

December 24, 1997

See Lpt.

Carolina Power & Light Company
ATTN: Mr. W. R. Robinson
Vice President - Harris Plant
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, NC 27562-0165

SUBJECT: MEETING SUMMARY - SELF-ASSESSMENT PRIOR TO SYSTEMATIC ASSESSMENT
OF LICENSEE PERFORMANCE (SALP) - SHEARON HARRIS NUCLEAR POWER
PLANT - DOCKET NO. 50-400

Dear Mr. Robinson:

This refers to a meeting requested by Carolina Power & Light Company on December 11, 1997, in Atlanta, Georgia. The purpose of the meeting was to discuss your Harris self-assessment prior to the cycle 13 SALP. It is our opinion, that this meeting was beneficial.

Enclosed is a List of Attendees and Carolina Power & Light Handout.

In accordance with Section 2.790 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 letter, please contact us.

Sincerely,

Original signed by M. B. Shymlock

Milton B. Shymlock, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No. 50-400
License No. NPF-63

Enclosures: 1. List of Attendees
2. Carolina Power & Light Handout

cc w/encls: (See page 2)

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PDR ADOCK 05000400
G PDR



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cc w/encls:

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(cc w/encls cont'd - See page 3)

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Distribution w/encls: (See page 4)

Distribution w/encls:

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 R. Baldwin, RII
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 W. Rankin, RII
 D. Thompson, RII
 V. Rooney, NRR
 PUBLIC

NRC Resident Inspector
 U. S. Nuclear Regulatory Commission
 5421 Shearon Harris Road
 New Hill, NC 27562-9998

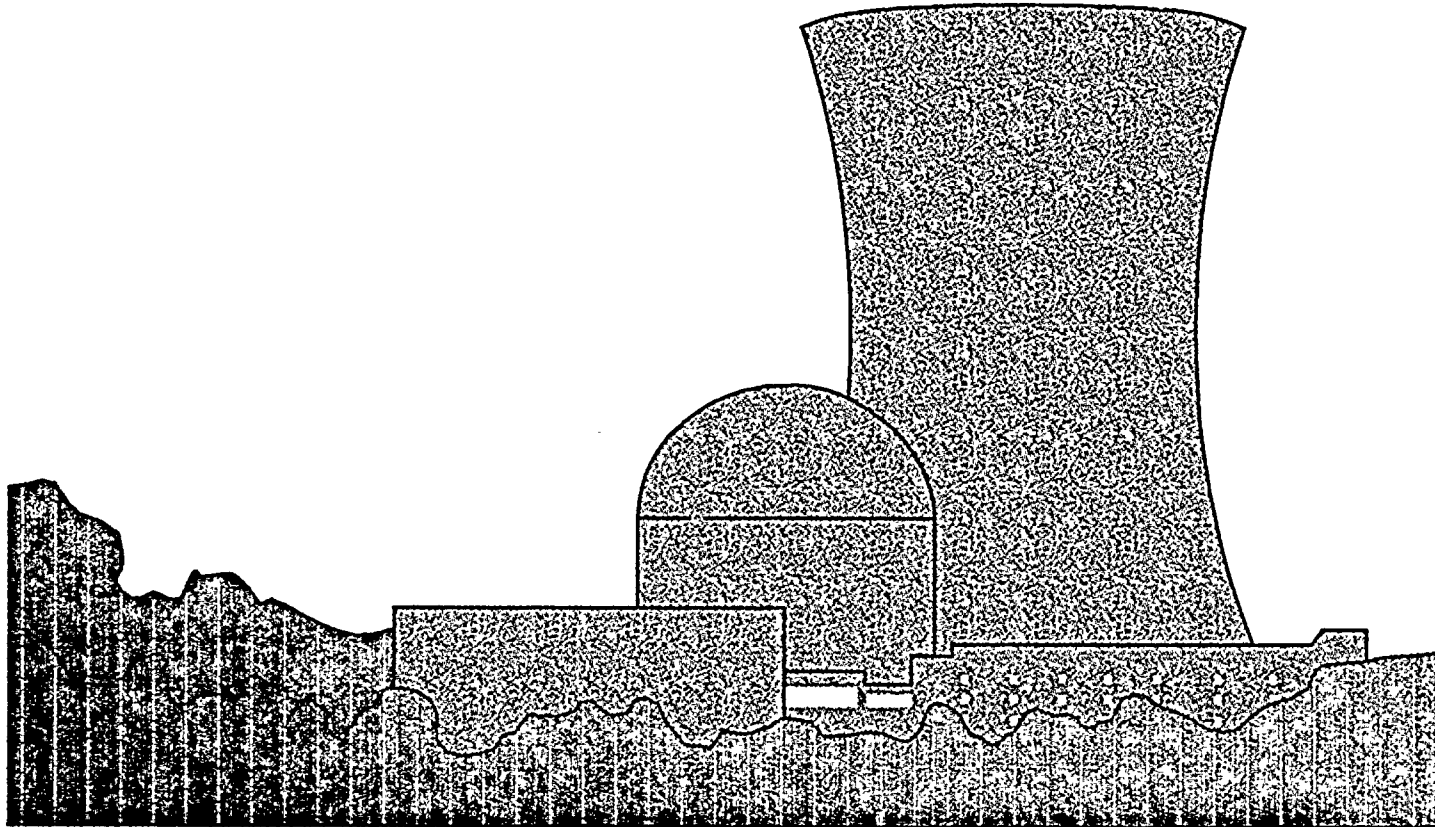
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| OFFICE | RII:DRP | | | | | | | | | | | | | |
| SIGNATURE | <i>GM</i> | | | | | | | | | | | | | |
| NAME | GMacDonald | | | | | | | | | | | | | |
| DATE | 12/17/97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | 12/ /97 | |
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HARRIS NUCLEAR PLANT



