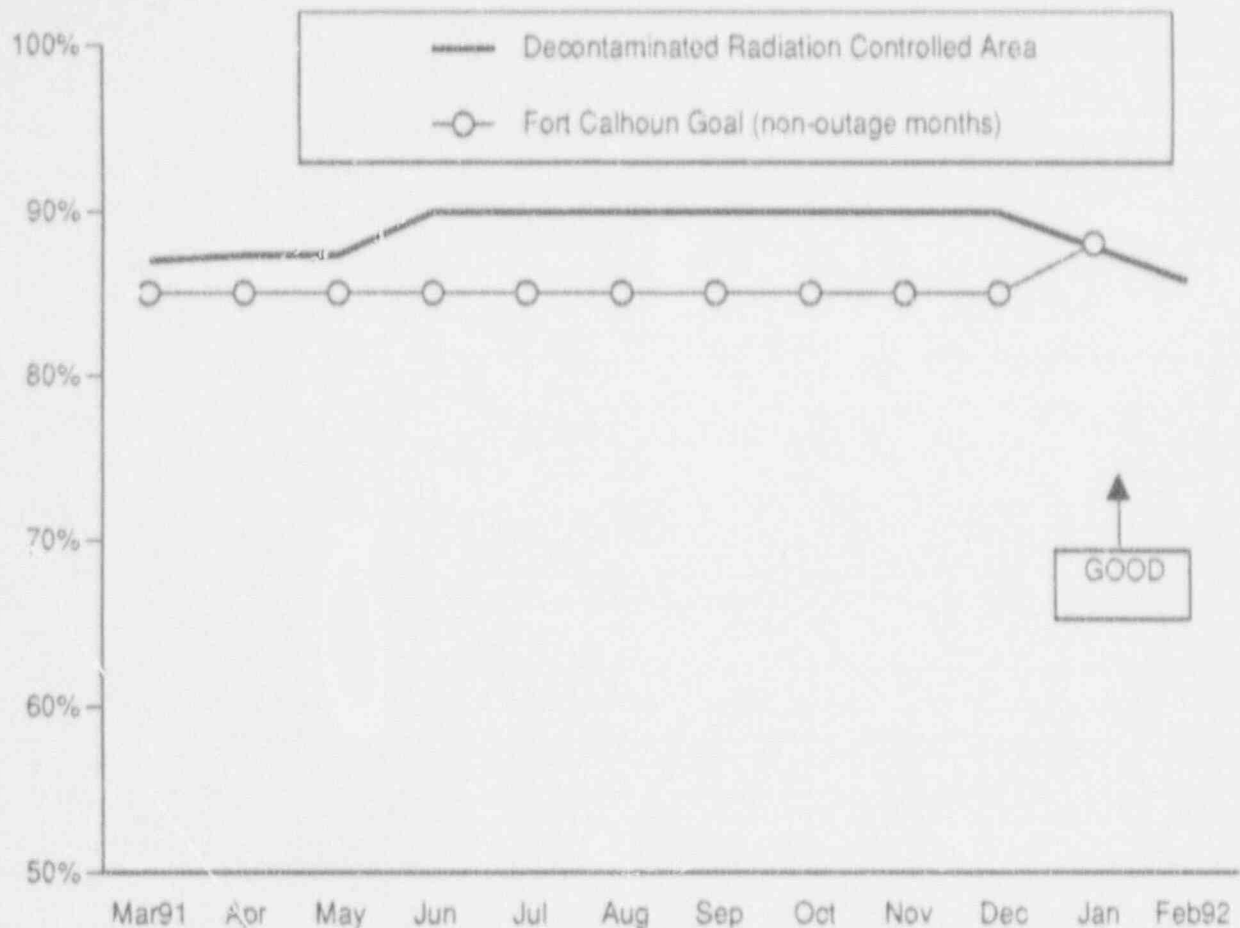
The 1992 goal for skin and clothing contaminations is 144.

Data Source: Patterson/Williams (Manager/Source)

Accountability: Patterson/Lovett

Adverse Trend: None

SEP 15 & 54



DECONTAMINATED RADIATION CONTROLLED AREA

This indicator shows the percentage of the RCA that is decontaminated (clean) based on the total square footage, a 1991 Fort Calhoun goal of 85% decontaminated RCA for non-outage months and a 1992 goal of 88% decontaminated RCA for non-outage months.

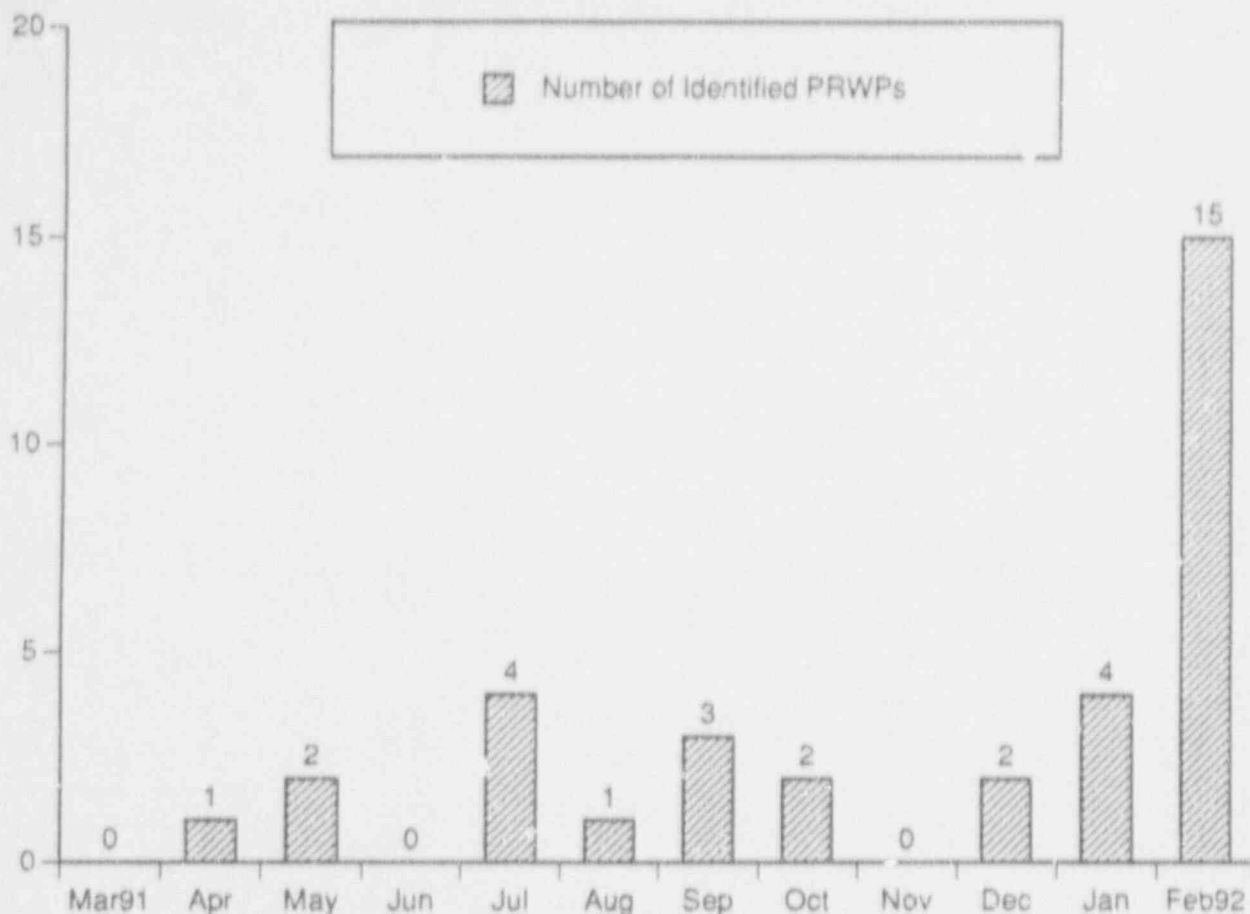
At the end of the reporting month, 85.8% of the total square footage of the RCA was decontaminated.

Date Source: Patterson/Gundal (Manager/Source)

Accountability: Patterson/Lovett

Adverse Trend: None

SEP 54



RADIOLOGICAL WORK PRACTICES PROGRAM

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

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

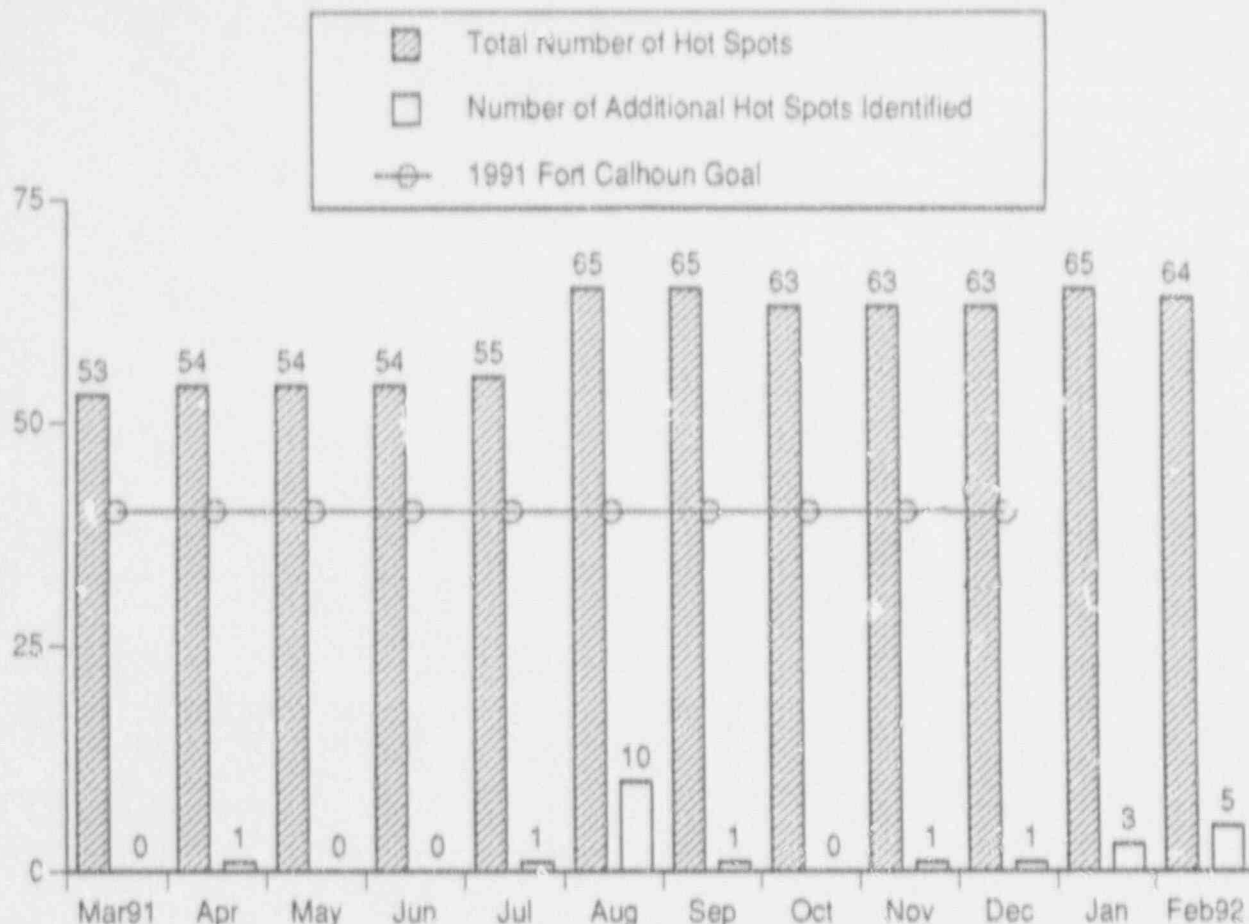
During the month of February 1992, fifteen PRWPs were identified. Of the fifteen PRWPs, twelve were personnel contaminations and three were Radiological Occurrence Reports. The number of PRWPs for this month is higher due to the Cycle 14 Refueling Outage.

