

January 30, 1998

Duke Energy Corporation
ATTN: Mr. G. R. Peterson
Site Vice President
Catawba Site
4800 Concord Road
York, SC 29745-9635

SUBJECT: MEETING SUMMARY - CATAWBA NUCLEAR STATION

Dear Mr. Peterson:

This refers to the meeting that was conducted at your request in the Region II office on January 20, 1998, for you to present a self-assessment of Catawba Nuclear Station performance. A list of attendees and a copy of your presentation handout are enclosed.

It is our opinion that this meeting was beneficial in that it provided the NRC staff with a better understanding of Catawba Nuclear Station performance and your ongoing initiatives.

In accordance with Section 2.790(a) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this meeting, please contact us.

Sincerely,

Original signed by:
Charles R. Ogle, Chief
Reactor Projects Branch 1
Division of Reactor Projects

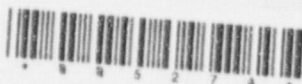
Docket Nos. 50-413, 50-414
License Nos. NPF-35, NPF-52

Enclosures:

1. List of Attendees
2. Licensee Presentation Handouts

cc w/encls:
M. S. Kitlan
Regulatory Compliance Manager
Duke Energy Corporation
4800 Concord Road
York, SC 29745-9635

cc w/encls cont'd: (See page 2)



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PDR ADOCK 05000413
PDR

JE 45

DEC

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cc w/encls cont'd:

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Executive Director
Public Staff - NCUC
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cc w/encls cont'd: (See page 3)

DEC

3

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Distribution w/enc's:
P. Tam, NRR
R. Carroll, RII
C. Payne, RII
PUBLIC

NRC Resident Inspector
U.S. Nuclear Regulator Commission
4830 Concord Road
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OFFICE	RII:DRP												
SIGNATURE	<i>[Signature]</i>												
NAME	RCARROLL												
DATE	1/29/98	1/	/98	1/	/98	1/	/98	1/	/98	1/	/98	1/	/98
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: G:\CATMTG.SUM

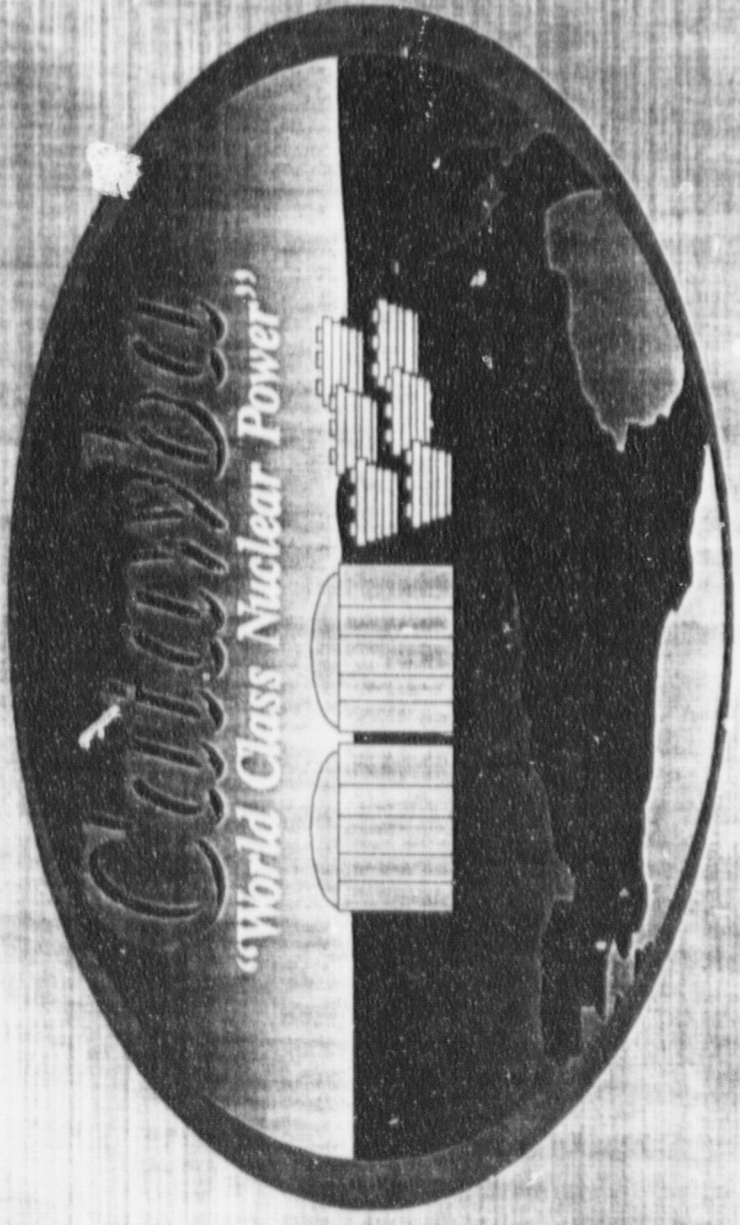
LIST OF ATTENDEES

NUCLEAR REGULATORY COMMISSION

B. Mallett, Acting Deputy Regional Administrator, Region II (RII)
H. Berkow, Director, Project Directorate, (PD) II-2, Office of Nuclear Reactor Regulation (NRR)
J. Johnson, Director, Division of Reactor Projects (DRP) RII
L. Plisco, Deputy Director, DRP, RII
C. Costo, Director, Division of Reactor Safety (DRS) RII
C. Ogle, Chief, Branch 1, DRP, RII
P. Tam, Senior Project Manager, PD II-2, NRR
N. Economos, Reactor Inspector, Maintenance Branch, DRS, RII
R. Carroll, Project Engineer, Branch 1, DRP, RII

DUKE ENERGY CORPORATION (DEC)

G. Peterson, Vice President, Catawba Nuclear Station (CNS)
C. Davis, Vice President, Electric System Support, DEC
J. Forbes, Engineering Manager, CNS
P. Herran, Engineering Manager, McGuire Nuclear Station
M. Birch, Safety Assurance Manager, CNS
M. Kitlan, Regulatory Compliance Manager, CNS



Management Meeting

January 20, 1998

Enclosure 2

Agenda

Introduction	Gary Peterson
Performance Measures & Focus-1997	Gary Peterson
Work Management	Ron Jones
Operational Performance	Ron Jones/ Jeff Forbes
Design Basis Issues	Jeff Forbes
Outage Performance	Ron Jones
Self Improvement Culture	Gary Peterson
Summary	Gary Peterson

Introduction

Successes

- Nuclear Safety
- Excellent Generation
- Work Management
- Costs Under Control

Challenges

- Equipment Reliability
- Design Basis Issues
- Complacency



Management Meeting

January 20, 1998

Agenda

Introduction	Gary Peterson
Performance Measures & Focus-1997	Gary Peterson
Work Management	Ron Jones
Operational Performance	Ron Jones/ Jeff Forbes
Design Basis Issues	Jeff Forbes
Outage Performance	Ron Jones
Self Improvement Culture	Gary Peterson
Summary	Gary Peterson

Introduction

Successes

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Challenges

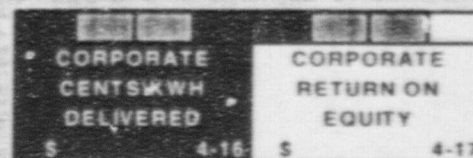
- Equipment Reliability
- Design Basis Issues
- Complacency

Performance Measures YE 1997

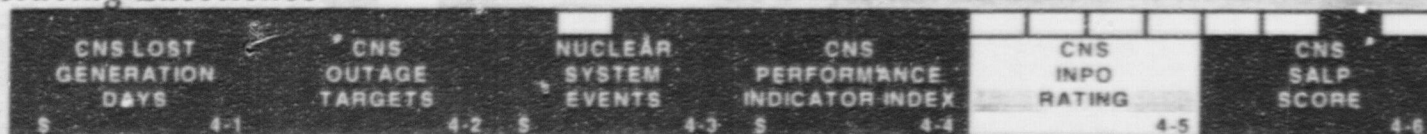
Vision - "To Be World Class"

- Non-Fuel Production Cost in Top Ten
- Capacity Factor in Top Quartile
- INPO Rating in Top Quartile
- NRC SALP Score in Top Quartile
- Zero Recordable Injuries
- Zero Reportable Environmental Incidents