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CONSTRUCTION PRODUCTS

NRC Management Meeting
December 11, 1997

NRC Management Meeting

December 11, 1997

Introduction

Bill Robinson

V.P. - Harris Nuclear Plant

Regulatory Programs

Chris VanDenburgh

Mgr. - Regulatory Programs

Plant Performance

Bo Clark

General Manager - HNP

Operations

Bruce Meyer

Mgr. - Operations

Maintenance

Joe Collins

Mgr. - Maintenance

Engineering

Tony Cockerill

Supt. - I&C/Electrical



Plant Support

Karl Neuschafer

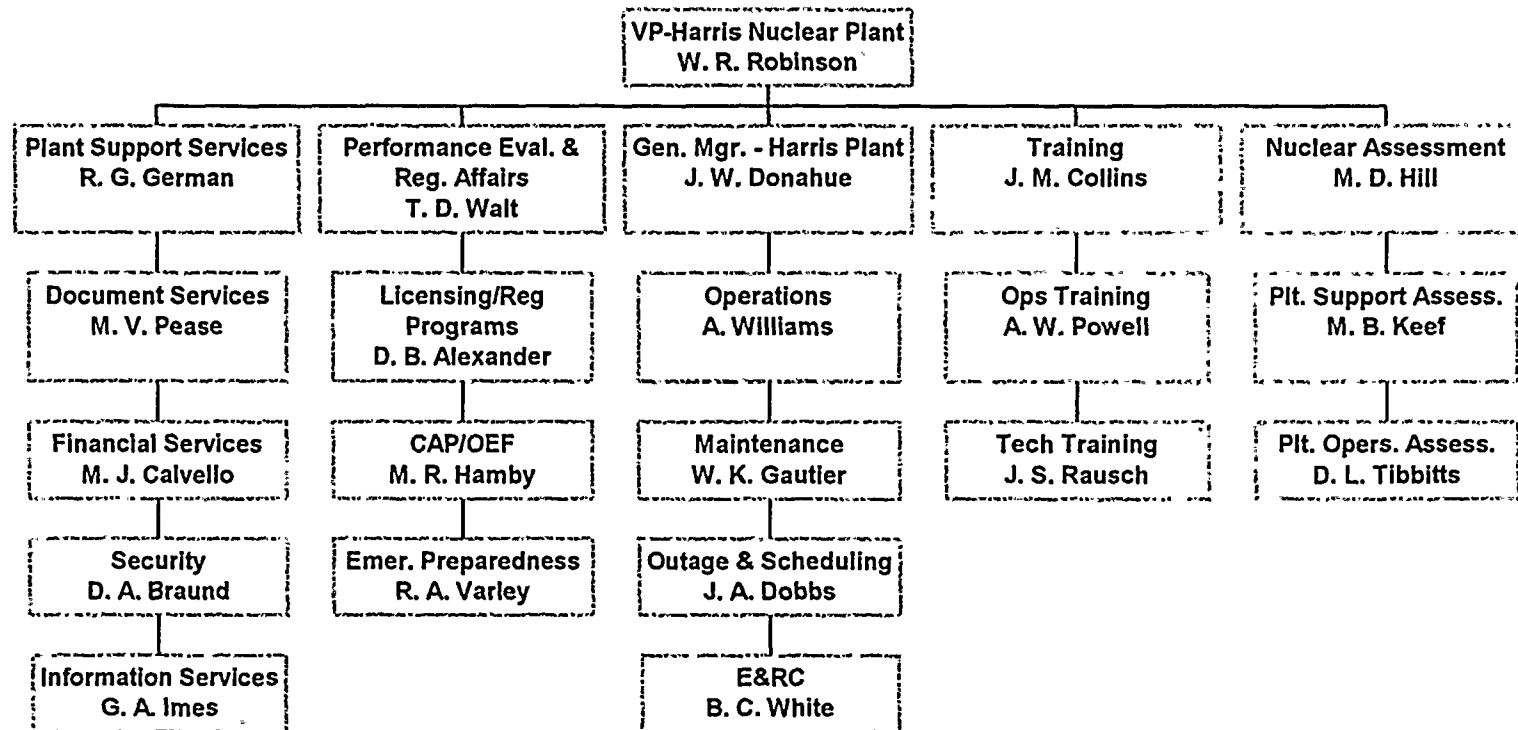
Supt. - Radiation Control

Bill Robinson
Introduction

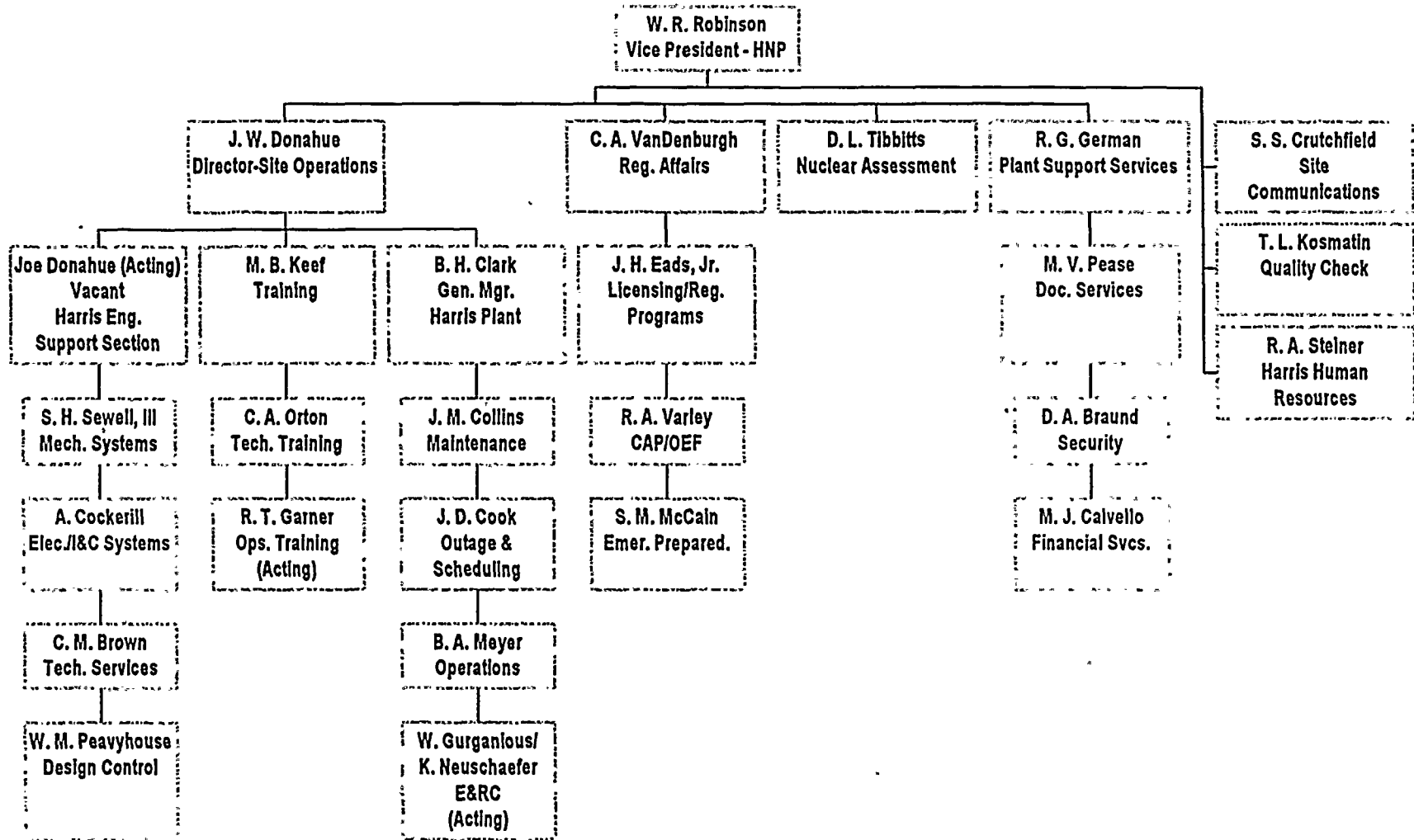
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Harris Nuclear Plant

(Former Organizational Structure)




Harris Nuclear Plant



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Organizations reporting
to another department.

Chris VanDenburgh
Regulatory Programs

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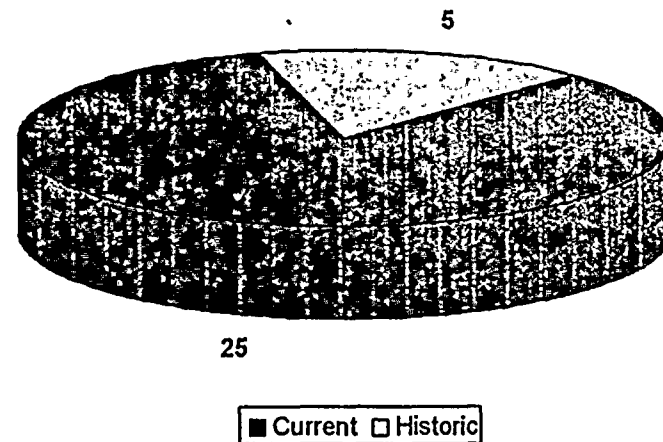
Cited Violations

Current SALP Period

(March 17, 1996 - January 17, 1998)

● 30 Cited Violations

- ◆ 5 - historical performance
- ◆ 25 - current performance



30 Cited Violations

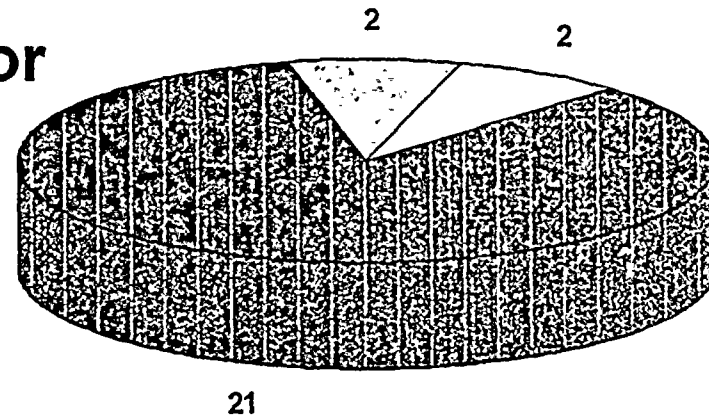
Cited Violations

Current SALP Period

(March 17, 1996 - January 17, 1998)

● Current Performance

- ◆ 21 due to personnel error
- ◆ 10 resulted from LERs

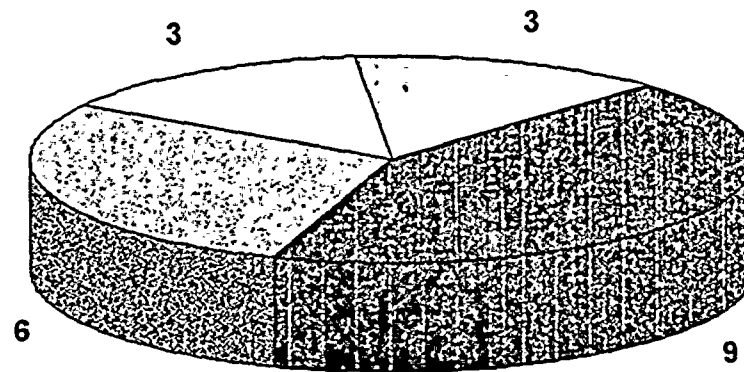


25 Current Performance Violations

Cited Violations

Current SALP Period
(March 17, 1996 - January 17, 1998)