Data Source: Patterson/Williams (Manager/Source)

Accountability: Patterson/Lovett

Adverse Trend: None

SEP 52



NUMBER OF HOT SPOTS

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

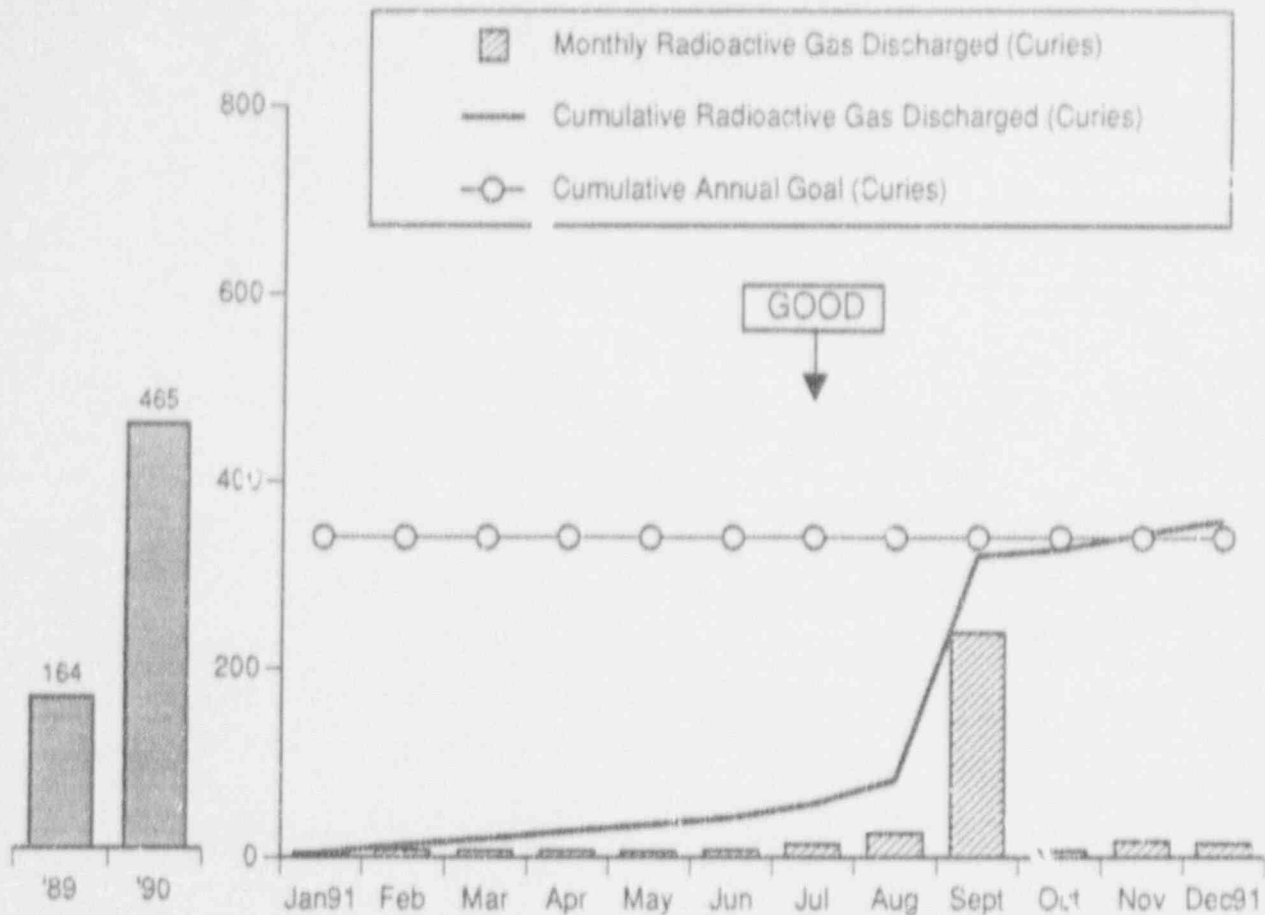
During February 1992 six hot spots were eliminated and five new hot spots were discovered.

The 1992 Fort Calhoun goal is to resolve one hot spot per month.

Date Source: Patterson/Williams (Manager/Source)

Accountability: Patterson/Lovett

Adverse Trends: None



GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT.

The gaseous radioactive waste being discharged to the environment is shown for January 1, 1991 through December 31, 1991. A total of 358.5 curies have been released to the environment during this time.

In September, 238.236 curies of gaseous radioactive waste was released to the environment due to containment purges required during the unscheduled maintenance outage. Most of the radioactive waste was released in the form of Xenon-133.

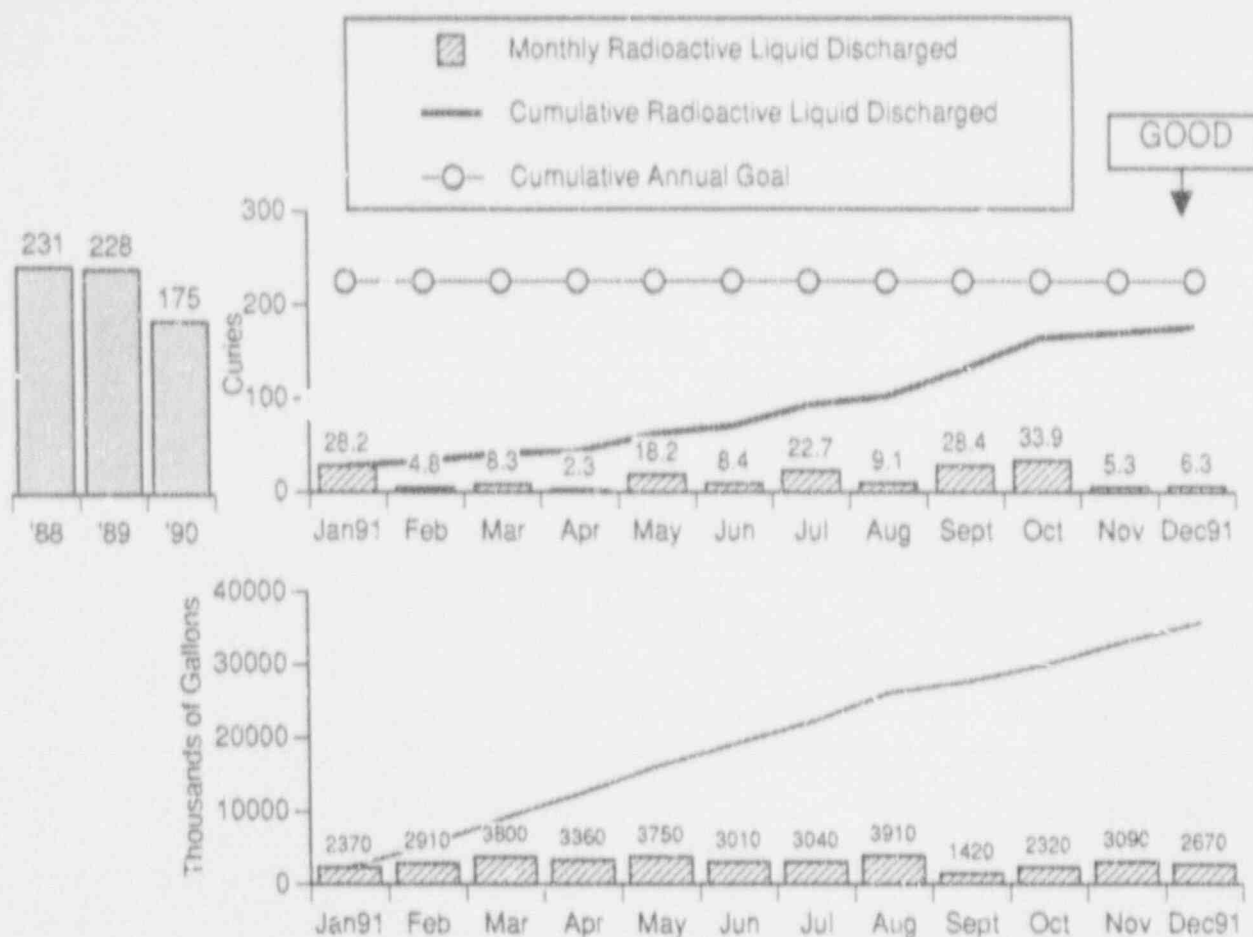
The Fort Calhoun Station cumulative annual goal for 1991 is 340 curies for this indicator.

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

Date Source: Franco/Krist (Manager/Source)

Accountability: Patterson/Trausch

Adverse Trend: None



LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

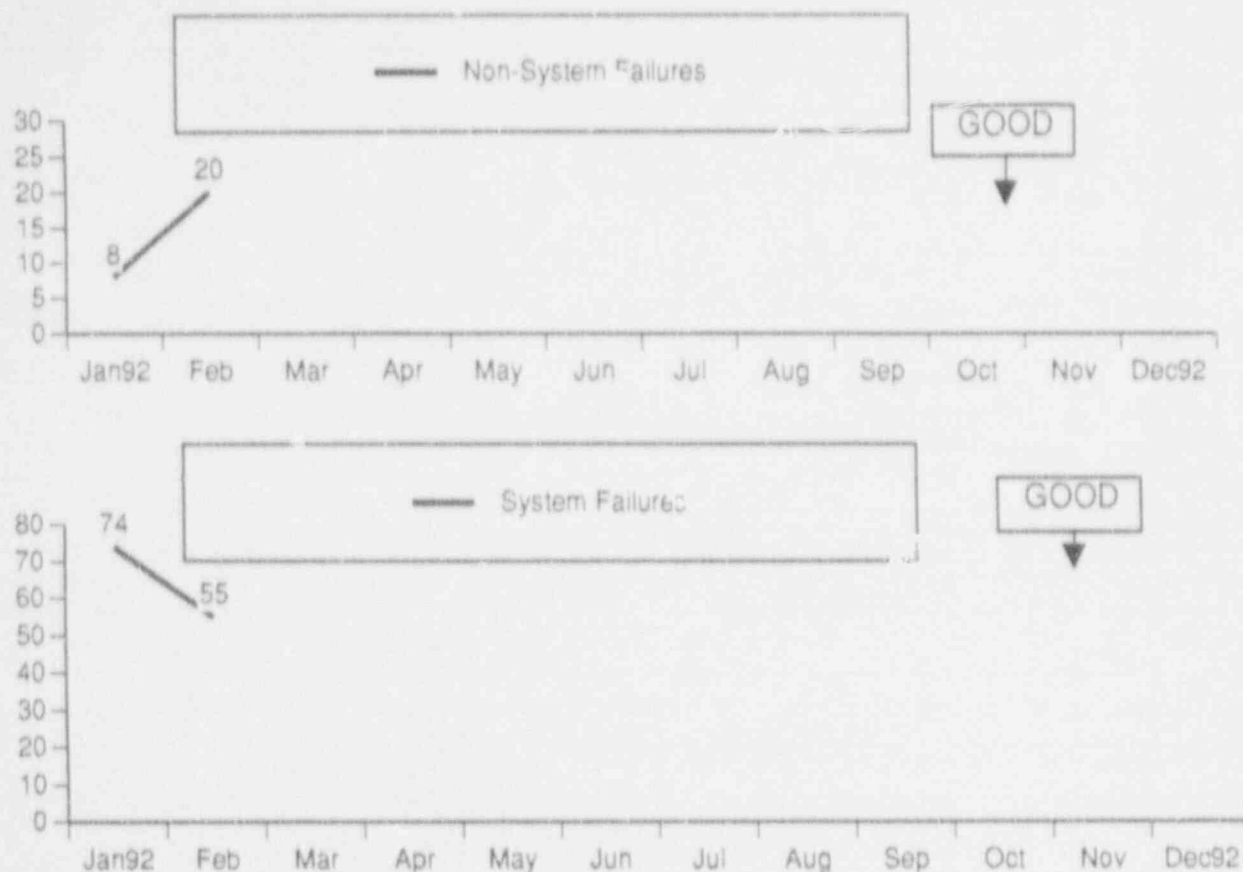
The liquid radioactive waste being discharged to the environment is shown for January 1, 1991 through December 31, 1991. The liquid radioactive waste that was discharged to the environment from all sources totaled 176.1 curies during this time. The Fort Calhoun Station cumulative annual goal for 1991 is 225 curies.

The bottom graph shows the volume of liquid radioactive waste that has been released from the radioactive waste monitor tanks and steam generators. The volume of liquid radioactive waste discharged to the environment from the radioactive waste monitor tanks and the steam generators totaled 35.7 million gallons from January through December 1991. The liquid radioactive waste that was released to the environment includes liquid released from the steam generators due to the fact that radioisotopes were detected in the steam generator blowdown. The liquid radioactive waste being discharged to the environment is calculated every six months.