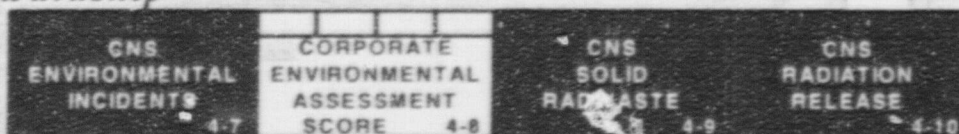
Catawba Performance Measures
December, 1997



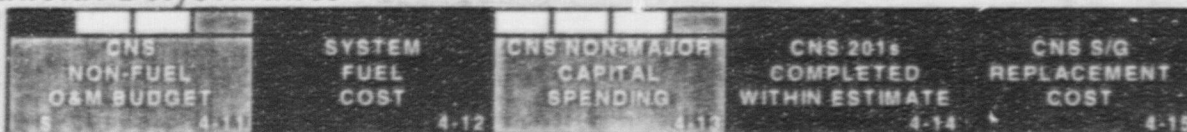
Operating Excellence



Stewardship



Financial Performance



Team Effectiveness



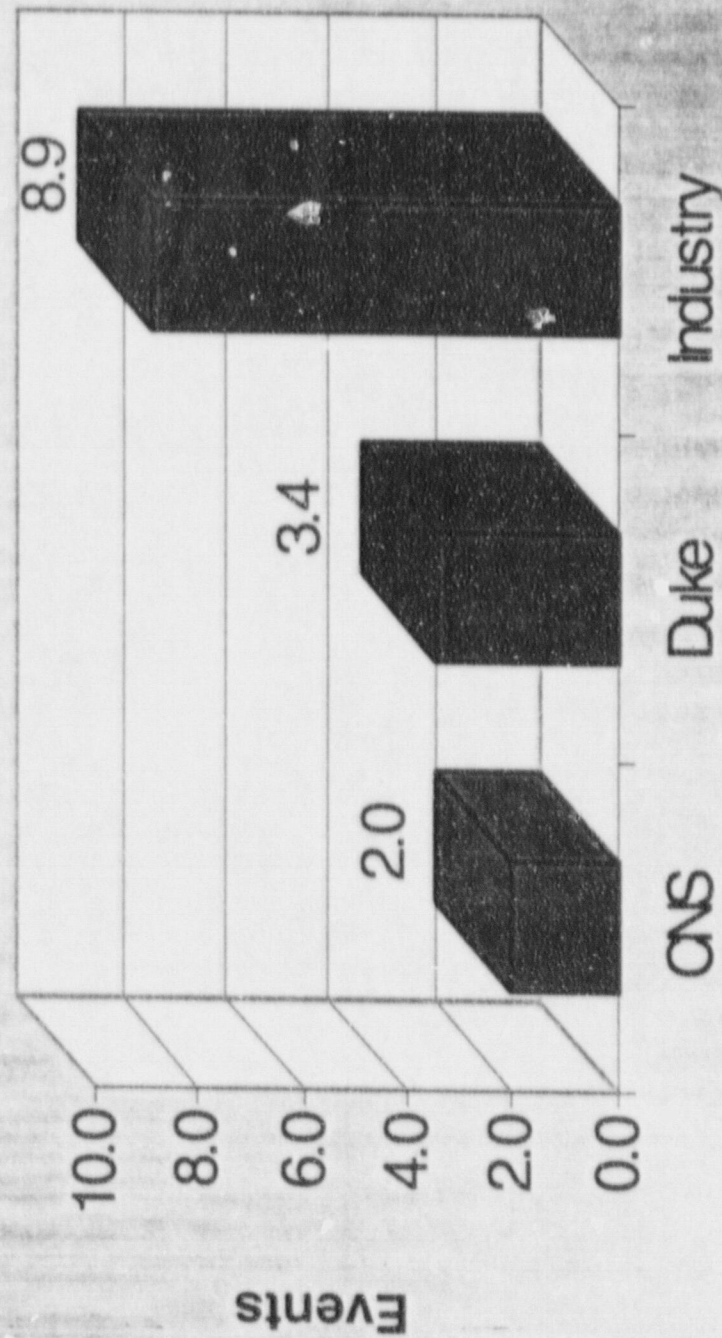
Site Focus Areas



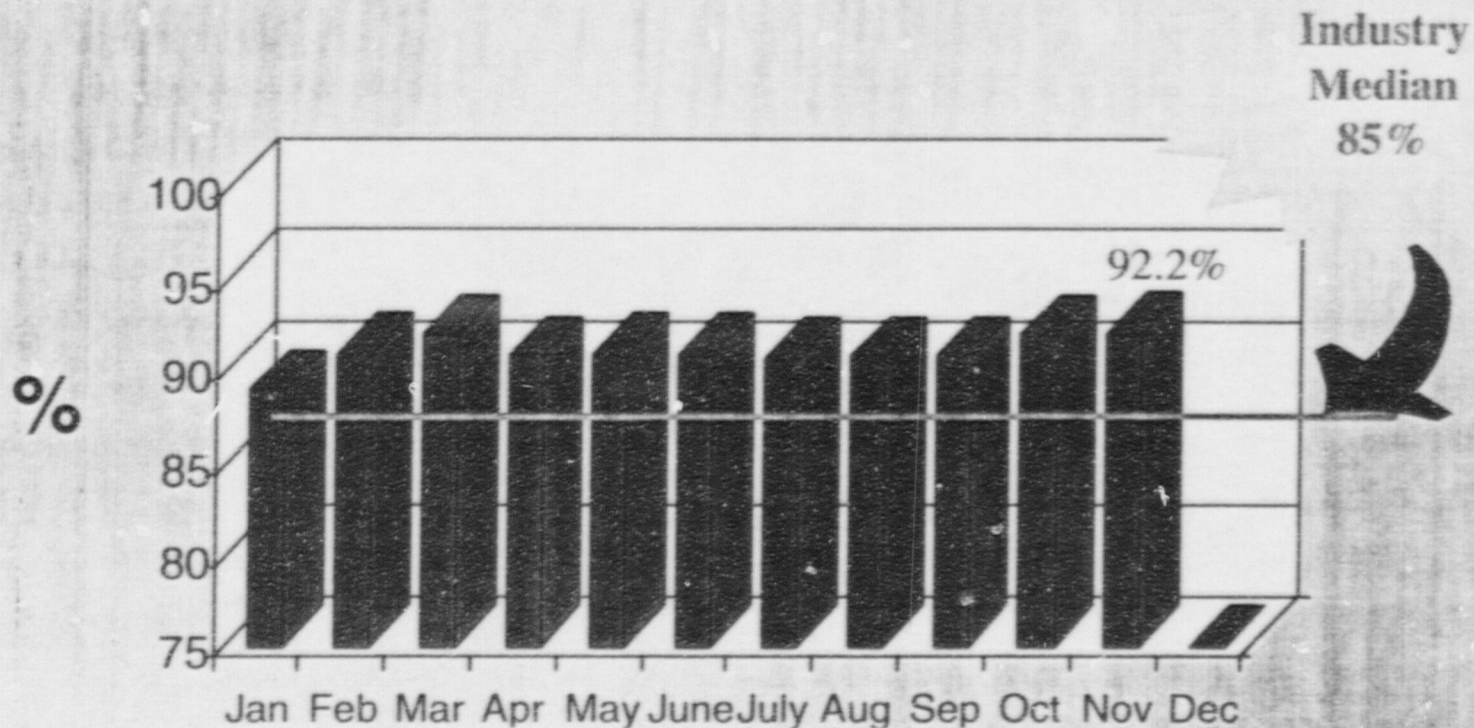
Site Focus Measures YE 1997

Vision Measures					
Capacity Factor in Top 25%					
Non-Fuel Production Cost in Top 10					
INPO Rating in Top 25%					
NRC SALP Score in Top 25%					
Zero Recordable Injuries					
Zero Reportable Environmental Events					
Site Focus Areas					
	Self Assessments S1	Process Improvements S1	Equipment Reliability S1	Cost S1	Training S2
Number of HP-Related LERs	% Gross Self Assessment Plans Completed	Milestone Dates For Long-Range Plan	Days Offline Due To Equipment Failure	CNS Non-Fuel O&M Prod Cost	EM&S Accreditation Project
Number of HP-Related NRC 715s	# Of PIP Cause & Prop Resolution > 30 Days	Milestone Dates For Outage Models	TEPR	Project Performance Index (Cost/Sched)	Training Records Retention Project
Self Improvement Goals	# Of PIP Activities > 6 Months Old	Innage Schedule Efficiency	Rework	Services From Others (ESS PSM Vendor)	EM&S ETQS Innovation Project
	QualityPof Root Cause Analysis (RCA)	Non-Outage Corrective Work Order Inventory/Backlog	Equipment/ System Reliability	0734 Budget Performance	OPS Job Task Analysis Upgrade
	Observations Completed	Ctrl. Room Instrument Problems (CRIPS)		Inventory Balance	Plew Loop Project
	% Of Management Observations Completed				ESP Improvement Project
	# Of Benchmarking Plans Completed				Training Effectiveness Measure