● Most personnel errors in Operations

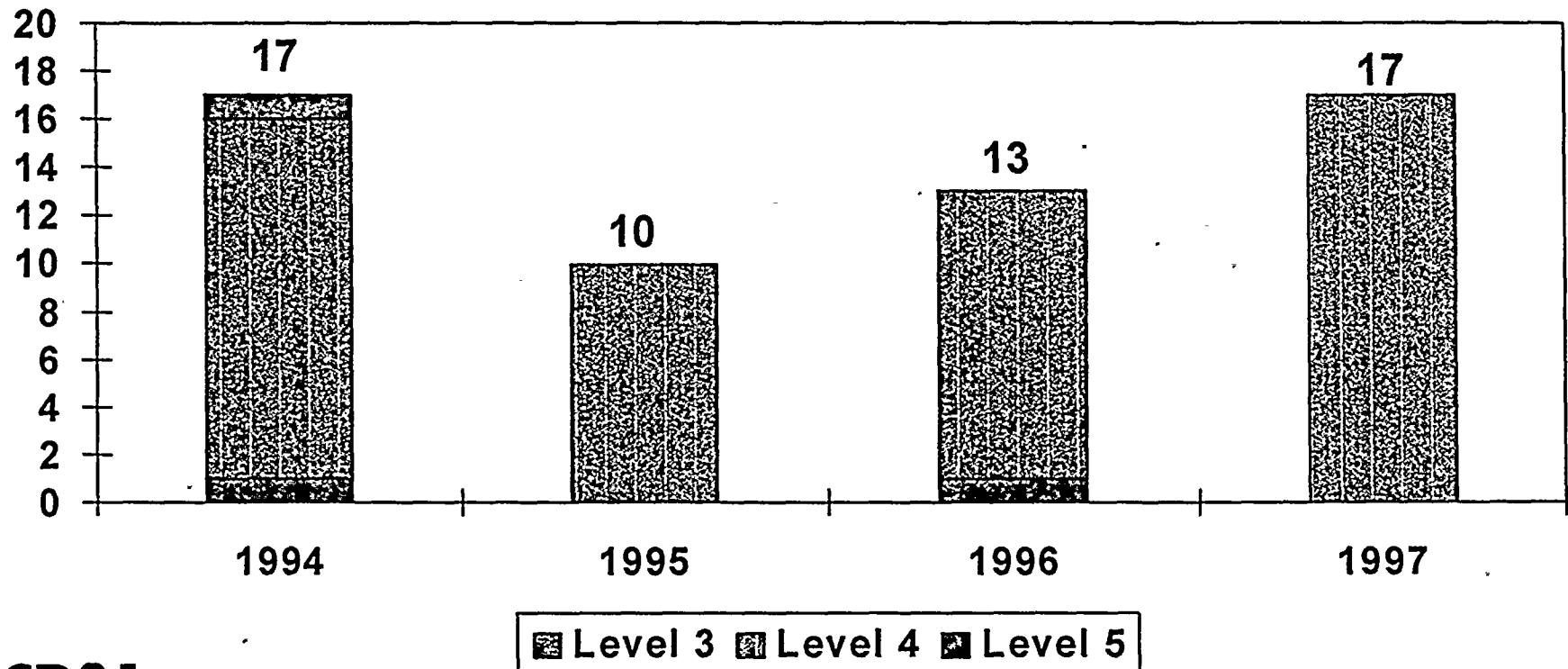


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21 Personnel Error Violations

Cited Violations

Current SALP Period
(March 17, 1996 - January 17, 1998)



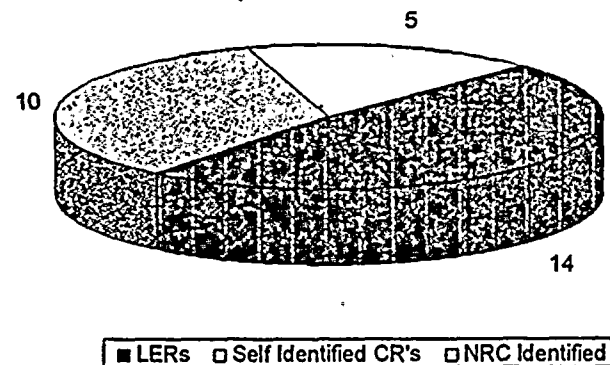
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CONSTRUCTION PROGRAMS & LOGISTICS

Non-Cited Violations

Current SALP Period
(March 17, 1996 - January 17, 1998)

● 29 Non-Cited Violations

- ◆ 14 from LERs
- ◆ 10 from CR's
- ◆ 5 NRC-identified
- ◆ 18 involved personnel error

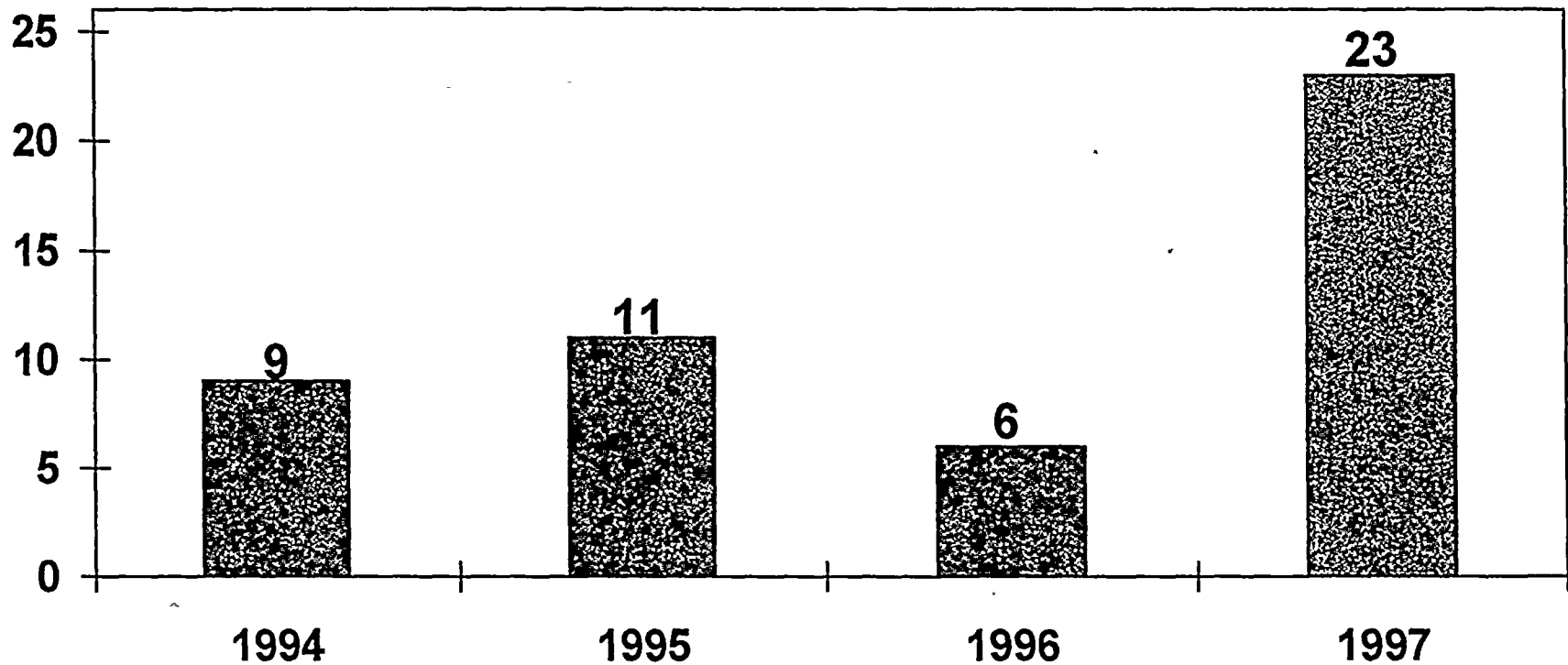


29 Non-Cited Violations

Non-Cited Violations

Current SALP Period

(March 17, 1996 - January 17, 1998)