Data Source: Franco/Krist (Manager/Source)

Accountability: Patterson/Lovett

Positive Trend



LOGGABLE/REPORTABLE INCIDENTS (SECURITY)

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

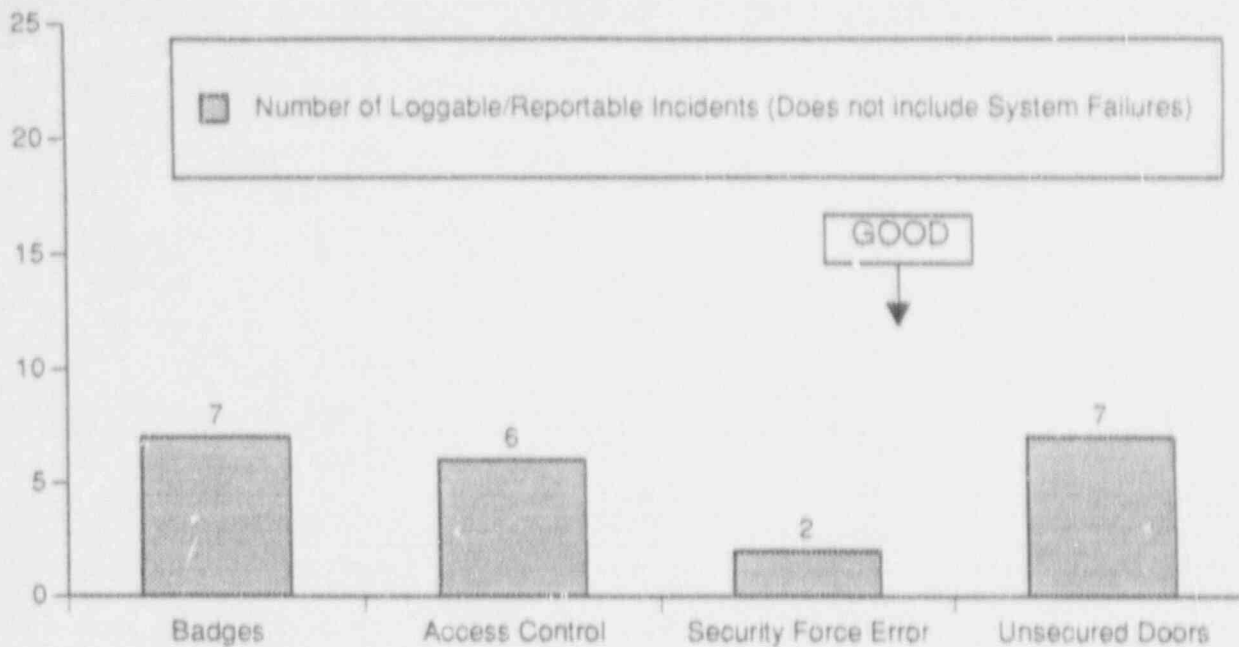
During the month of February 1992, there were 75 loggable/reportable incidents identified. System failures accounted for 55 (73%) of the loggable/reportable incidents, and 25 (45%) of these were environmental failures. Due to the increase in incidents involving lost badges, tailgating, and unsecured doors, Security Services has implemented "Concentrated Awareness Training" (CAT) teams in areas of the plant where potential security violations occur. The purpose of the CAT team is to instruct plant personnel on the proper use of card readers, ensure doors are closed after ingress or egress, identify potential tailgating problems, monitor visitor/escort responsibilities, and ensure security badges are being worn correctly.

Data Source: Sefick/Woerner (Manager/Source)

Accountability: Sefick

Adverse Trend: None

SEP 58



SECURITY NON-SYSTEM FAILURES

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

Non-System Failures	Number of Incidents	
	Feb. '92	Jan. '92
Security Badges	7	6
Access Control and Authorization	6	2
Security Force Error	2**	0
Unsecured Doors	7	0
Total	20	8

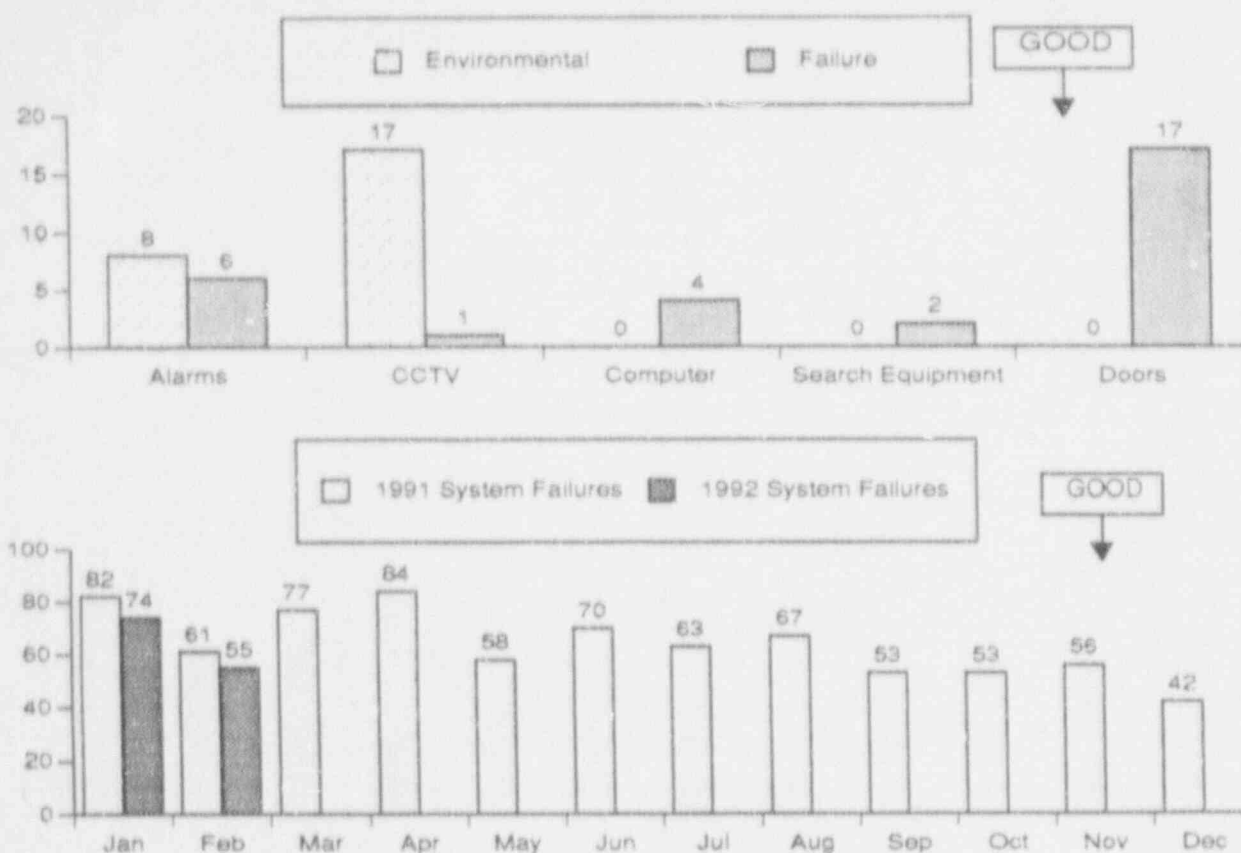
**Not included in total loggables/reportables. Both incidents involved the improper issuing of security badges by the security force, therefore both incidents were counted in the Access Control and Authorization area.

Data Source: Sefick/Woerner (Manager/Source)

Accountability: Sefick

Adverse Trend: None

SEP 58



SECURITY SYSTEM FAILURES

This indicator shows the number of loggable/reportable system failures for the reporting month. These items include: Alarm System Failures, CCTV failures, Security Computer Failures, Search Equipment Failures, and Door Hardware Failures. Alarm systems and CCTV failures will be divided into two categories: environmental failures and failures as defined in the performance indicator definitions. Also, the 1991 and 1992 System Failures will be compared on a monthly basis.

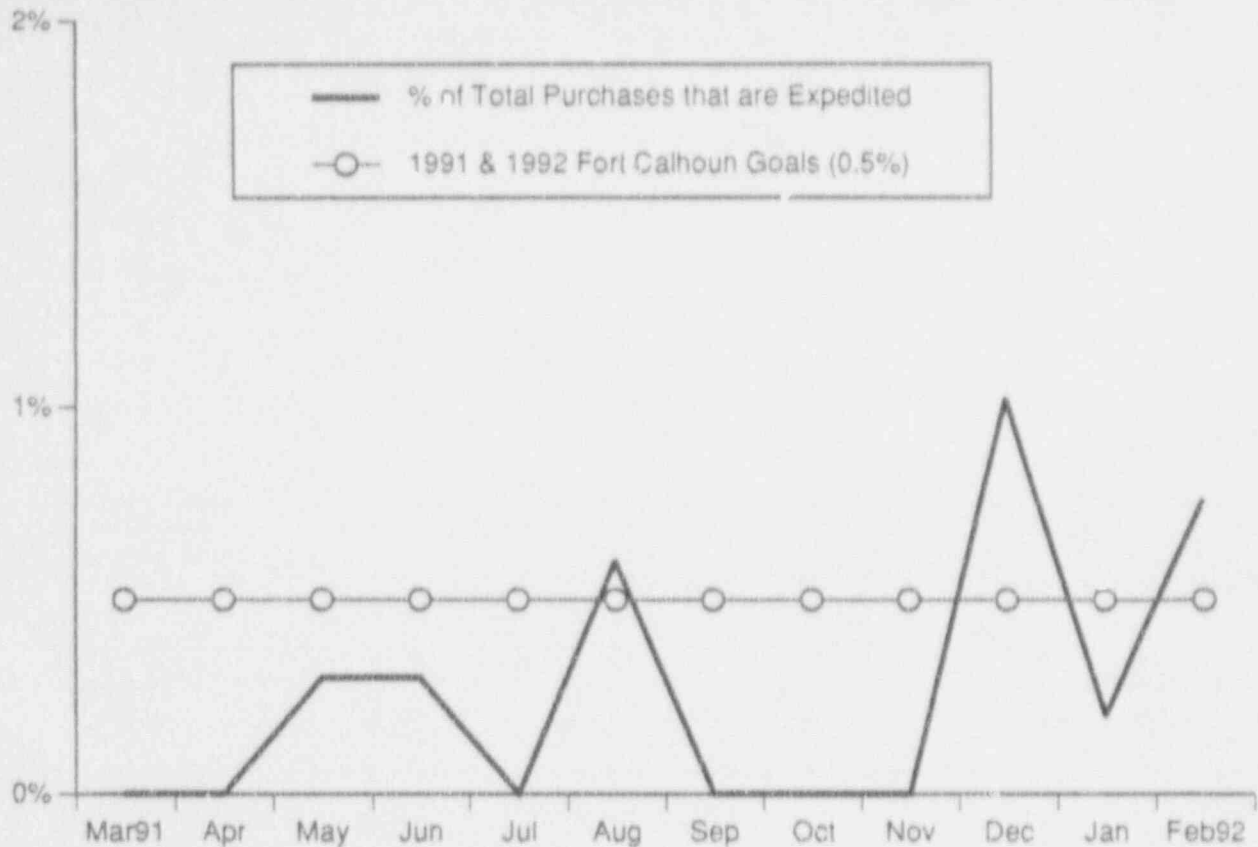
System	Number of incidents			
	February '92		January '92	
	Environ	Failures	Environ	Failures
Alarms	8	6	16	18
CCTV	17	1	21	2
Computer	N/A	4	N/A	3
Search Equipment	N/A	2	N/A	6
Door Hardware	N/A	17	N/A	8
Totals	25	30	37	37

Data Source: Sefick/Woerner (Manager/Source)

Accountability: Sefick/Petersen

Adverse Trend: None

SEP 58



EXPEDITED PURCHASES

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

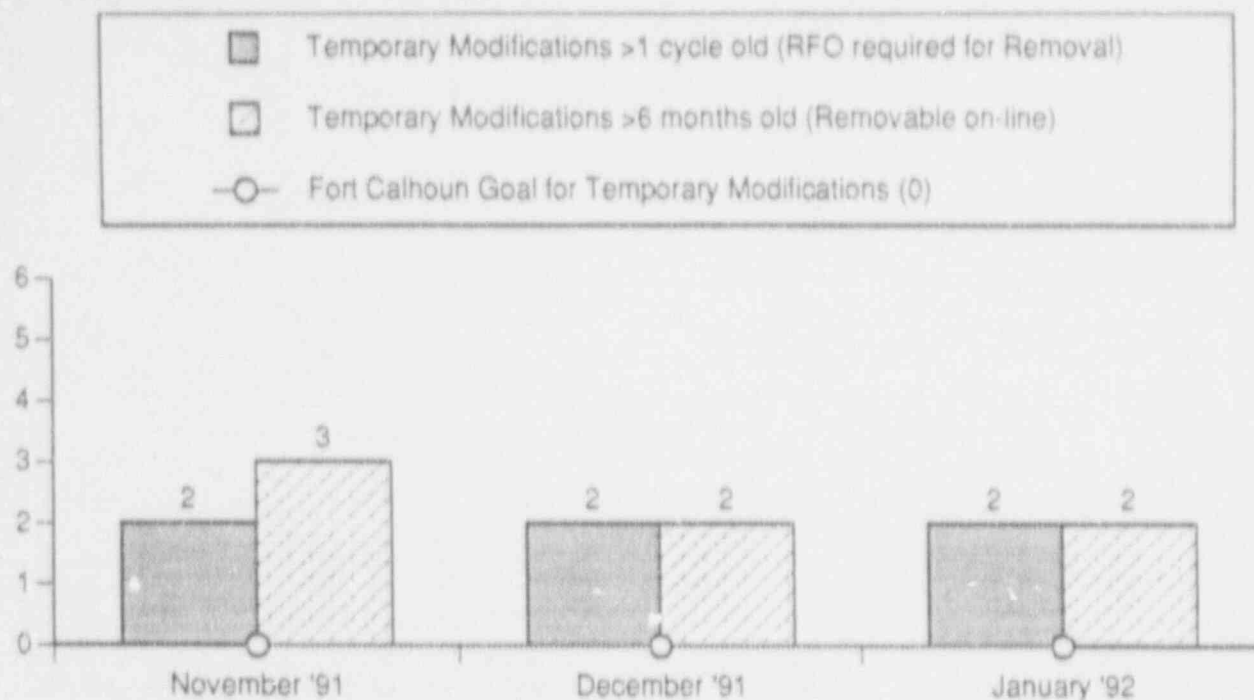
During February, there was a total of 526 purchase orders generated. Of the 526 purchase orders generated, 4 (0.76%) were expedited purchases. The expedited purchases were for fuses, ERF computer system drive belts for printers in the control room and TSC, and gaskets for several MWOs.