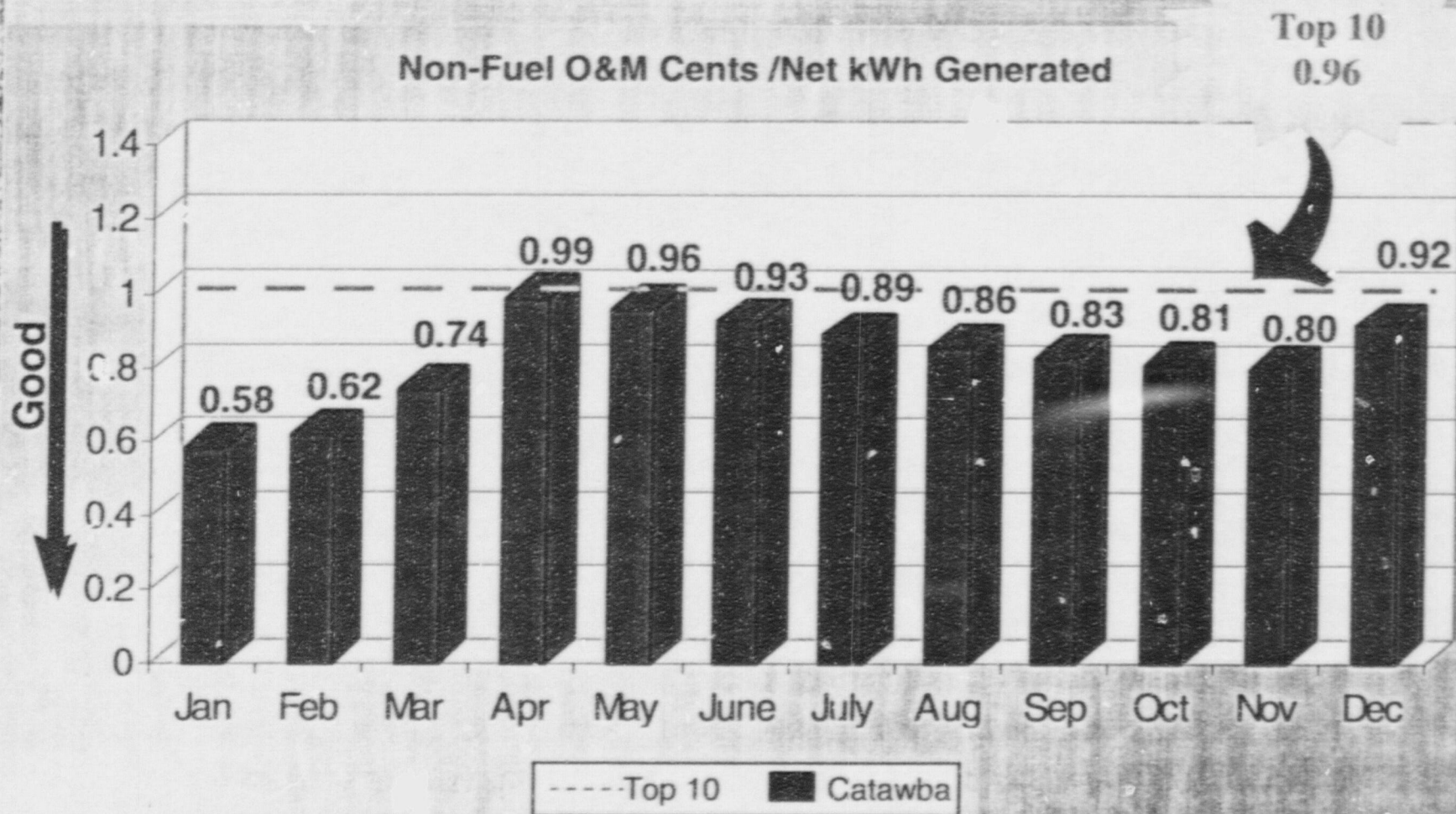
System Nuclear Events/Per Reactor 1997



Catawba Performance Indicator Index 1997



Catawba Non Fuel O&M Vs. Top 10 1997



Organizational Changes - 1997

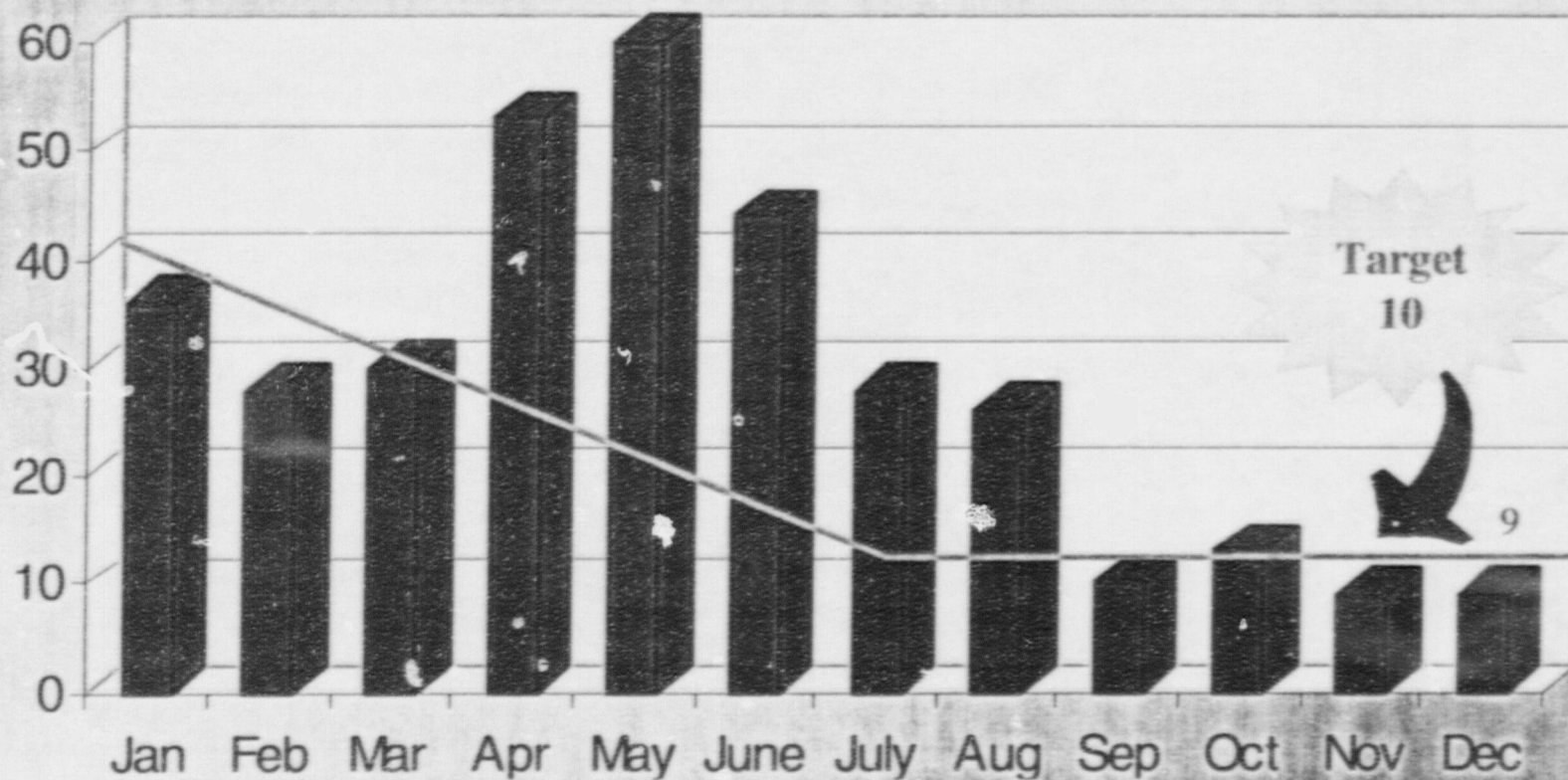
- **Seven Senior Management Changes**
 - Depth of talent available
(average nuclear experience 18 yr.)
 - Slow transition
 - Minimizes effect of change
 - Mentoring of individuals
- **Results**
 - No events as results of changes