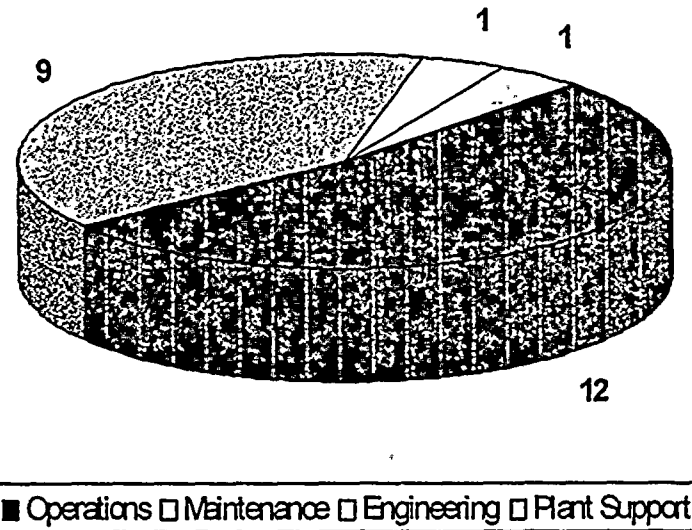
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1998-2000

Licensee Event Reports

Current SALP Period
(March 17, 1996 - January 17, 1998)

● 44 LERs

- ◆ 21 historical performance
- ◆ 23 current performance



23 current performance LERs

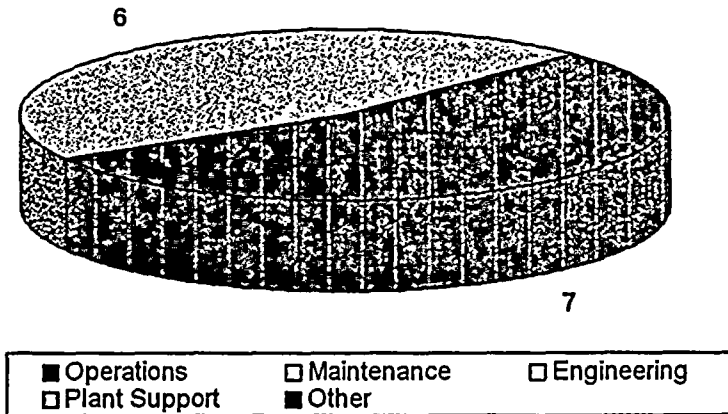
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Licensee Event Reports

Current SALP Period
(March 17, 1996 - January 17, 1998)

● Most involved personnel errors

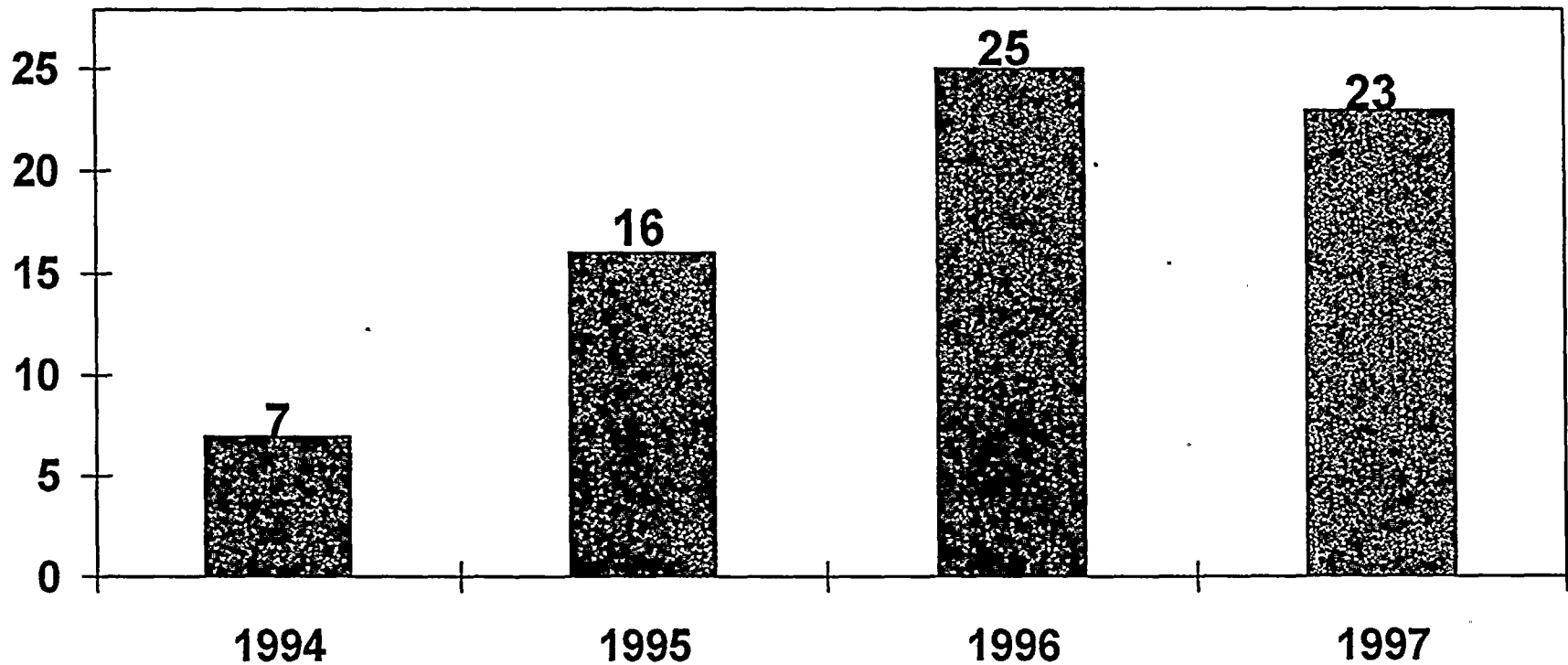
- ◆ 7 Operations
- ◆ 6 Maintenance



13 current performance LERs

Licensee Event Reports

Current SALP Period
(March 17, 1996 - January 17, 1998)



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CORPORATION

FSAR Update

- **385 FSAR changes since beginning of FSAR read through in March 1996**
- **Amendment 48 largest update since original licensing**
- **3448 pages and 517 USQ determinations**
- **Significant level of engineering effort and commitment to accuracy of design documentation**

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CONSTRUCTION PRODUCTS

Technical Specification Surveillance Review

● Purpose

- ◆ Review TS surveillance requirements to ensure that they are completely and correctly reflected in procedures

● Plan

- ◆ Four-person CP&L team
- ◆ Operations, Engineering, Maintenance, Licensing
- ◆ Review 581 surveillance requirements

Technical Specification Surveillance Review

● 82 Initial reviews completed

● 88 Total findings

- 8 significant findings
- 38 minor findings
- 38 improvement items
- 4 no action required

Technical Specification Surveillance Review

● Significant Findings

- ◆ Pressurizer level and related volume
- ◆ Spent fuel pool water level (LER 97-021-00)
- ◆ Containment refueling water level
- ◆ EDG day tank minimum level
- ◆ HVAC heater measurement
- ◆ FHB & RABEES bleed flow path (LER 97-21-01)
- ◆ FHB & RABEES charcoal flow (LER 97-021-01)
- ◆ AFW isolation quarterly slave relay testing

Summary

- **Violations**

- ◆ Most involved personnel errors in Operations

- **Licensee Event Reports**

- ◆ Large number due to effective GL 96-01 review and continuing review efforts

- **FSAR Update**

- ◆ Continued commitment to accuracy of design basis

- **TS Surveillance Review**

- ◆ Effective in finding complex discrepancies

Bo Clark
Plant Performance

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World Class Goals

*We are an organization of
high goals, standards, and
expectations.*

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Construction Products Limited

World Class Goals

World-Class -

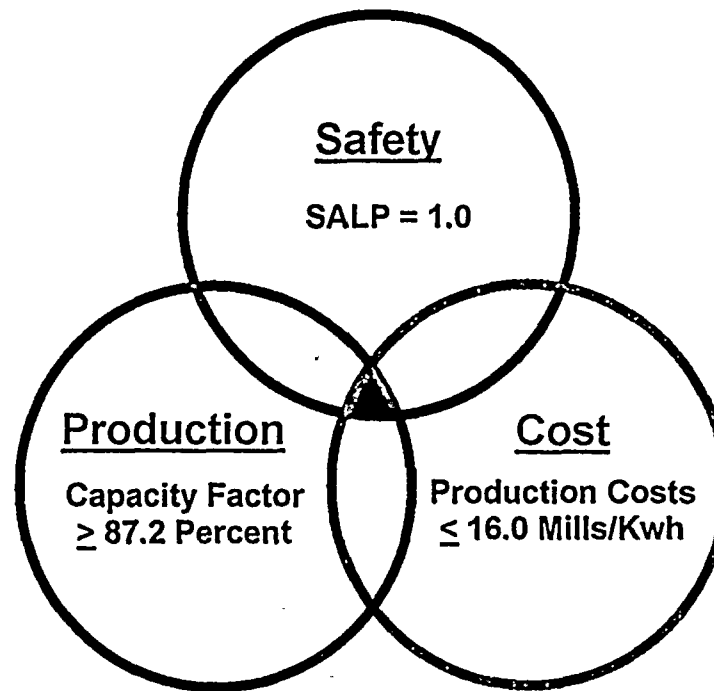
To be above the mean of the upper quartile of all operating plants in the United States in the areas of Safety, Production and Cost.