The 1992 Fort Calhoun goal for this indicator is 0.5%. The 1991 goal was 0.5%.

Date Source: Willrett/Fraser (Manager Source)

Accountability: Willrett/Fraser

Adverse Trend: None



TEMPORARY MODIFICATIONS (EXCLUDING SCAFFOLDING)

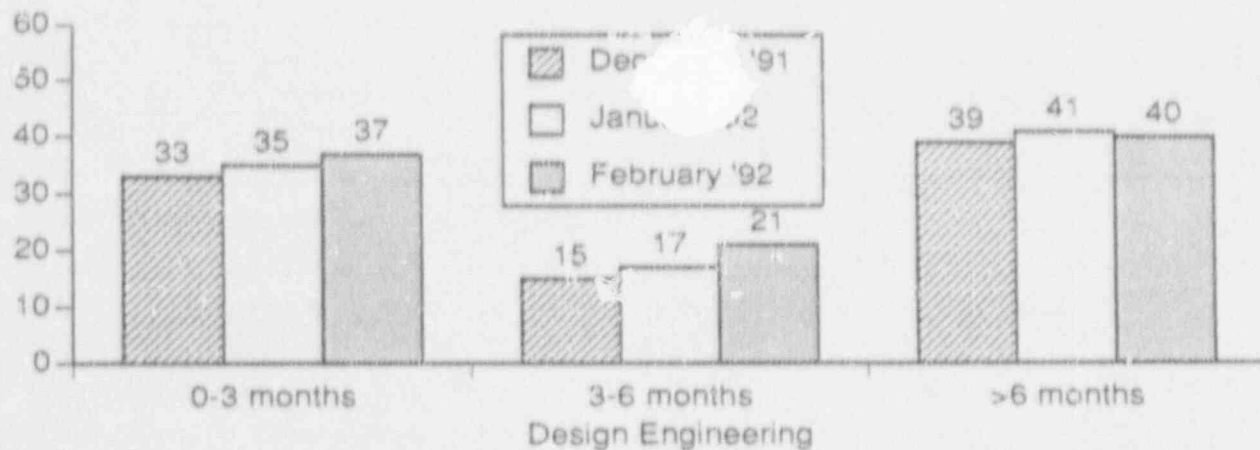
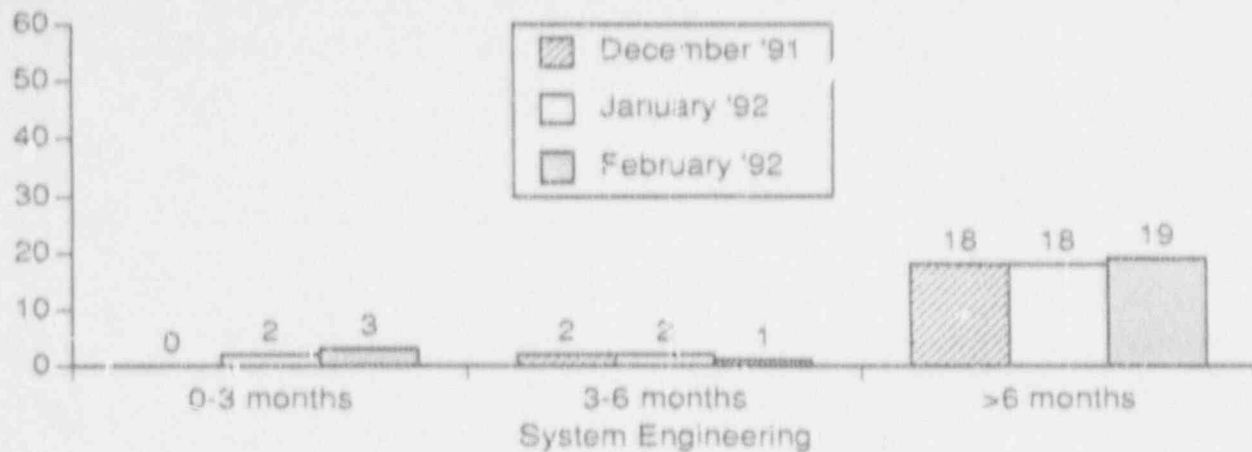
This indicator provides information on the number of temporary modifications greater than one fuel cycle old requiring a refueling outage (RFO) for removal and the number of temporary modifications removable on-line that are greater than six months old. Also provided is the Fort Calhoun goal for temporary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

The goal for this indicator was changed in August 1991 to be more indicative of Fort Calhoun's control and management of temporary modifications. There are currently 2 temporary modifications that are greater than one fuel cycle old. Both of these modifications are 100% ready to be removed during the 1992 refueling outage. These are: AI-198 power supply failure alarm, and pressure indication for RW/CCW HXs. In addition, at the end of February there were 2 temporary modifications installed that were greater than six months old that can be removed on-line. These were: handjack close of CCW/RW valves, which is awaiting a system engineering evaluation of EAR 91-037; and potable water supply piping temporary repair, which will be made permanent by ECN 91-077, issued 10/21/91, and ECN 91-370, scheduled to be issued 2/28/92.

At the end of February, there was a total of 32 TMs installed in the Fort Calhoun Station. 22 of the 32 installed TMs require an outage for removal and 10 are removable on-line. In 1992 a total of 21 temporary modifications have been installed.

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

SEP 62 & 71



ENGINEERING ASSISTANCE REQUEST (EAR) BREAKDOWN

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

At the end of February 1992, 5 EARs were in the initiation process and 24 EARs had been resolved and were going through the closeout process. There were 3 EARs awaiting a technical response from Nuclear Projects.

Total EAR breakdown is as follows:

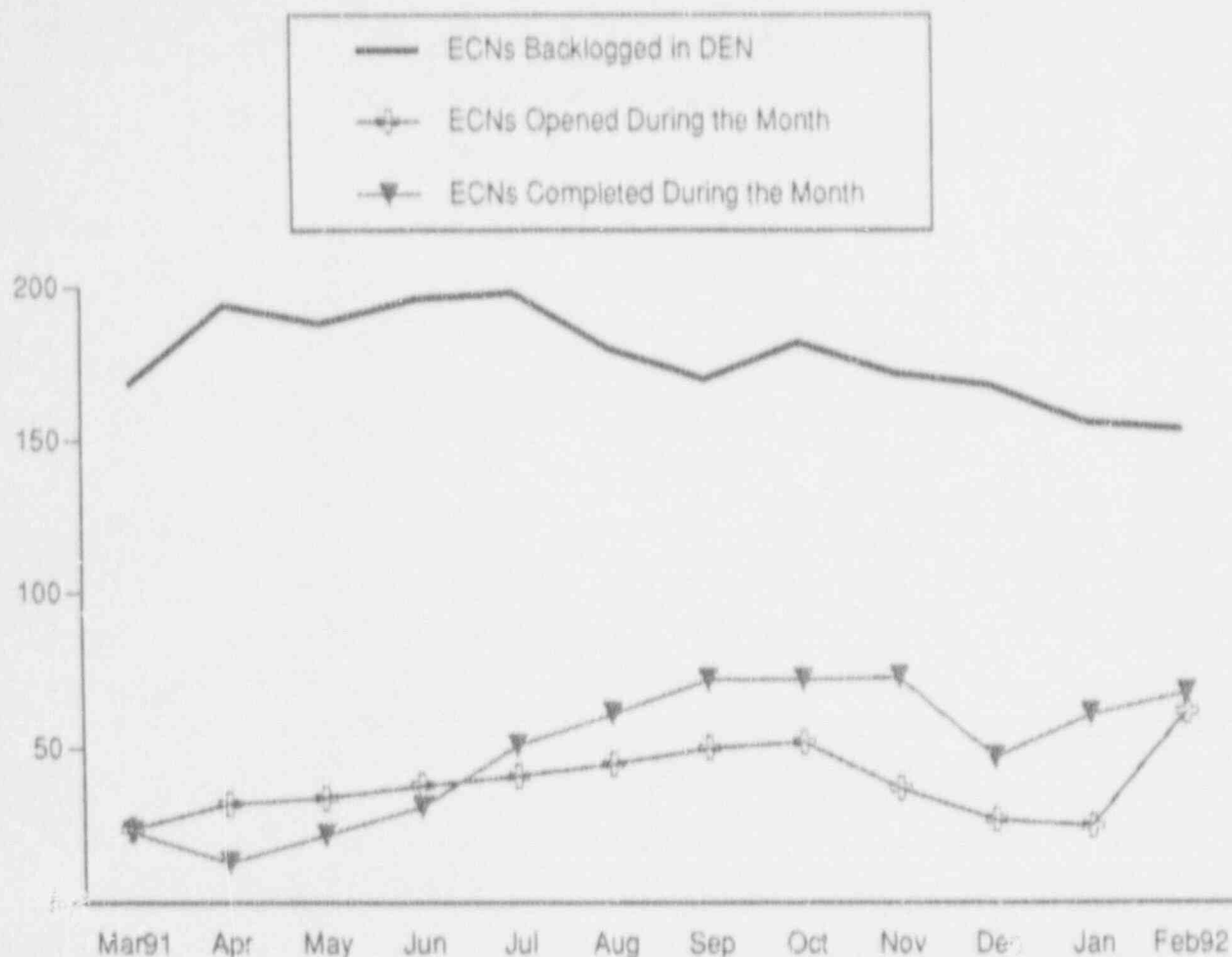
EARS opened during the month	17
Ears closed during the month	11
Total EARs open as of the end of the month	153

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

Accountability: Jaworski/Phelps

Adverse Trend: None

SEP 62



ENGINEERING CHANGE NOTICE STATUS

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

At the end of February 1992, there was a total of 154 DEN backlogged open ECNs. There were 62 ECNs opened, and 68 ECNs completed during the month.

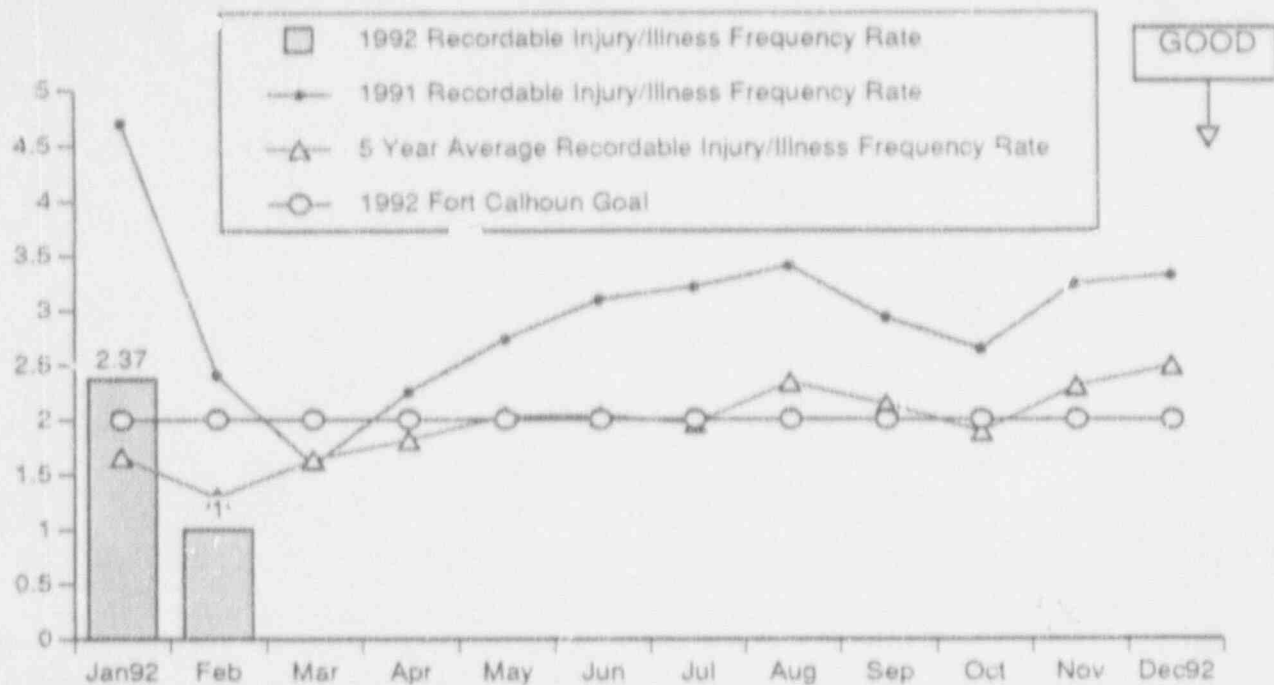
Although the number of open ECNs is currently high, activities are in progress to reduce the backlog of open ECNs. It is expected that the number of open ECNs will continue to decrease.