Work Management
Ron Jones

Non-Outage, Corrective Work Orders Total Inventory- 1997

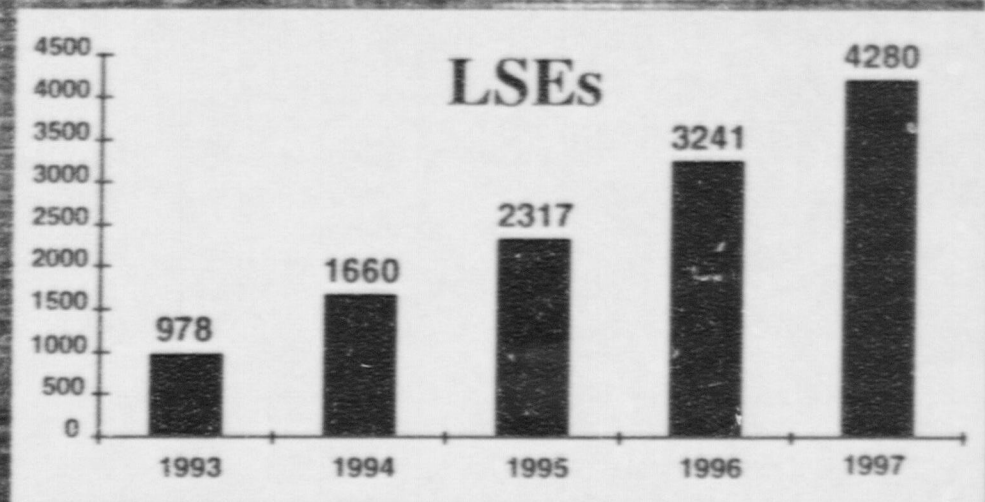
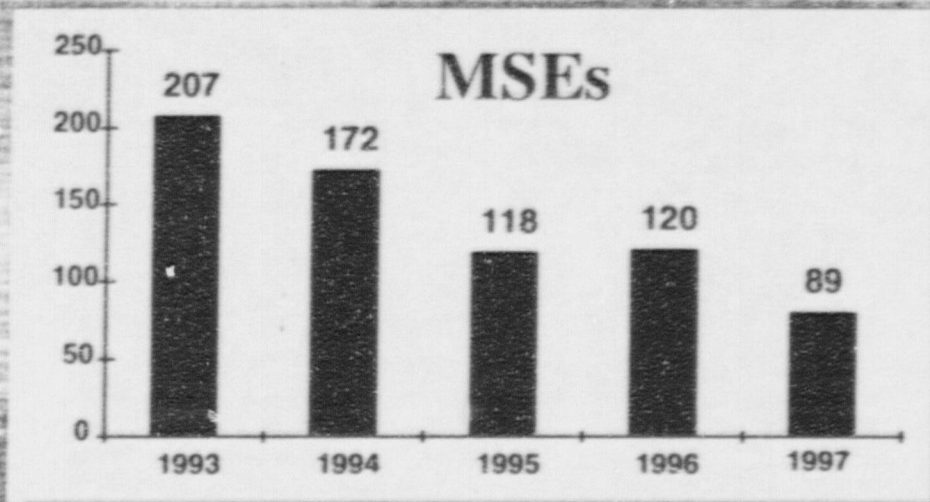


Non-Outage, Corrective Work Orders Backlog > 6 months - 1997

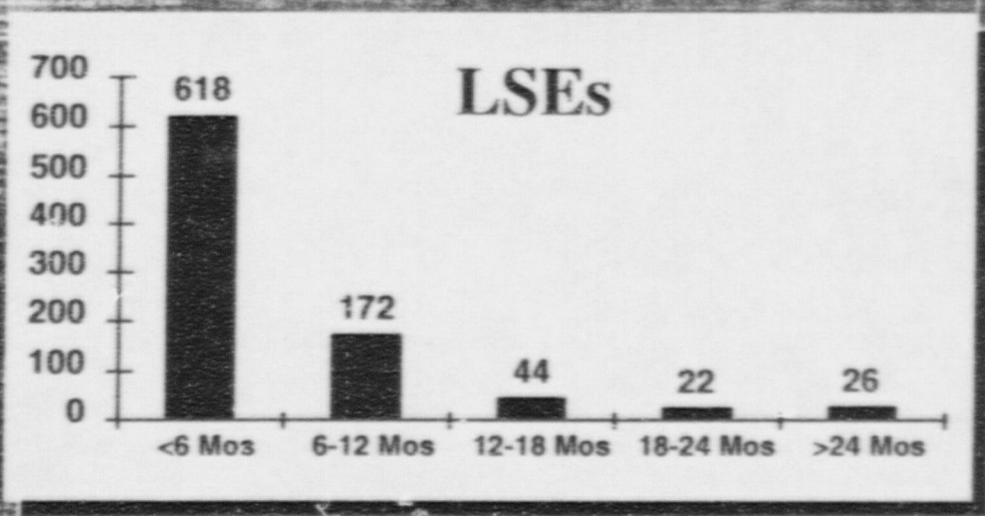
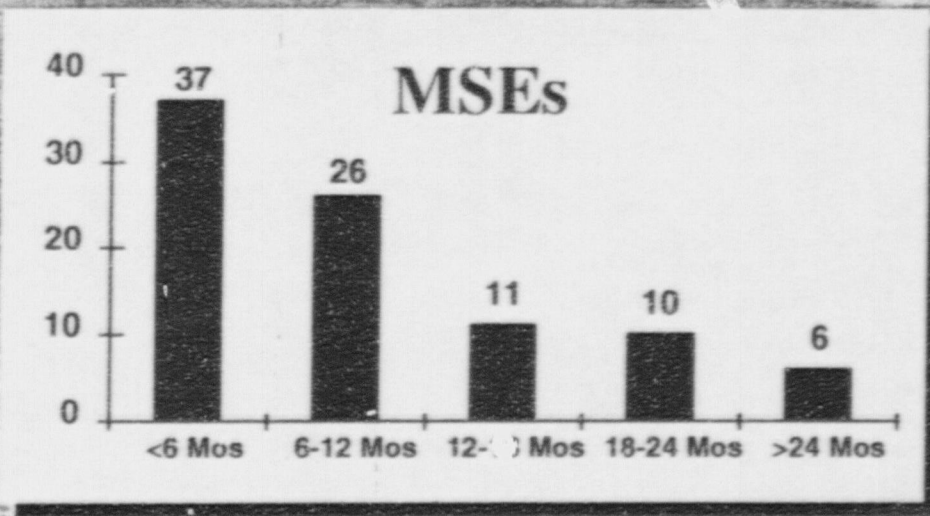