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1999 Harris Plant Goals

Three-Year Average



Human Resources
Improve Human Resources to World Class Levels

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Key Business Plan Initiatives

● Safety

- ◆ Improve human performance
 - ▣ Reduce errors

● Production

- ◆ Improve refueling outage management
- ◆ Improve plant and equipment reliability
- ◆ Improve fuel reliability

Key Business Plan Initiatives

● Human Performance

- ◆ Build a winning team
- ◆ Effective personnel performance management
- ◆ Communicate, communicate, communicate

Current Performance Against 1999 World Class Goals

Three-Year Averages

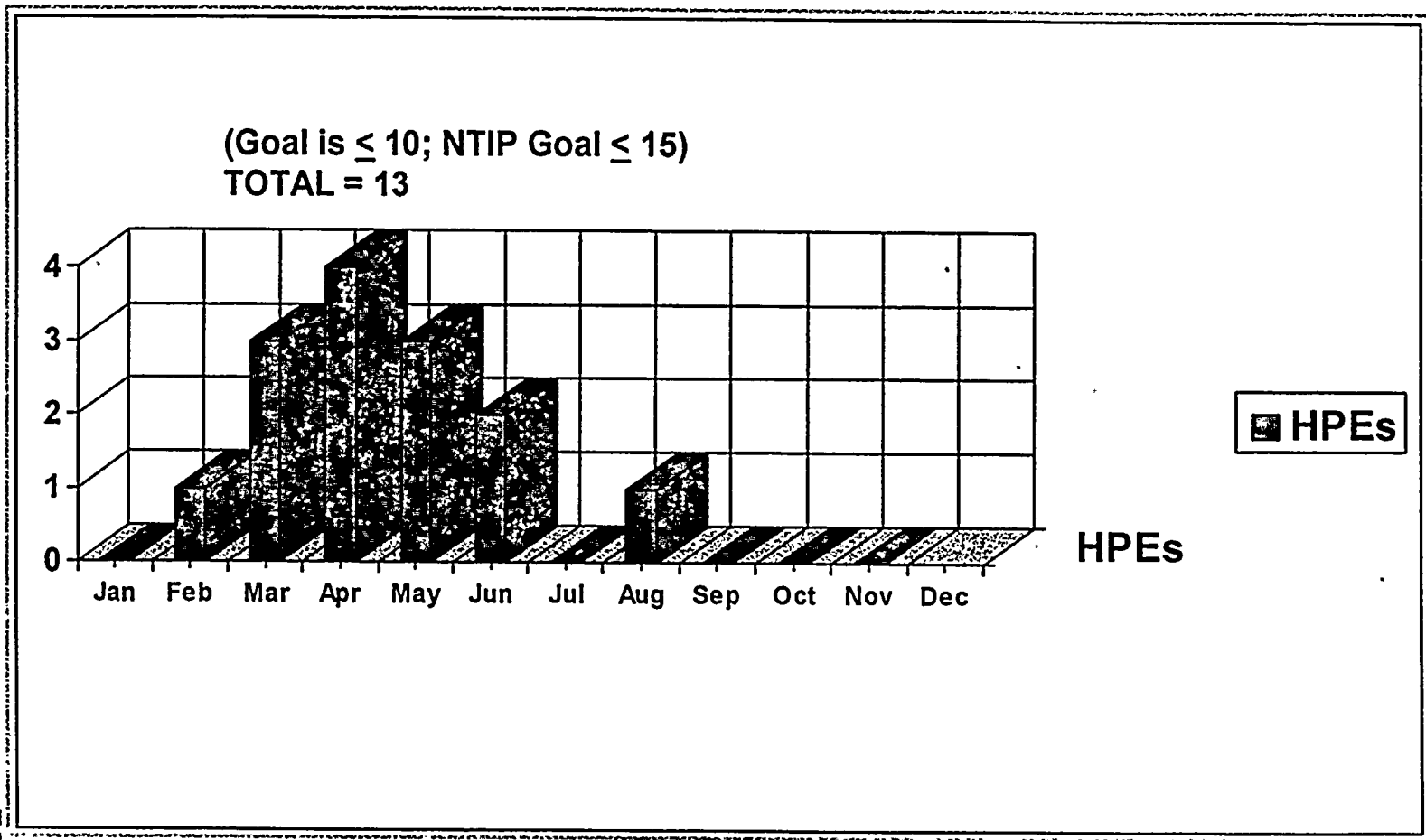
| | Current | Goal |
|--------------------------|---------|-------|
| Safety | 1.0 | 1.0 |
| Production | 83.7 | 87.2% |
| Cost (Mills/KWHR) | 17.2 | 16.0 |

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The Need for a Plan

- **We were not performing to our expectations**
 - ◆ **Human performance errors**
 - ◆ **Station equipment performance**
 - ◆ **Refueling outage planning and execution**

1997 Human Performance Events



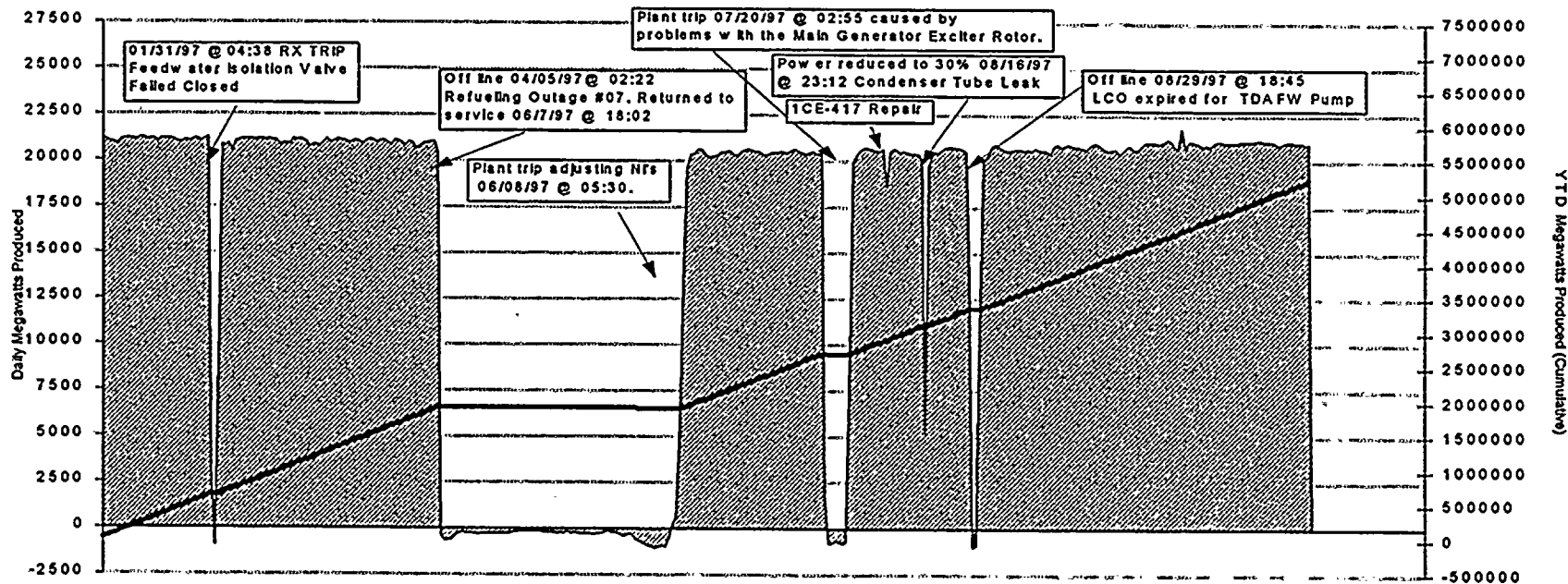
The Need for a Plan

- **We were not performing to our expectations**
 - ◆ **Human performance errors**
 - ◆ **Station equipment performance**
 - ◆ **Refueling outage planning and execution**