Data Source: Phelps/Pulverenti (Manager/Source)

Accountability: Phelps/Jaworski

Adverse Trend: None

SEP 62



RECORDABLE INJURY/ILLNESS CASES FREQUENCY RATE

This indicator shows the 1992 monthly recordable injury/illness cases frequency rate in column form. The 1991 recordable injury/illness cases frequency rate and the Fort Calhoun Station 5 year average (from 1987 through 1991) recordable injury/illness cases frequency rates are also shown.

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

There were no (zero) recordable injury/illness cases reported during the month of February 1992. There has been a total of 1 recordable injury/illness case in 1992.

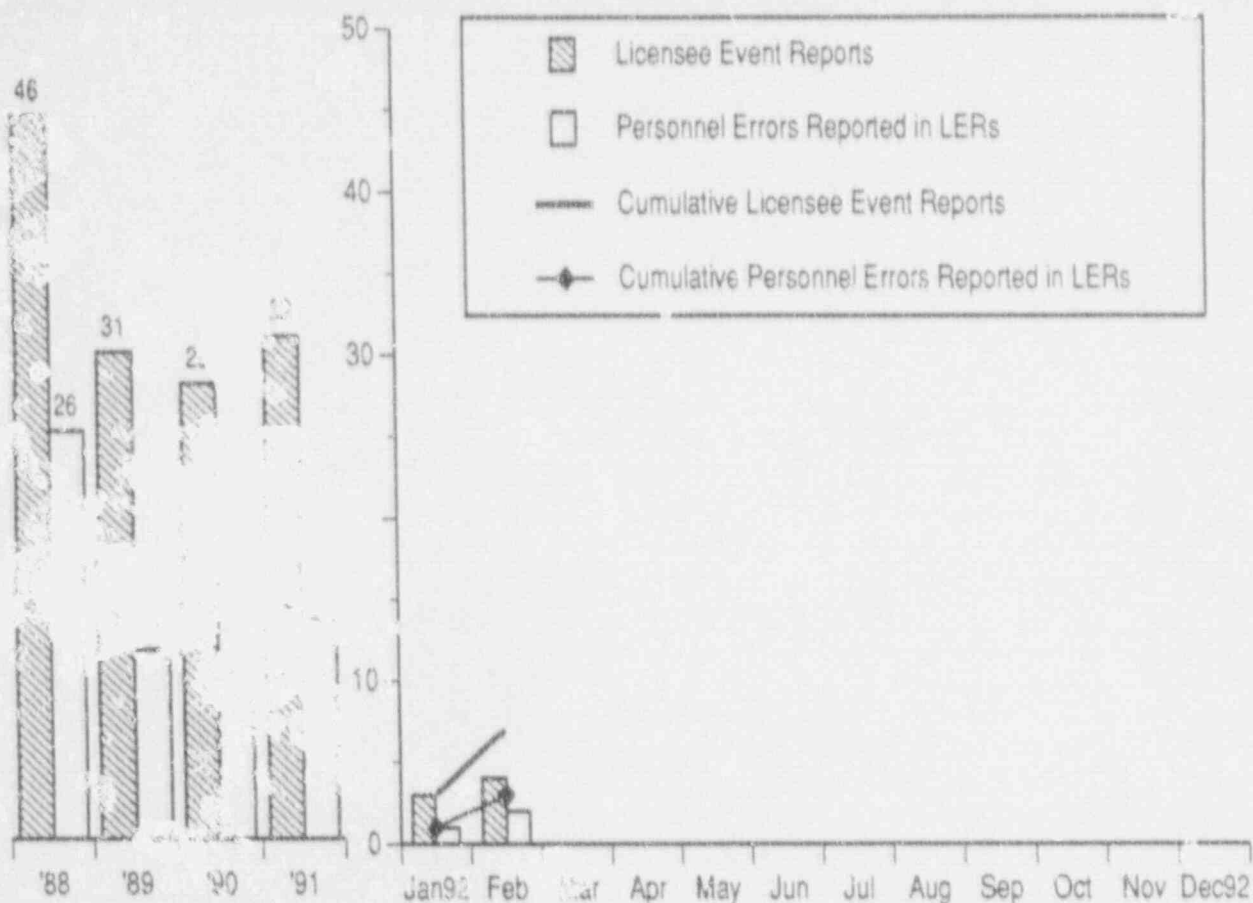
The 1992 goal for this indicator is 2.0.

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

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

Positive Trend

SEP 15, 25 & 26



NUMBER OF PERSONNEL ERRORS REPORTED IN LERS

This indicator shows the number of Licensee Event Reports (LERs) with report dates during February 1992, the LERs attributed to personnel errors, and the cumulative total of both. The year-end totals for the four previous years are also shown.

In February, there were four LERs reported. Two of the LERs were attributable to personnel error. The LERs attributable to personnel error were: 92-03 "Inoperable Fire Zone - Missed Fire Watch" and 92-06 "No Alarm on RM. 041/042/043".

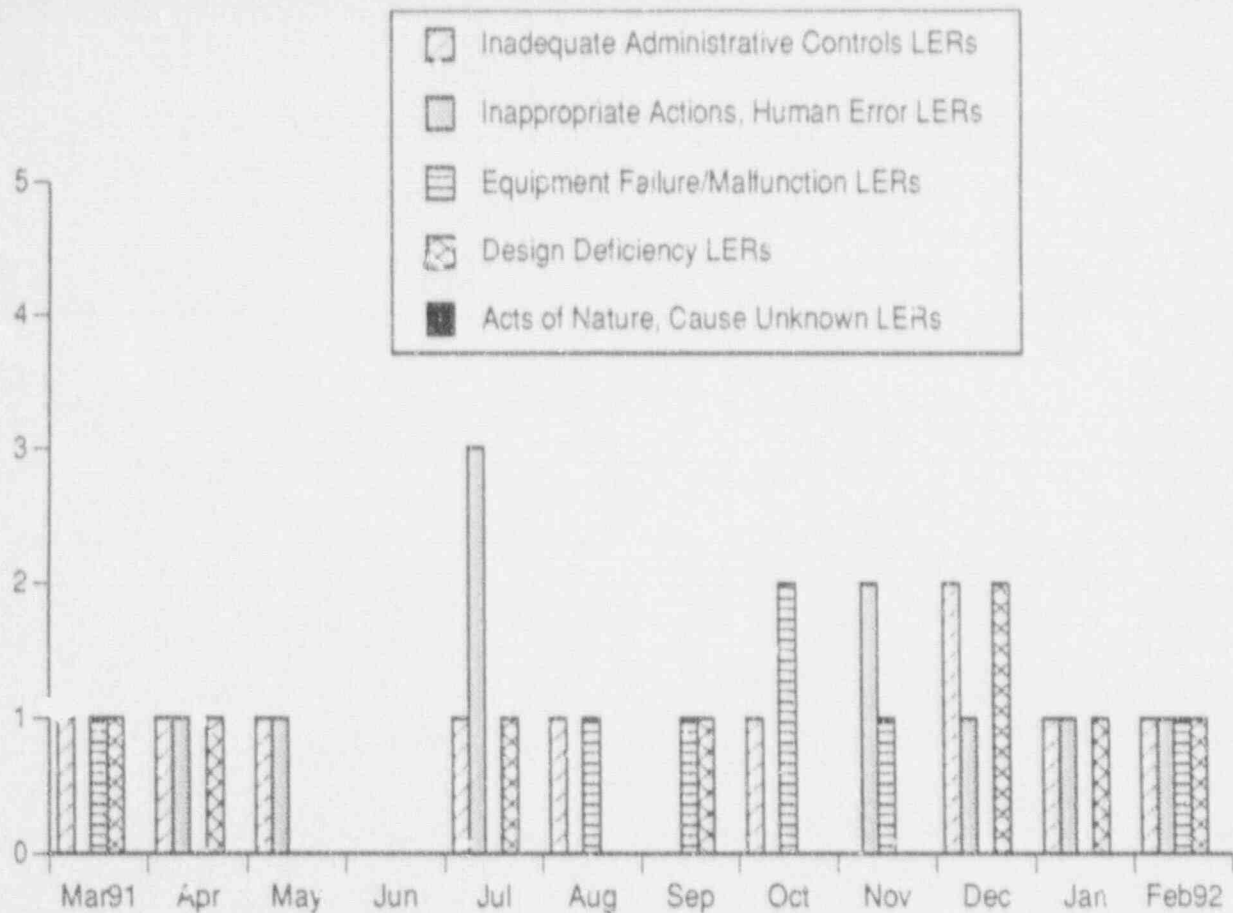
In January there were three LERs reported. One of the LERs was attributable to personnel error. The LER attributable to personnel error was: 91-30 "Containment Purge without Radiation Monitors in Service".

Data Source: Short/Howman (iManager/Source)

Accountability: Patterson

Adverse Trend: None

SEP 15



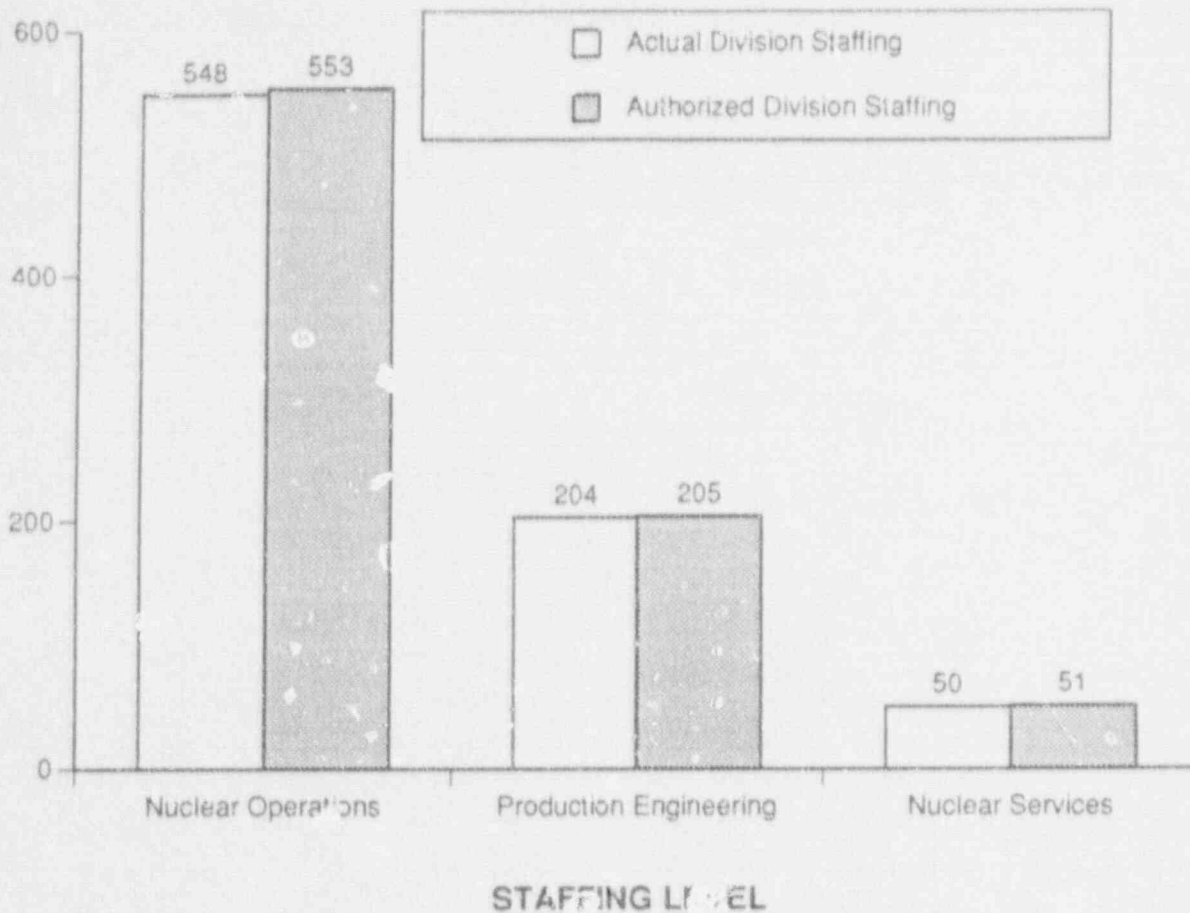
LER ROOT CAUSE BREAKDOWN

This indicator shows the LERs by report date and Root Cause Code for the months from March 1991 through February 1992.