Corrective Action Work Management

PIPs By Year



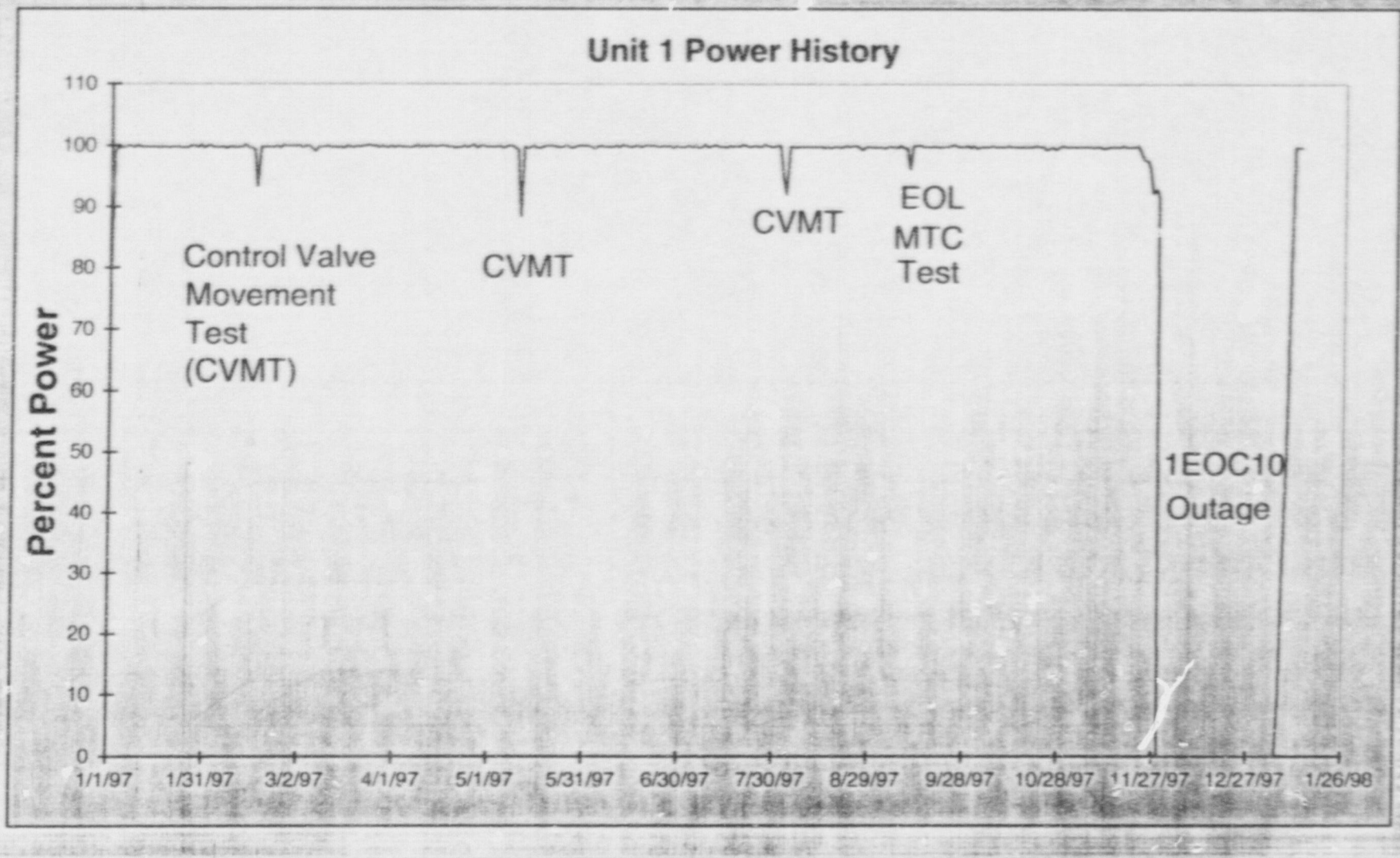
PIP Age Distribution



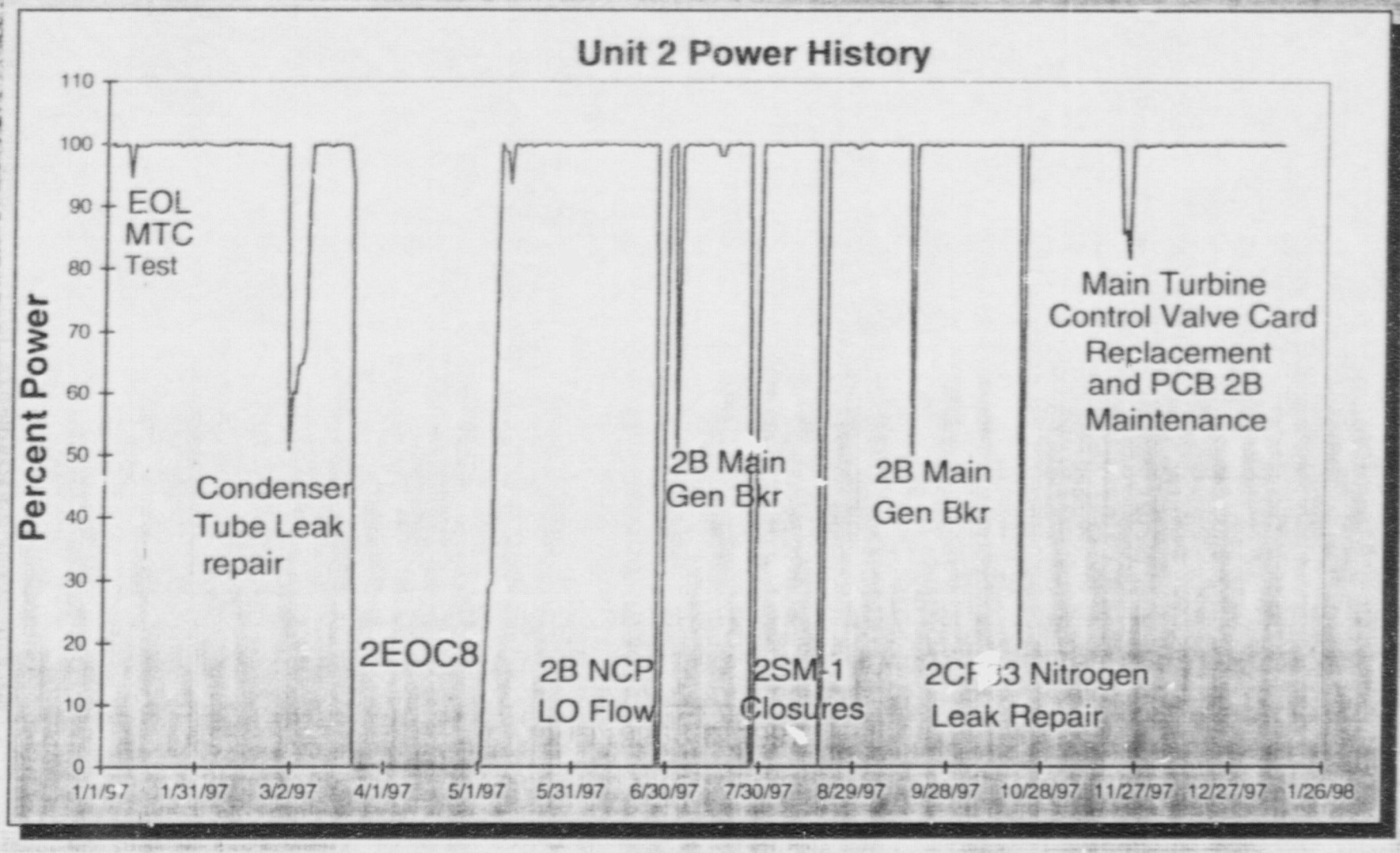
Operational Performance

Ron Jones
Jeff Forbes

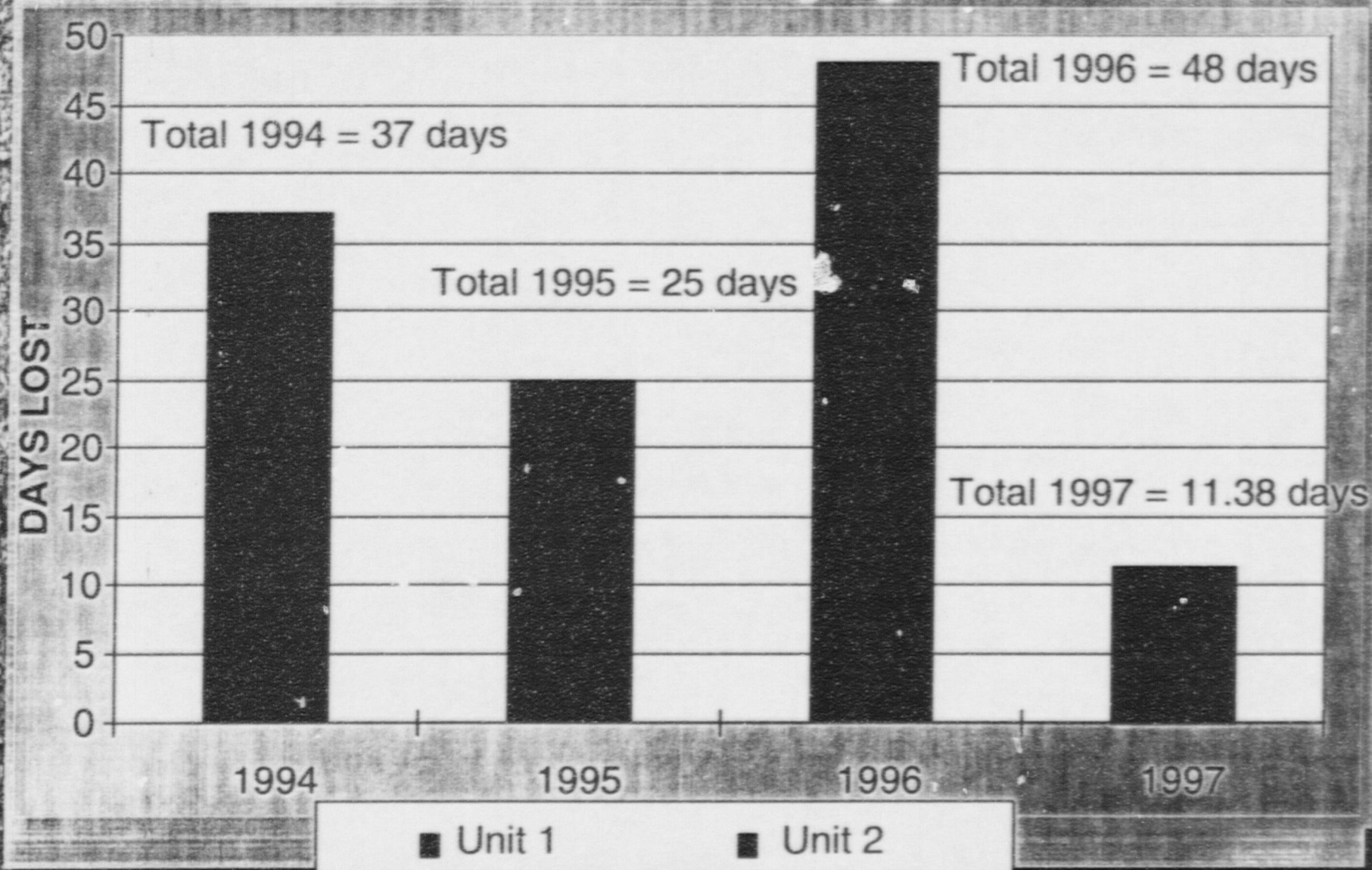