Plant Capacity

| | | |
|------------------------|--------------------------------------|------|
| Power Generation Group | 1997 HNP Daily Net Generation | 1997 |
|------------------------|--------------------------------------|------|

1997 YTD NET GENERATION 5247160 MWhr
 1997 YTD CAPACITY FACTOR 76.11 PERCENT
 NET MDC = 880 MW



| 1997 | January | February | March | April | May | June | July | August | September | October | November | December |
|---------|---------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|
| MON MWH | 637260 | 554879 | 651701 | 75947 | -8467 | 400231 | 475450 | 569404 | 610656 | 648281 | 631818 | |
| MON CAP | 99.60 | 96.01 | 101.85 | 12.28 | -1.32 | 64.64 | 74.31 | 88.99 | 98.62 | 101.18 | 102.04 | |
| YTD MWH | 637260 | 1192139 | 1843840 | 1919787 | 1911320 | 2311551 | 2787001 | 3356405 | 3967061 | 4615342 | 5247160 | |
| YTD CAP | 99.60 | 97.90 | 99.26 | 77.51 | 61.33 | 61.88 | 63.69 | 66.92 | 70.40 | 73.56 | 76.11 | |

1997 Capacity Factor performance goal = 83.30%



The Need for a Plan

- We were not performing to our expectations
 - ◆ Human performance errors
 - ◆ Station equipment performance
 - ◆ Refueling outage planning and execution

Refueling Outage Planning & Execution

- Planning milestones--missed/late
- Outage length
 - ◆ Planned - 39 days
 - ◆ Actual - 63 days
- Outage cost
 - ◆ Budgeted = \$23.2 million
 - ◆ Actual = \$29 million

Core Value

- **We are a self-correcting organization**
 - ◆ **Line-driven assessments**
 - ◆ **INPO-requested assistance**
 - ◆ **NAS**
 - ◆ **PES**
 - ◆ **NSRC**
 - ◆ **NSOC**

The Plan

- Our recognition of a need for a step change in performance
- Recommendation for a structured plan by our Nuclear Safety Review Committee
- Formal structured plan was developed by the line organization

Desired Outcome of Improvement Plan

Operational excellence as defined by:

- ◆ Certainty
- ◆ Dependability
- ◆ Efficiency

- ◆ Accuracy
- ◆ Predictability
- ◆ Timeliness

The Plan

Four Simple, Key Initiatives

- **Build a Winning Team**
- **Reduce Our Errors**
- **Fix Our Problems**
- **Plan Our Work, Work Our Plan**

Initiative # 1
Build a Winning Team

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Initiative 1: Build a Winning Team

- ***Key Objectives***

- ◆ **Improve site performance by getting the right people for every supervisory position**
- ◆ **Develop and retain top-notch employees and remove poor performers with effective use of the EPM process**
- ◆ **Gain, through effective communications, employee understanding for rapid and dramatic improvement**



Initiative 1: Build a Winning Team

● *Results*

Turnover

- Replaced 6 managers/supervisors
- 41 Improvement Plans initiated /2 terminations to date

Increased quality of leadership

- Employee feedback (Operations/Maintenance)

Improved understanding of realities facing Harris Plant and CP&L

- NSRC Member - “Most significant impressions: the extent to which essential features of NTIP understood and embraced by the staff down through all levels.....”

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Initiative #2
Reduce Errors

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Initiative 2: Reduce Errors

- *Key Objectives*

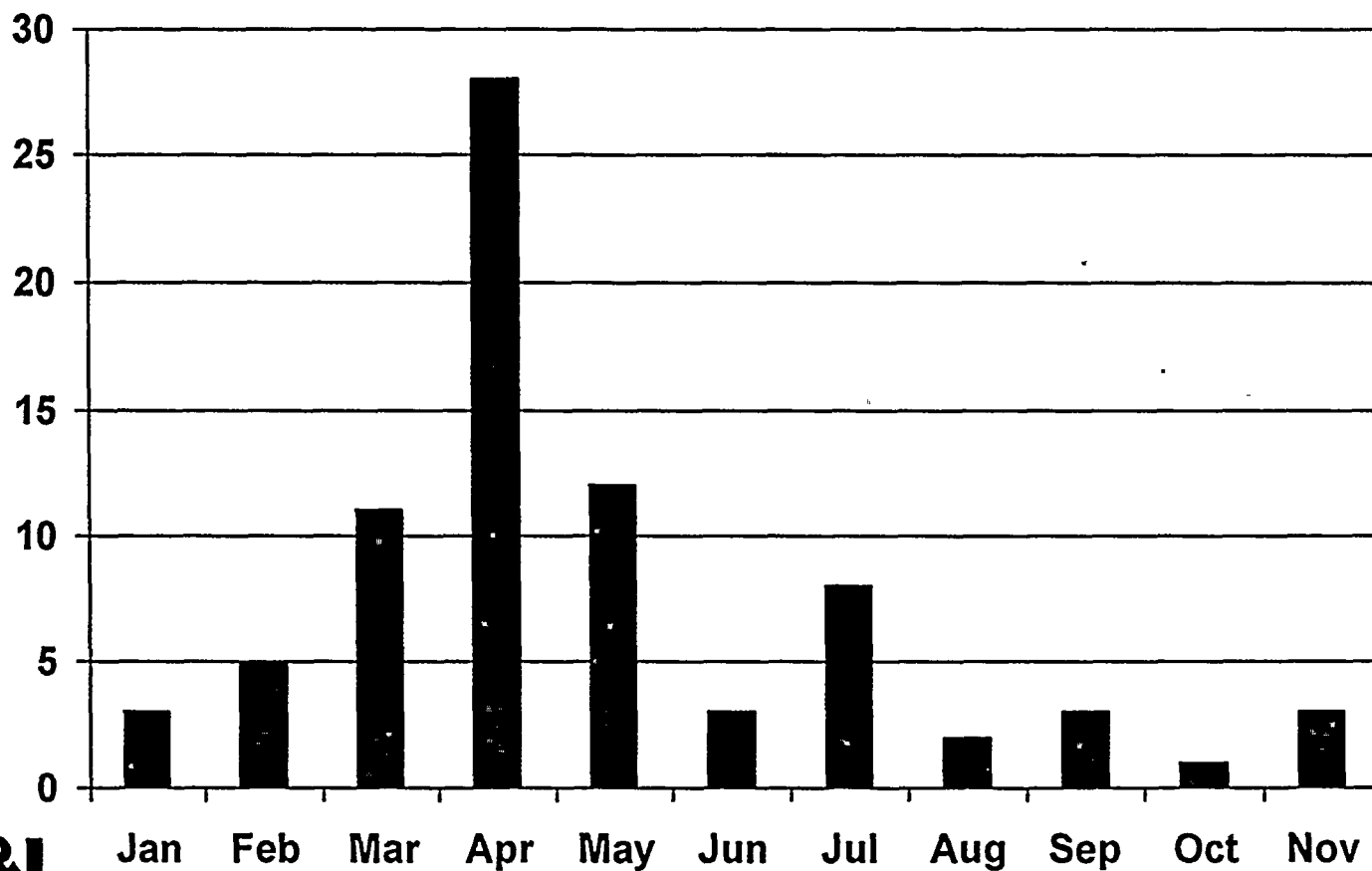
- ◆ Reduce human performance events
- ◆ Use “STAR” as our error reduction tool.
- ◆ Improve manager and supervisor coaching skills and emphasize positive reinforcement of desired behaviors

Initiative 2: Reduce Errors

- ***Results to date***

- ◆ **Reduction in human performance events**
 - **12 events in first half of 1997 - 1 event in last half of 1997**
- ◆ **Closeout of previous NAS operations concerns**
 - **7 of 9 ready for closure - remaining 2 by the end of 1997**
- ◆ **No repeat findings in human performance in the 1998 INPO evaluation**