Data Source: Short/Howman (Manager/Source)

Accountability: Patterson

Adverse Trend: None



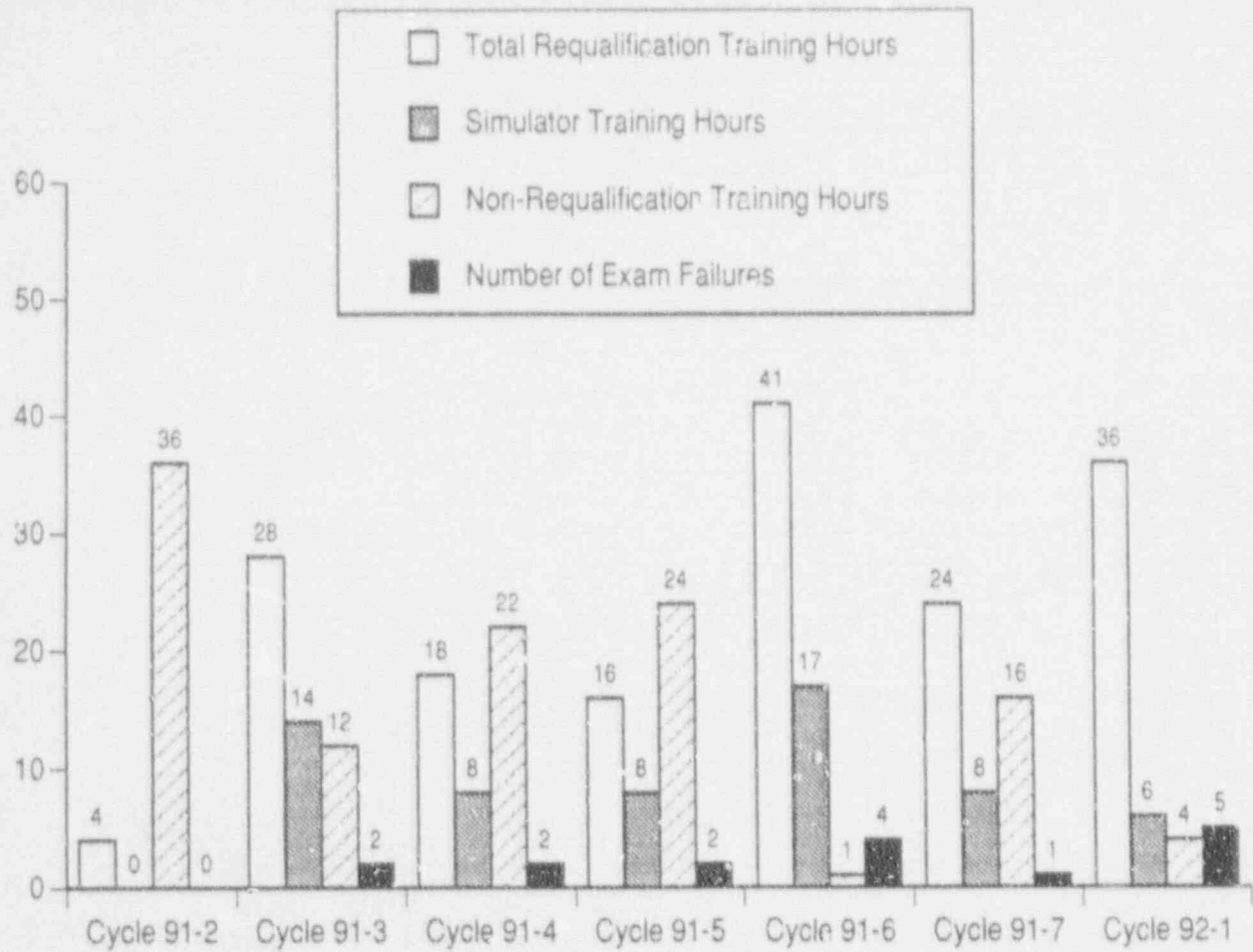
The authorized and actual staffing levels are shown for the three Nuclear Divisions.

Data Source: Sorenson/Burke (Manager/Source)

Accountability: Waszak

Adverse Trend: None

SEP 24



LICENSED OPERATOR REQUALIFICATION TRAINING

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

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

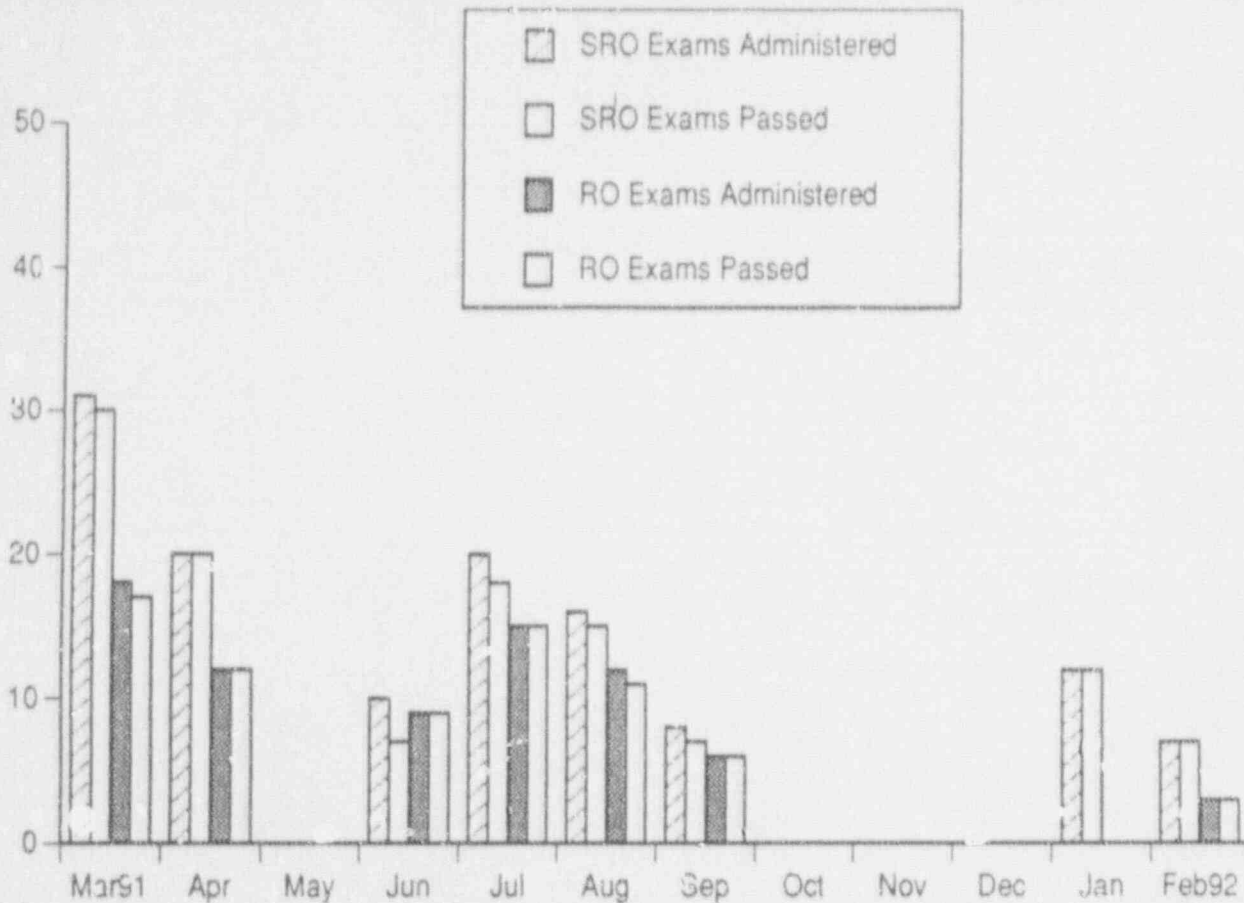
The individuals who failed exams were all remediated and approved for continued shift operations prior to the end of their scheduled Requalification Training week.

Data Source: Gasper/Guliani (Manager/Source)

Accountability: Gasper/Guliani

Adverse Trend: None

SEP 68



LICENSE CANDIDATE EXAMS

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

During the month of February 1992, there were seven internally administered SRO exams taken and all seven of these exams were passed. There were three internally administered RO exams given and all three exams were passed.

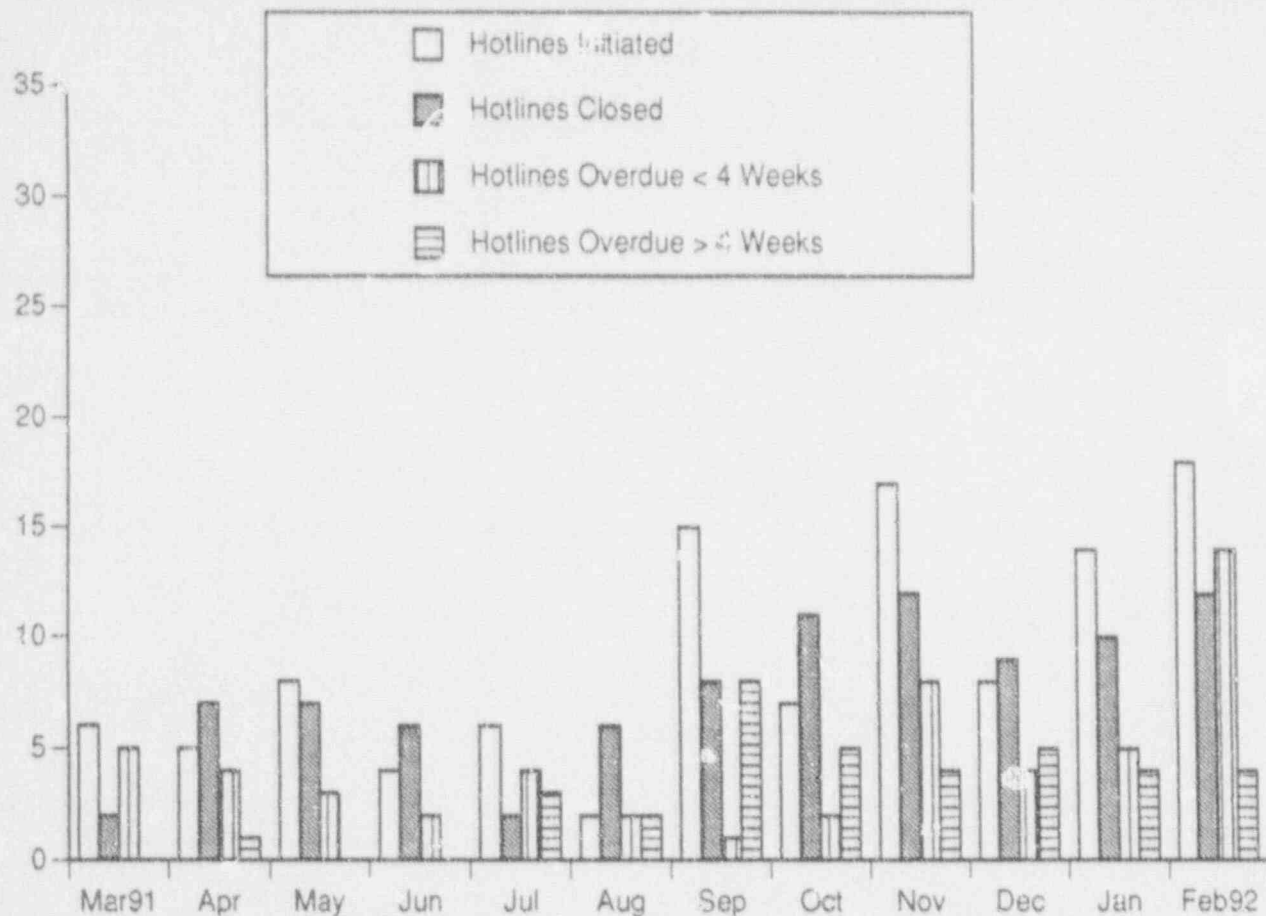
Also during February, there were two SRO NRC administered site specific exams given and both of these exams were passed. There were six RO NRC administered generic exams given and all six exams were passed.