Catawba Unit 1- 1997



Catawba Unit 2- 1997



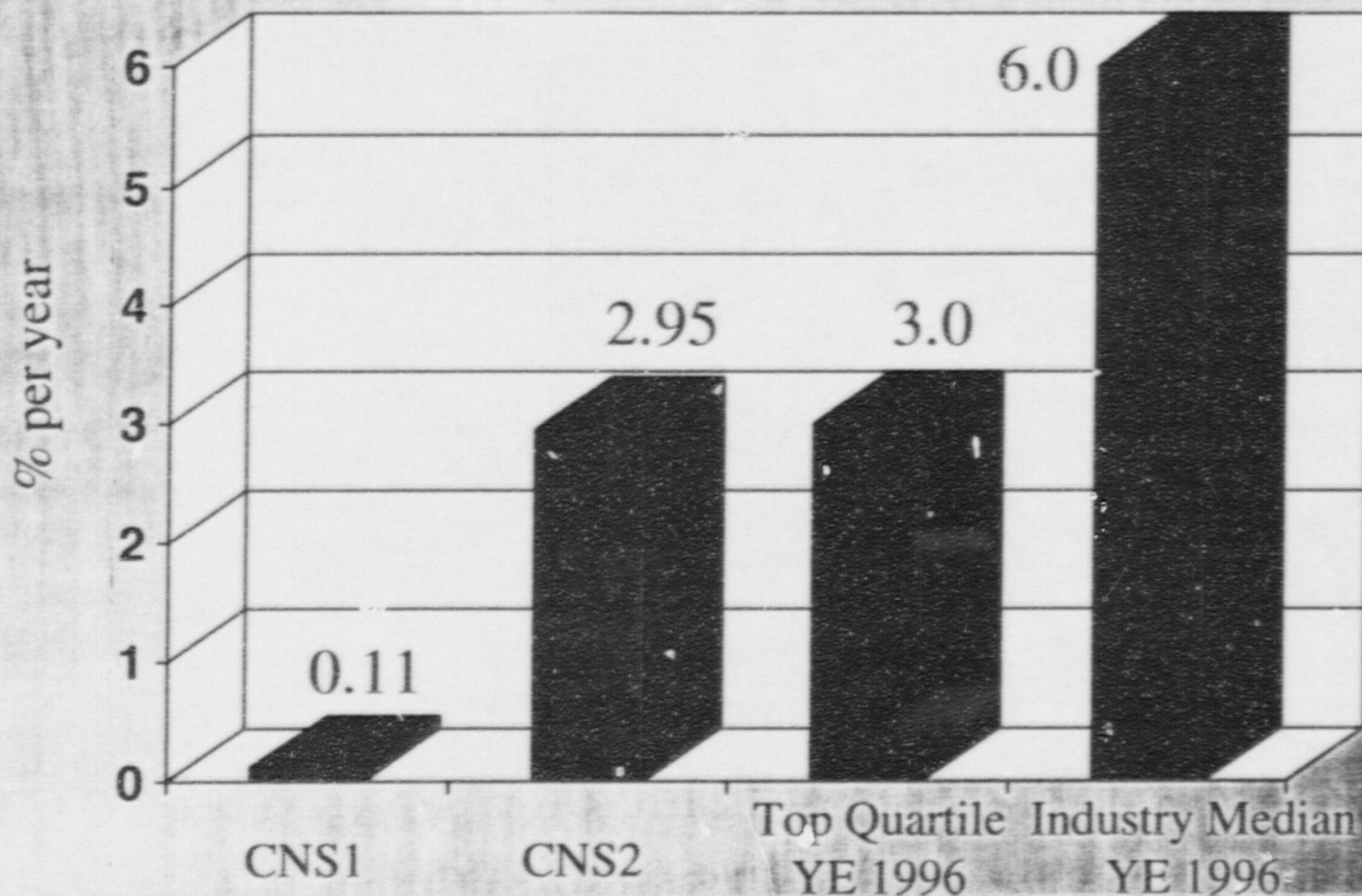
Lost Generation Due to Equipment Problems



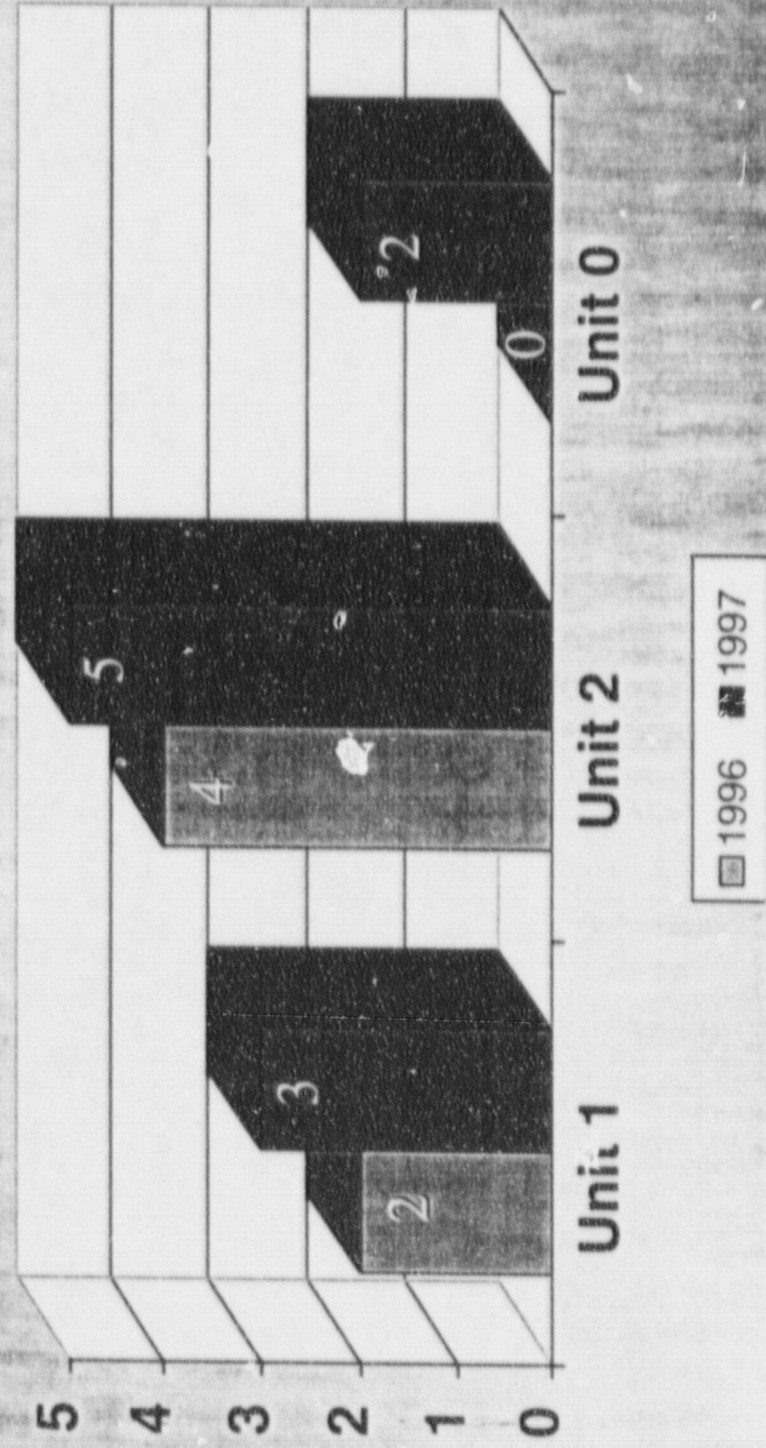
Examples of Equipment Reliability Improvements in 1EOC10