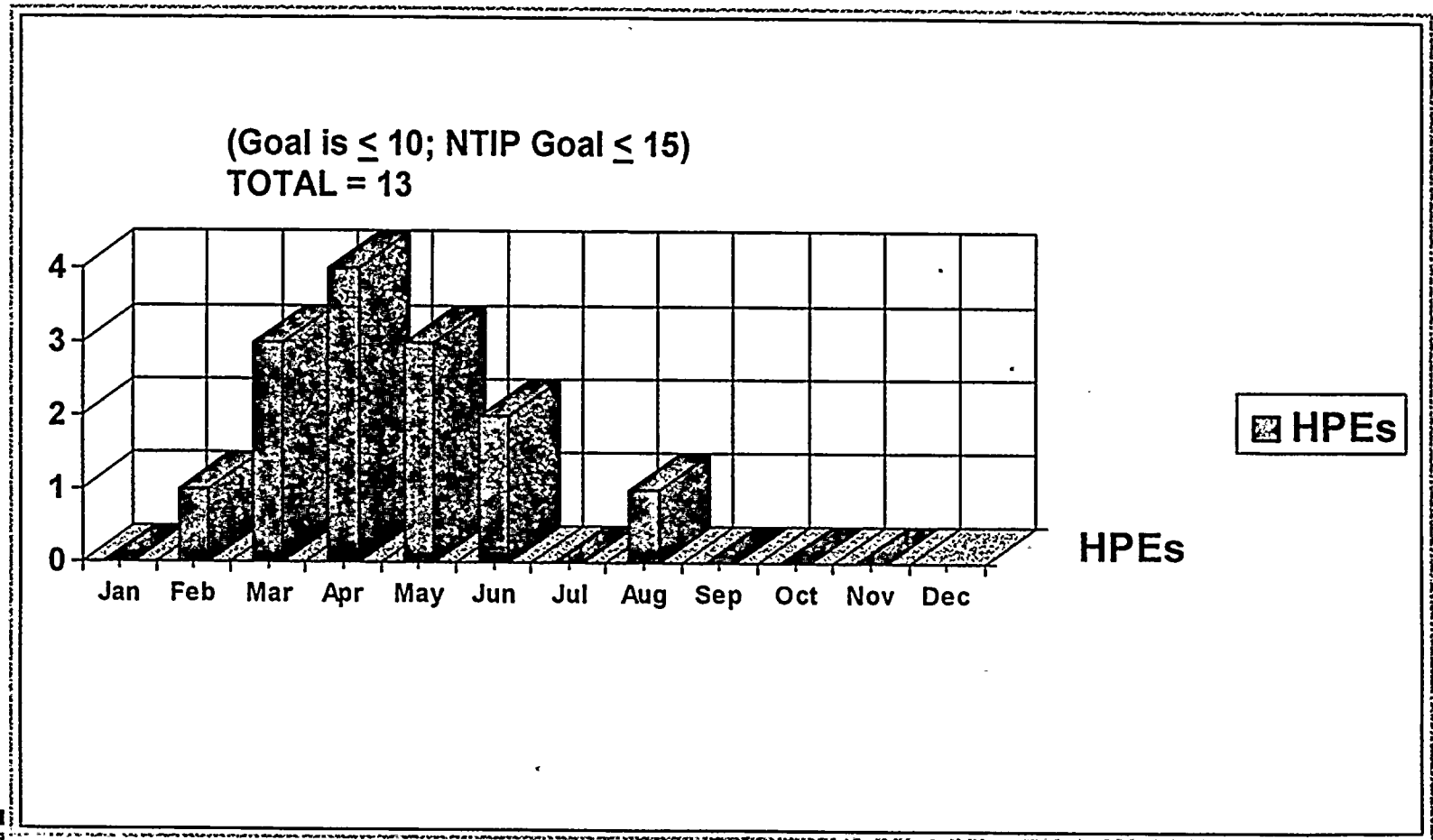
Lack of STAR



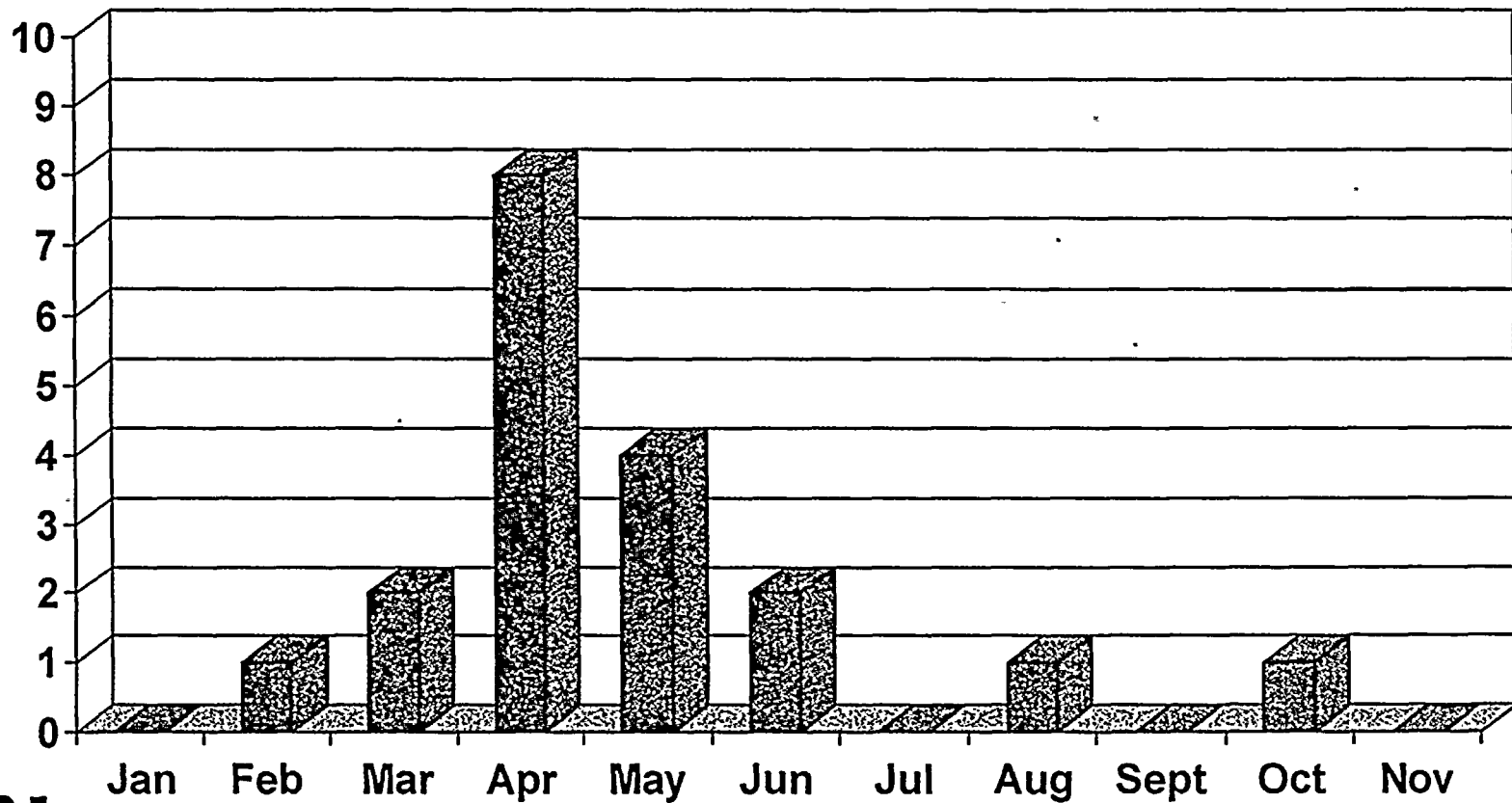
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PROPERTY MANAGEMENT



1997 Human Performance Events



Clearance Errors



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A Division of CP&L

NAS Operations Concerns

(Management Requested Surveillance)

- ◆ **Shift qualifications**
- ◆ **Use of STAR**
- ◆ **Communications**
- ◆ **Plant status**
- ◆ **Questioning attitude**
- ◆ **Condition reporting**
- ◆ **Poor work practices**
- ◆ **Overtime**
- ◆ **Management in the field**

Initiative #3
Fix Our Problems

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Initiative 3: Fix Our Problems