Data Source: Gasper/Herman (Manager/Source)

Accountability: Gasper/Lazar

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.

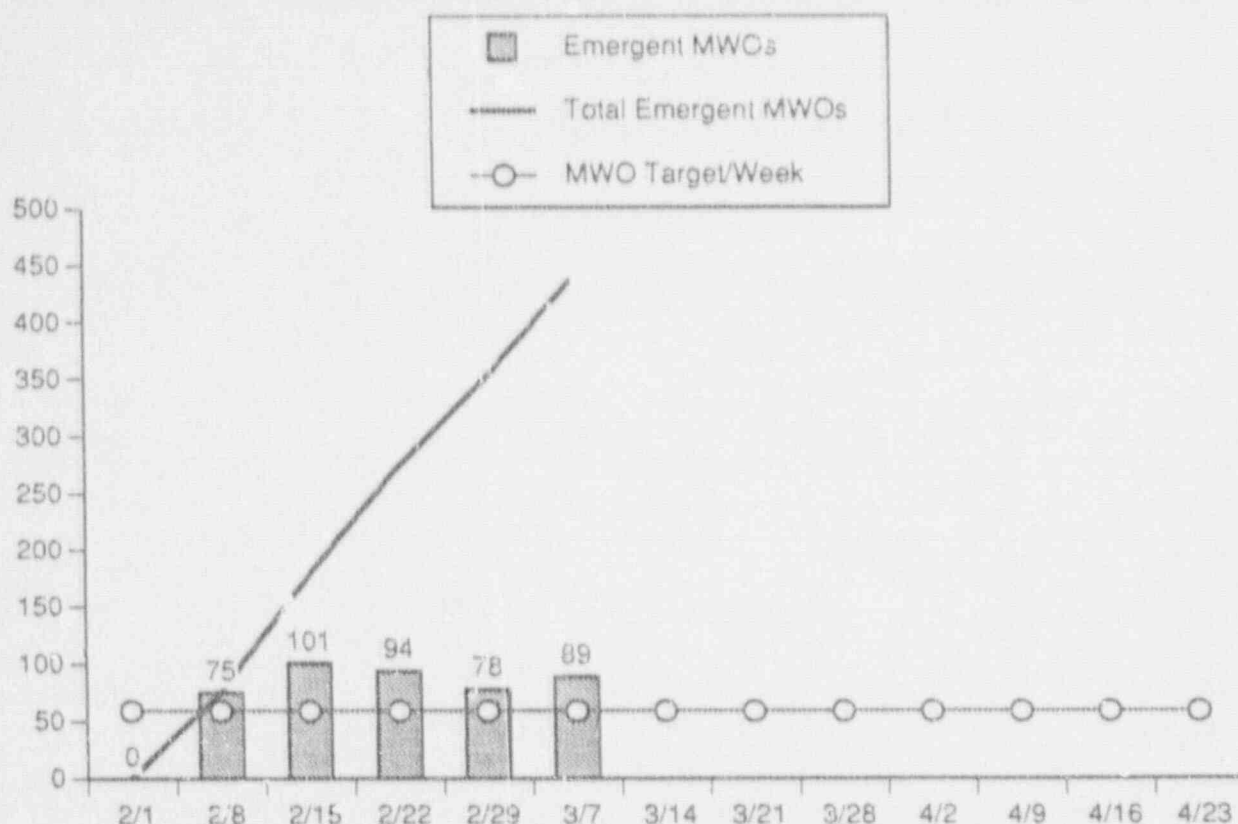
December 1991

Initiated Hotlines	18
Closed Hotlines	12
Hotlines Overdue < 4 wks.	14
Hotlines Overdue > 4 wks.	4

Data Source: Gasper/Newhouse (Manager/Source)

Accountability: Gasper

Adverse Trend: None



EMERGENT MWOs APPROVED FOR INCLUSION IN THE CYCLE 14 REFUELING OUTAGE

This indicator shows the total number of Emergent Maintenance Work Orders (MWOs) approved for inclusion in the Cycle 14 Refueling Outage scope. The total number of MWOs and PMOs in the outage schedule on 2/1/92 was 3,509. The goal for the outage is to maintain emergent work at less than 20%, or no more than 702 emergent MWOs during the outage. This number represents 59 MWOs per week for the twelve week outage.

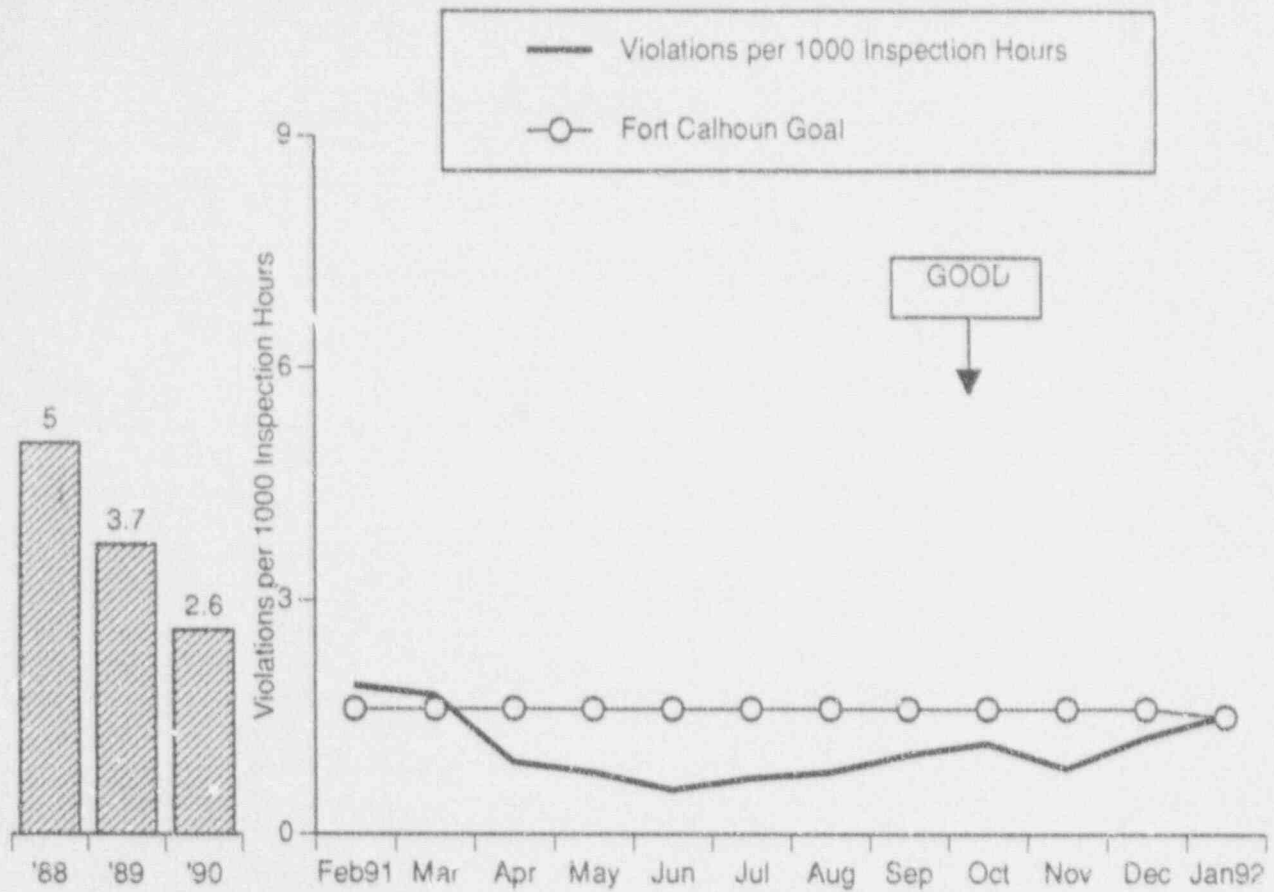
Approximately 1,993 emergent MWOs were generated during the 1990 refueling outage.

Data Source: Patterson/Dunham (Manager/Source)

Accountability: Patterson/Clemens

Adverse Trend: Because the amount of emergent work is exceeding the target for each week, the Supervisor, Outage Projects has determined that an adverse trend is indicated.

SEP 31



VIOLATIONS PER 1,000 INSPECTION HOURS

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

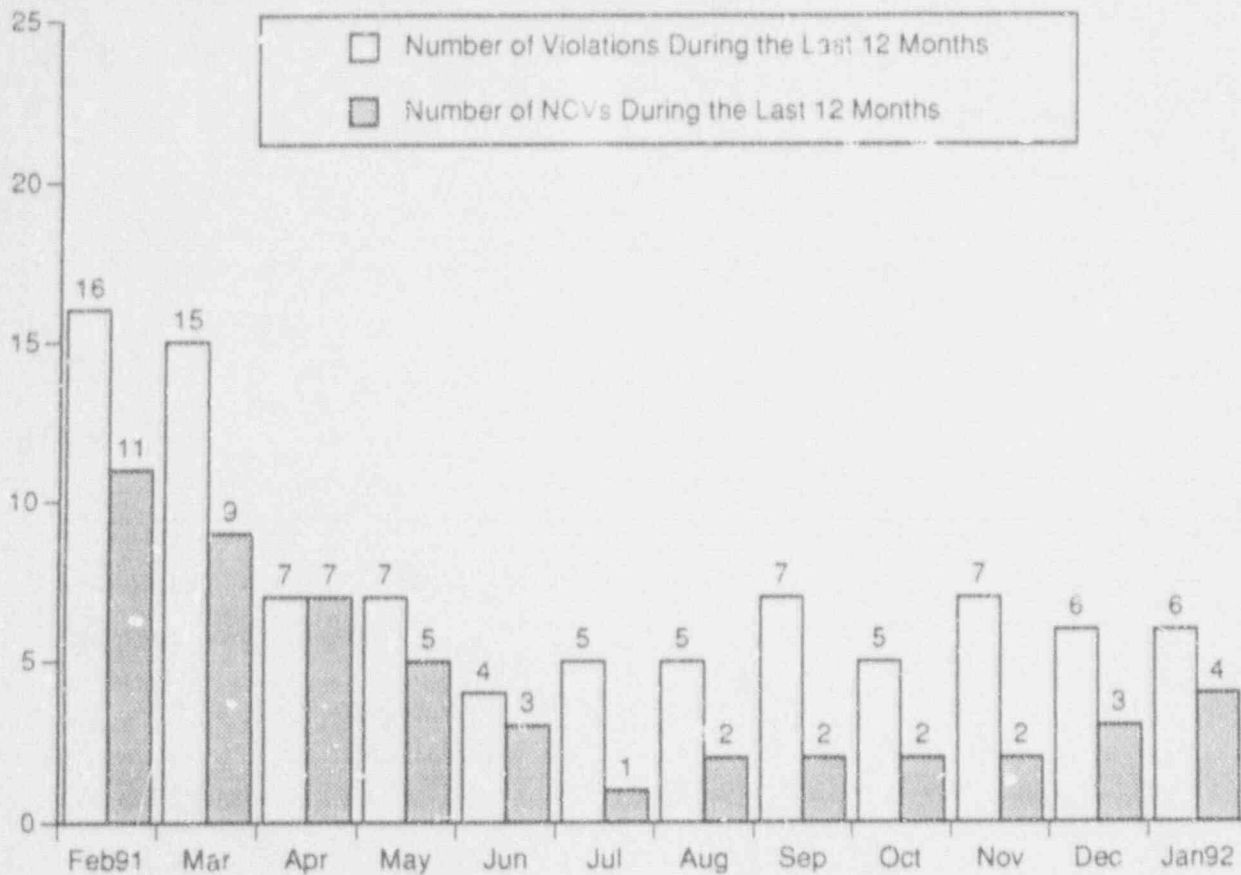
The violations per 1,000 inspection hours indicator was reported as 1.52 for the twelve months from February 1, 1991 through January 31, 1992.

The 1992 Fort Calhoun Goal is 1.5 violations per 1,000 inspection hours for 1991. The 1991 goal was 1.6 violations per 1,000 inspection hours.