- Replaced Reactor Coolant Pump 1D Motor
- Significantly Reduced Reactor Coolant Pump 1C Motor Vibration
- MSIV Circuit Modifications to Eliminate Spurious Valve Closures
- Upgrade on all 4 Emergency Diesel Generator Battery Chargers
- Replaced Piping in Several Key Systems to Improve Safety
- Completed Mods to Maintain Containment Spray HXs in Wet lay-up
- PM Program on Main Switchyard Transformer Equipment

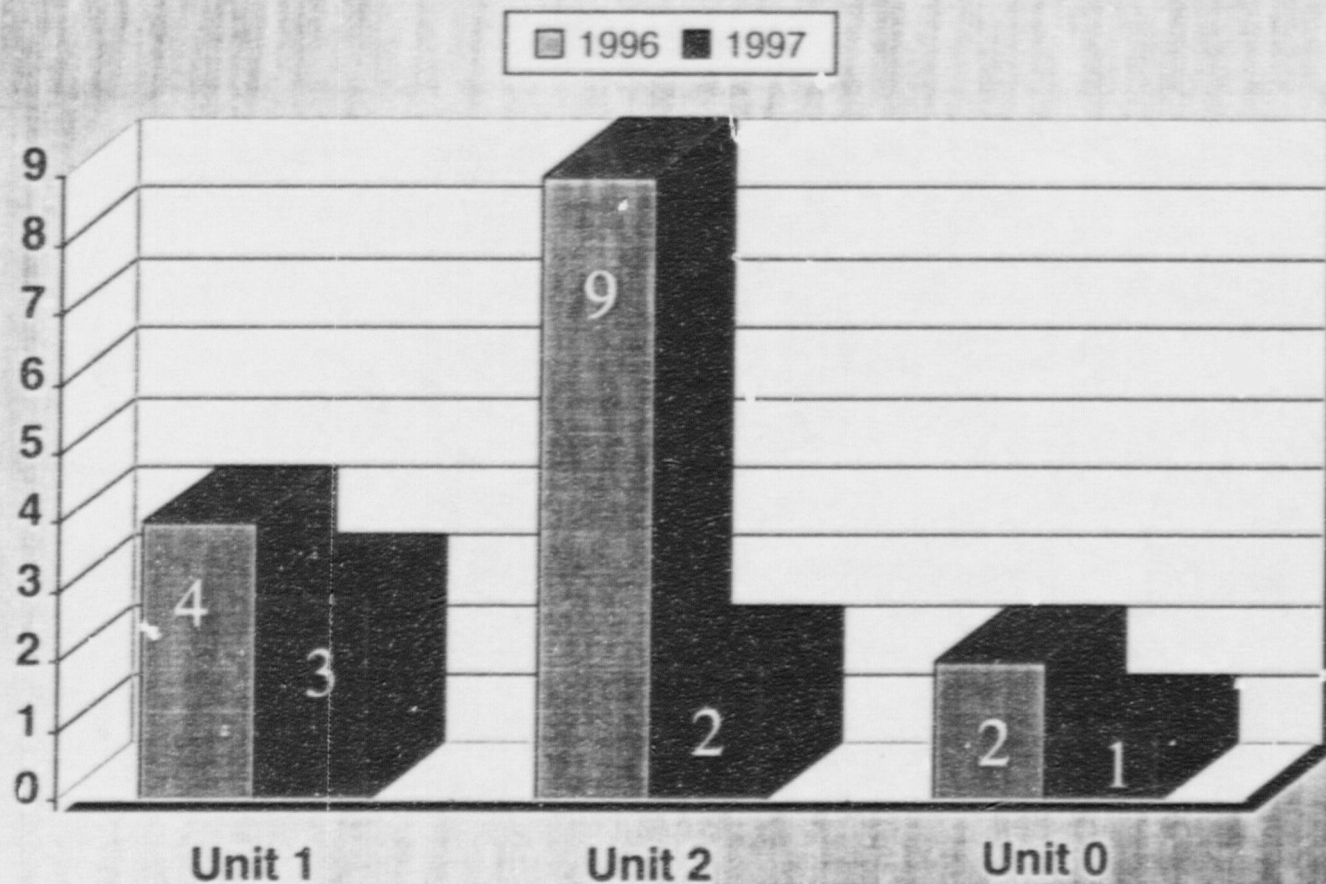
Unplanned Capability Loss Factor 1997



Number of A1 Systems that Returned to A2



Number of A2 Systems that Went to A1 Status



Design Basis Issues

Jeff Forbes

Proactive Identification of Design Basis Issues

- **SSEI**
 - Strength For Self Assessment
 - Calculations Adequate But Room For Improvement
- **7 of 17 LERs Self Identified Design Basis Issues**
- **Examples Of Design Basis Improvements**
 - Steam Generator PORV Single Failure
 - Steam Generator Overfill
 - Auxiliary Feedwater Suction Source
 - FWST Missile Shield
 - Natural Circulation Test

UFSAR Upgrade Project

- **Phase 1 Completed December 1997**
 - Chapter 5 Reactor Coolant System
 - 6800 Items Reviewed
 - 2400 Work Hours
 - Found 312 Discrepancies (4.6 %)
- **Phase 2**
 - Remaining 14 Chapters
 - Target Completion Schedule
 - 5 Chapters 1998 High Priority
 - 9 Chapters 1999-2001

Outage Performance
Ron Jones

1EOC10 Outage Goals

	MIN	TARGET	MAX	ACTUAL
Personnel safety (recordable injuries)	3	2	1	
Human perf. LERs	2	1	0	
Radiation dose (Rem)	119.945	109.041	98.137	133.689
Total O & M cost	-	-	-	
Outage duration (days)	40	36	32	
Environmental solid radwaste generated (FT³)	3000	2750	2500	

Outage Successes

- Continuous focus on nuclear and personnel safety
- Better advanced planning and scheduling
- Use of 6 tools for “Event Free Performance”
- Improved plant reliability returning from outage

Outage Challenges

- Radiological
- Operational

Self Improvement Culture
Gary Peterson

CNS Performance

<u>Key Indicators</u>	<u>1995 Results</u>	<u>1996 Results</u>	<u>1997 Results</u>
HP Related LERs	7	5	3
HP Related NRC Violations	5	7	9
Mispos	27	21	20
Mispo Events	1	0	2
FME Events	7	0	0
Safety/ OSHA Recordables	11	10	8
Rx Management / Significant Events	10/1	7/0	2/0
Missed Surveillances	1	1	3
Maintenance Rework	41	30	12
PIP Initiation Rate (Total PIPs)	2452	3386	4369
MSE PIPs	118	120	89
Self Improvement Culture Rating	10.7	12.1	12.64

Technical Training Facility

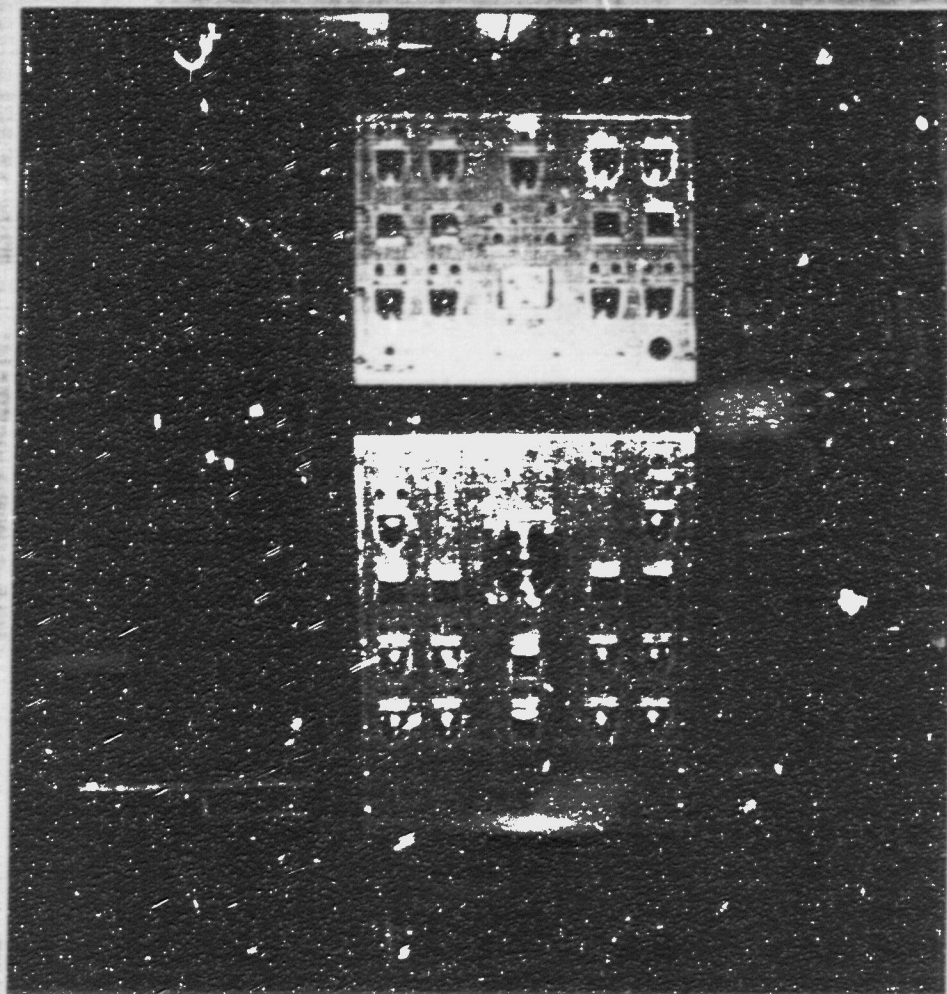
- **On Site Facility Of 46,000 sq. ft.**
 - 6 classrooms, 1 chemistry lab, 1 I&E lab, simulated change rooms
 - Canteen, Training Lab, Flow loop simulator, Assembly Room
- **Provides A Real, Hands-on Operational Environment**
- **Provides An Atmosphere Conducive To Learning**
- **Houses All Of The Technical Training On Site**
- **Flow Loop Simulator Will Be Used To Enhance Traditional Component Training**



Supervisory Tools for Human Performance Success

Six Tools Simulator

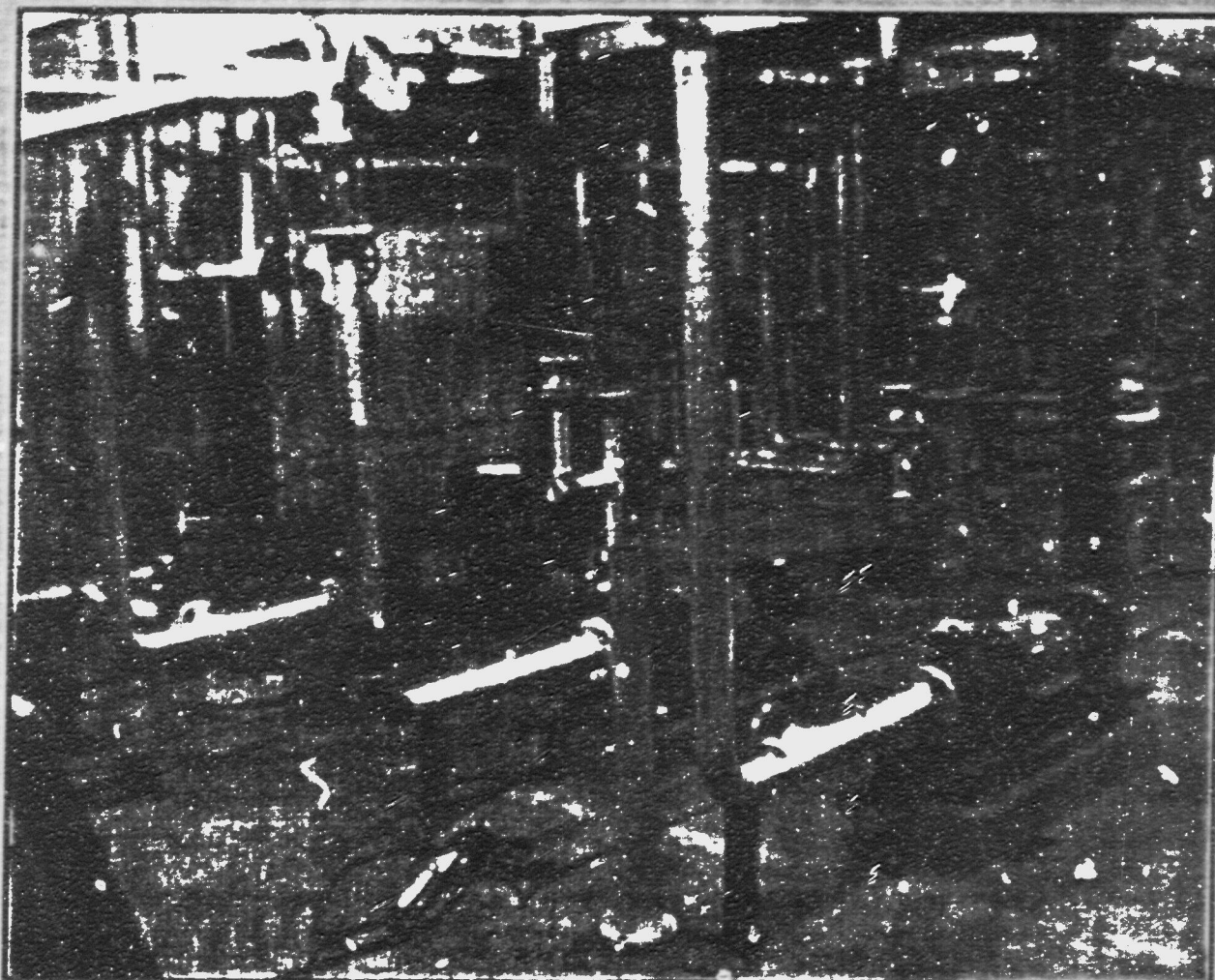
Hands on exercise
in Human
Performance Traps



Supervisory Tools for Human Performance Success

Flow Loop

Mechanical test
loop to study
effects of plant
conditions on
equipment



Industry Initiatives 1997

- **INPO Outage Management Review**
- **Hosted INPO Maintenance Evaluators in Training**
- **Hosted INPO Senior Nuclear Plant Manager Course**
- **Hosted INPO SOER 96-01 Workshop**
- **Benchmarking Visits**
- **Industry Involvement**

Summary
Gary Peterson

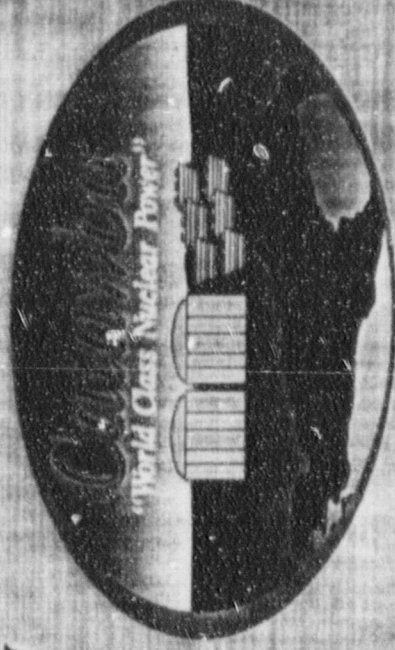
Summary

Challenges

- Equipment Reliability
- Design Basis Issues
- Complacency



Summary



Successes

- Nuclear Safety
- Excellent Generation
- Work Management
- Costs Under Control

**Overall 1997 has been the best year
in Catawba's history!**