Data Source: Short/Howman (Manager/Source)

Accountability: Short

Adverse Trend: None



CUMULATIVE VIOLATIONS AND NCVs (TWELVE-MONTH RUNNING TOTAL)

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

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

Data Source: Short/Howman (Manager/Source)

Accountability: Short

Adverse Trend: None

1991 SALP Funct. Area	CARs	Signif. CARs	NRC Viola.	LERs
A) Plant Operations	30	1	1	6
B) Radiolog. Controls	12	0	3	0
C) Maint/Surveil.	66	0	2	9
D) Emergency Preparedness	16	0	0	0
E) Security	5	0	1	3
F) Engr/Tech Support	93	0	1	12
G) Safety Assess/ Qual. Verif.	27	1	1	2
H) Other	0	0	0	0
Total	249	5	9	32

1992 SALP Funct. Area	CARs	Signif. CARs	NRC Viola.	LERs
A) Plant Operations	2	0	0	3 (2)
B) Radiolog. Controls	2	0	0	0
C) Maint/Surveil.	21 (14)	0	0	1
D) Emergency Preparedness	4 (3)	1	1 (1)	0
E) Security	1 (1)	0	0	0
F) Engr/Tech Support	3 (2)	0	0	3 (2)
G) Safety Assess/ Qual. Verif.	7 (5)	0	0	0
H) Other	0	0	0	0
Total	40 (25)	1	1 (1)	7 (4)

Note: () Indicate values for the reporting month.

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

The above matrix shows the number of Corrective Action Reports (CARs) issued by the Nuclear Services Division (NSD) vs. the number of Significant CARs issued by NSD vs. the number of violations issued by the NRC for the Fort Calhoun Station in 1991 and 1992. Included in these tables are the number of Licensee Event Reports (LERs) identified by the station each year. The number of NRC violations reported is one month behind the reporting month due to the time involved in collecting and processing the violations.

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

Accountability: Andrews/Gambier, Gates

Adverse Trend: None

SEP 15, 20, 21

PERFORMANCE INDICATOR DEFINITIONS

AGE OF OUTSTANDING MAINTENANCE WORK ORDERS

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

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

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

CHECK VALVE FAILURE RATE

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

COLLECTIVE RADIATION EXPOSURE

Collective radiation exposure is the total external whole-body dose received by all on-site personnel (including contractors and visitors) during a time period, as measured by the thermoluminescent dosimeter (TLD). Collective radiation exposure is reported in units of man-rem. This indicator tracks radiological work performance for SEP #54.

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

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.

DECONTAMINATED RADIATION CONTROLLED AREA

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

DIESEL GENERATOR UNAVAILABILITY

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

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

This indicator is defined as the number of accidents for all utility personnel permanently assigned to the station, involving days away from work per 200,000 man-hours worked (100 man-years). This does not include contractor personnel. This indicator tracks personnel performance for SEP #25 & 26.

DOCUMENT REVIEW

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

EMERGENCY AC POWER SYSTEM SAFETY SYSTEM PERFORMANCE

The sum of the known (planned and unplanned) unavailable and the estimated unavailable hours for the emergency AC power system for the reporting period divided by the number of hours in the reporting period multiplied by the number of trains in the emergency AC power system.

EMERGENT MWOs APPROVED FOR INCLUSION IN THE CYCLE 14 REFUELING OUTAGE

The total number of Emergent Maintenance Work Orders (MWOs) approved for inclusion in the Cycle 14 Refueling Outage scope. This indicator tracks performance for SEP #31.

ENGINEERING ASSISTANCE REQUEST (EAR) BREAKDOWN

This indicator shows a breakdown, by age of the EAR, of the number of EARs assigned to Design Engineering Nuclear and System Engineering. This indicator tracks performance for SEP #62.

ENGINEERING CHANGE NOTICE (ECN) STATUS

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

EXPEDITED PURCHASES

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

GASEOUS RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

This indicator displays the total number of Curies of all gaseous radioactive nuclides released from FCS.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

HOTLINE TRAINING MEMOS

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

LER ROOT CAUSE BREAKDOWN

This indicator shows the number and root cause type for License Event Reports.

LICENSE CANDIDATE EXAMS

This indicator shows the number of SRO and/or RO quizzes and exams that are administered and passed each month. This indicator tracks training performance for SEP #68.

LICENSED OPERATOR REQUALIFICATION TRAINING

The total number of hours of training given to each crew during each cycle. Also provided are the simulator training hours (which are a subset of the total training hours), the number of non-requalification training hours and the number of exam failures. This indicator tracks training performance for SEP #68.

LIQUID RADIOACTIVE WASTE BEING DISCHARGED TO THE ENVIRONMENT

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

LOGGABLE/REPORTABLE INCIDENTS (SECURITY)

The total number of security incidents for the reporting month depicted in two graphs. This indicator tracks security performance for SEP#58

MAINTENANCE EFFECTIVENESS

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

MAINTENANCE WORK ORDER BACKLOG

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

MAINTENANCE WORK ORDER BREAKDOWN (CORRECTIVE NON-OUTAGE MAINTENANCE)

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

MAINTENANCE OVERTIME

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

MAXIMUM INDIVIDUAL RADIATION EXPOSURE

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

NUMBER OF HOT SPOTS

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

NUMBER OF 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 MISSED SURVEILLANCE TESTS RESULTING IN LICENSEE EVENT REPORTS

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

NUMBER OF PERSONNEL ERRORS REPORTED IN LERS

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

OPERATIONS AND MAINTENANCE BUDGET

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

PLANNED CAPABILITY LOSS FACTOR

The ratio of the planned energy losses during a given period of time, to the reference energy generation (the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions), expressed as a percentage.

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

PROCEDURAL NONCOMPLIANCE INCIDENTS (MAINTENANCE)

The number of identified incidents concerning maintenance procedural problems, the number of closed IRs related to the use of procedures (includes the number of closed IRs caused by procedural noncompliance), and the number of closed procedural noncompliance IRs. This indicator trends personnel performance for SEP #15, 41 & 44.

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 (NON-OUTAGE)

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

RECORDABLE INJURY/ILLNESS CASES FREQUENCY RATE

The number of injuries requiring more than normal first aid per 200,000 man-hours worked. This indicator trends personnel performance for SEP #15, 25 & 26.

SECURITY NON-SYSTEM FAILURES

The following components are the types of loggable/reportable non-system failures represented in this indicator. Incidents in this category include security badges, access control and authorization, security force error and unsecured doors.

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

This indicator tracks security performance for SEP #58.

SECURITY SYSTEM FAILURES

The following components are the types of loggable/reportable SECURITY SYSTEM FAILURES represented in this indicator. Incidents in this category include alarm system failures, CCTV failures, security computer failures, search equipment failures, and door hardware failures. These system failures are further categorized as follows:

- 1) Alarm System Failure - Detection system events involving false/nuisance alarms and mechanical failures.
- 2) Alarm System Environs - Degradations to detection system performance as a result of environmental conditions (i.e., rain, snow, frost).
- 3) CCTV Failures - Mechanical failures to all CCTV hardware components.
- 4) CCTV Environs - Degradations to CCTV performance as a result of environmental conditions (i.e., rain, snow, frost, fog, sunspots, shade).
- 5) Security Computer Failures - Failure of the multiplexer, central processing unit, and other computer hardware and software. This category does not include software problems caused by operator error in using the software.
- 6) Search Equipment Failures - Failures of x-ray, metal, or explosive detectors and other equipment used to search for contraband. This also includes incidents where the search equipment is found to be defective or did not function properly during testing.
- 7) Door Hardware Failures - Failure of the door alarm and other door hardware such as latches, electric strikes, doorknobs, locks, etc.
- 8) 1991 versus 1992 System Failures - Statistics from 1991 will be compared on a monthly basis with 1992 loggable/reportable system failures.

This indicator tracks security performance for SEP #58.

STAFFING LEVEL

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

TEMPORARY MODIFICATIONS

The number of temporary mechanical and electrical configurations to the plant's systems.

- 1) Temporary configurations are defined as electrical jumpers, electrical blocks, mechanical jumpers, or mechanical blocks which are installed in the plant operating systems and are not shown on the latest revision of the P&ID, schematic, connection, wiring, or flow diagrams.
- 2) Jumpers and blocks which are installed for Surveillance Tests, Maintenance Procedures, Calibration Procedures, Special Procedures, or Operating Procedures are not considered as temporary modifications unless the jumper or block remains in place after the test or procedure is complete. Jumpers and blocks installed in test or lab instruments are not considered as temporary modifications.
- 3) Scaffolding is not considered a temporary modification. Jumpers and blocks which are installed and for which MRs have been submitted will be considered as tempo-

PERFORMANCE INDICATOR DEFINITIONS (cont'd)

rary modifications until final resolution of the MR and the jumper or block is removed or is permanently recorded on the drawings. This indicator tracks temporary modifications for SEP #62 & 71.

TOTAL SKIN AND CLOTHING CONTAMINATIONS

The number of skin and clothing contaminations for the reporting month.

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

UNPLANNED SAFETY SYSTEM ACTUATIONS (NRC DEFINITION)

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

VIOLATIONS PER 1,000 INSPECTION HOURS

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

VOLUME OF LOW-LEVEL SOLID RADIOACTIVE WASTE

This indicator is defined as the volume of low-level solid radioactive waste actually shipped for burial. This indicator also shows the volume of low-level radioactive waste which is in temporary storage, the amount of radioactive oil that has been shipped off-site for processing, and the volume of solid dry radioactive waste which has been shipped off-site for processing. Low-level solid radioactive waste consists of dry active waste, sludges, resins, and evaporator bottoms generated as a result of nuclear

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

SAFETY ENHANCEMENT PROGRAM INDEX

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

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Modify Computer Program to Correctly Schedule Surveillance Tests	
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POSITIVE TREND REPORT

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

The following indicators have been selected as exhibiting positive trends:

Disabling Injury/Illness Frequency Rate

(Page 7)

The Disabling Injury/Illness Frequency Rate for the month is zero.

Recordable Injury/Illness Cases Frequency Rate

(Page 36)

The Recordable Injury/Illness Cases Frequency Rate for the reporting month (1.0) is below the 1992 Fort Calhoun goal of 2.0.

End of Positive Trend Report

ADVERSE TREND REPORT

A Performance Indicator which has data representing three (3) consecutive months of declining performance constitutes an adverse trend. The Adverse Trend Report explains the conditions under which certain indicators are showing adverse trends. An explanation will be provided for indicators with data representing three months of declining performance that have been labeled as adverse trends.

The following indicator is exhibiting an adverse trend for the reporting month:

Emergent MWOs Approved for Inclusion in the Cycle 14 Refueling Outage

(Page 43)

This indicator has been determined to be exhibiting an adverse trend by the Supervisor, Outage Projects because the amount of emergent work has exceeded the weekly target of 59 MWOs for each week during the outage.

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 median or upper quartile. The indicators will be compared to the industry median or upper quartile as relevant to that indicator.

Expedited Purchases

(Page 32)

The percentage of Expedited purchases for the reporting month (0.76%) exceeds the 1992 Fort Calhoun monthly goal of 0.5%.

Violations per 1,000 Inspection Hours

(Page 44)

The violations per 1,000 inspection hours value for the reporting month (1.52) is above the Fort Calhoun goal of 1.5.

End of Management Attention Report.

PERFORMANCE INDICATOR REPORT IMPROVEMENTS/CHANGES

This report has been abbreviated to allow some performance indicator data sources to devote more time to refueling outage activities. Publication of all indicators will resume with the May 1992 report.

Planned Capability Loss Factor

(Page 4)

This indicator has been added to the report.

Emergent MWOs Approved for Inclusion in the Cycle 14 Refueling Outage

(Page 43)

This indicator, formerly titled "Emergent MWO Planning Status", has been revised to more accurately represent the refueling outage MWO status.

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 - 9/30/77	2,805,927	9,958,888
3rd Refueling	09/30/77 - 12/09/77	*	*
Cycle 4	12/09/77 - 10/14/78	3,026,832	12,985,720
4th Refueling	10/14/78 - 12/24/78	*	*
Cycle 5	12/24/78 - 01/18/80	3,882,734	16,868,454
5th Refueling	01/18/80 - 06/11/80	*	*
Cycle 6	06/11/80 - 09/18/81	3,899,714	20,768,168
6th Refueling	09/18/81 - 12/21/81	*	*
Cycle 7	12/21/81 - 12/06/82	3,561,866	24,330,034
7th Refueling	12/06/82 - 04/07/83	*	*
Cycle 8	04/07/83 - 03/03/84	3,406,371	27,736,405
8th Refueling	03/03/84 - 07/12/84	*	*
Cycle 9	07/12/84 - 09/28/85	4,741,488	32,477,893
9th Refueling	09/28/85 - 01/16/86	*	*
Cycle 10	01/16/86 - 03/07/87	4,356,753	36,834,646
10th Refueling	03/07/87 - 06/03/87	*	*
Cycle 11	06/03/87 - 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	*	*
13th Refueling	02/01/92 - 04/26/92	(Planned Dates)	
Cycle 14#	04/26/92 - 09/19/93	*	*
14th Refueling	09/19/93 - 11/13/93	*	*
Cycle 15	11/13/93 - 03/12/95	*	*
15th Refueling	03/12/95 - 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 (364,468,300 KWH)	October 1987
Most Productive Fuel Cycle (4,936,859 MWH)(Cycle 11)	June 8, 1987-Sept. 27, 1988