● *Key Objectives*

- ◆ Identify adverse conditions and trends before significant events occur
- ◆ Improve the effectiveness of the corrective actions
- ◆ Perform critical self-assessments
- ◆ Management communication of corrective actions and self-assessment results information to their employees
- ◆ Improve plant reliability



Initiative 3: Fix Our Problems

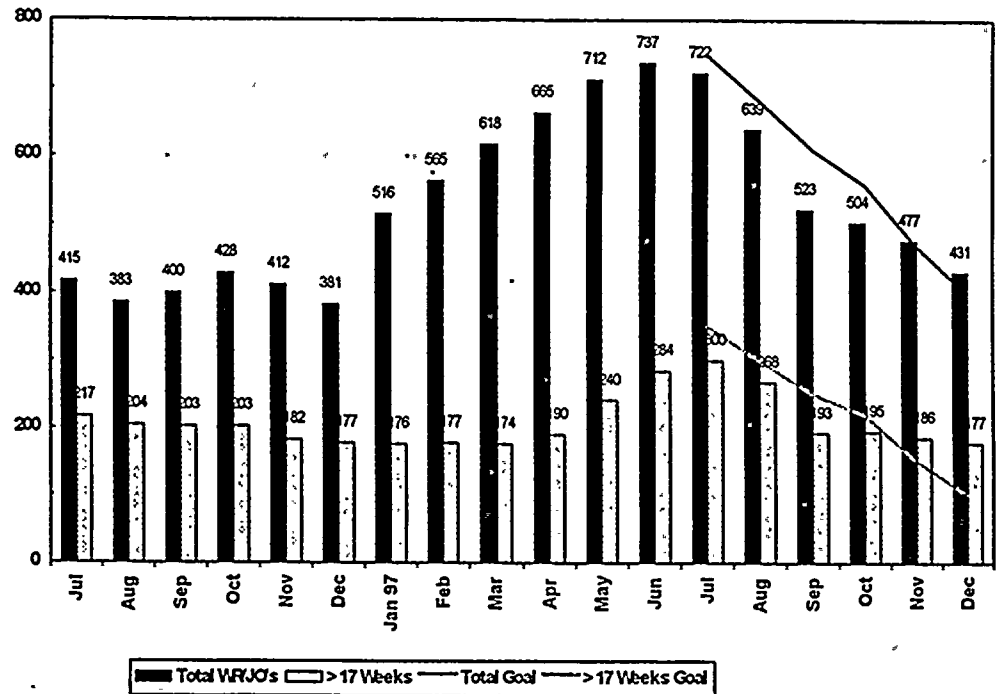
- *Indicators*

- ◆ Open corrective actions less than 1200 by 1/98
- ◆ Corrective action investigation average age for new CR's will be less than 30 Days by 1/98
- ◆ Meet capacity factor goals in 1998
- ◆ Maintenance backlog 400 by 1/98

Improvement Initiatives

● Integrated schedule

- ◆ Backlog reduction
- ◆ Reduce rework



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CONSTRUCTION PROJECTS

* April 4 - June 6, 1997
 Refueling Outage

Improved Plant Reliability

- **Secondary Reliability Improvement Plan**
- **Feedwater Isolation Valve mechanical and solenoid performance**
- **Renewed focus on problem-solving and troubleshooting**
- **Maintenance Rule implementation**

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Initiative #4

***Schedule Our Work
and Work Our
Schedule***

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—————

Schedule Our Work and Work Our Schedule

- **Objectives**

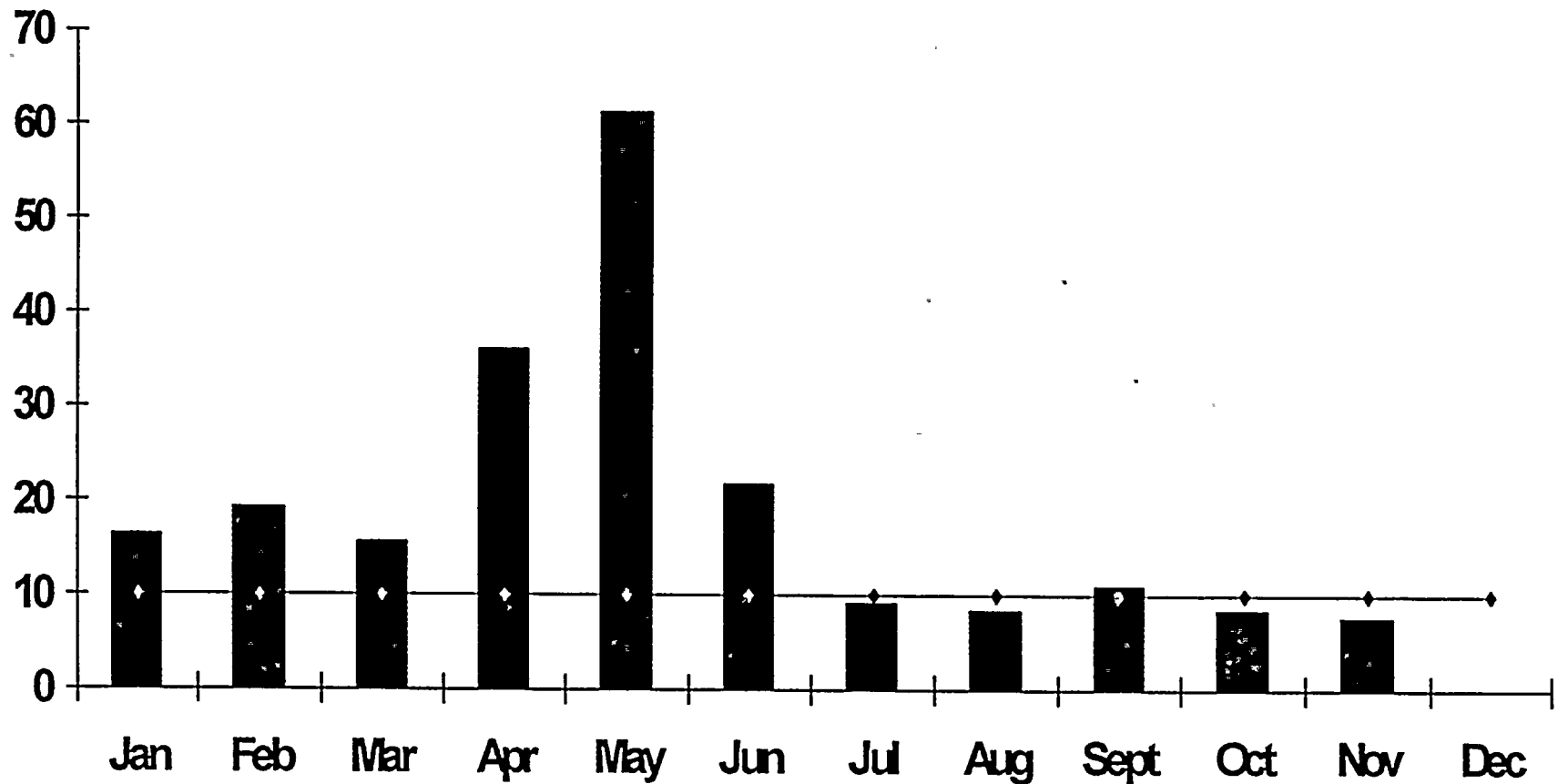
- ◆ Establish stability/predictability of daily routine
- ◆ Efficient utilization of resources
- ◆ Improved outage performance
- ◆ Maintain system defense-in-depth

Schedule Our Work and Work Our Schedule (continued)

• Indicators

- ◆ 100% Outage milestones met - on track**
- ◆ Site overtime $\leq 10\%$**
- ◆ <400 tickets total by 1/98**
- ◆ 90% daily schedule adherence**
- ◆ Reduce work delays by 10%**

Site Overtime - 1997



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Construction Performance

■ Monthly % ← Goal

Bruce Meyer
Operations

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CONSTRUCTION PRODUCTS & LOGS

Operations

- Strengths
- Challenges
- Improvement Initiatives

Operations

**SAFE, ERROR-FREE
OPERATION
EVERY TASK, EVERY JOB
EVERY SHIFT**

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Strengths

- Operations management involvement
- Operations professionalism and leadership
- Conservative plant operations
- Operator training
- Self-assessment

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Challenges

- Improving human performance
 - ◆ Constant focus “every shift”
- Plant equipment awareness
- Workload management
 - ◆ Procedure changes
 - ◆ Refueling outage preparations

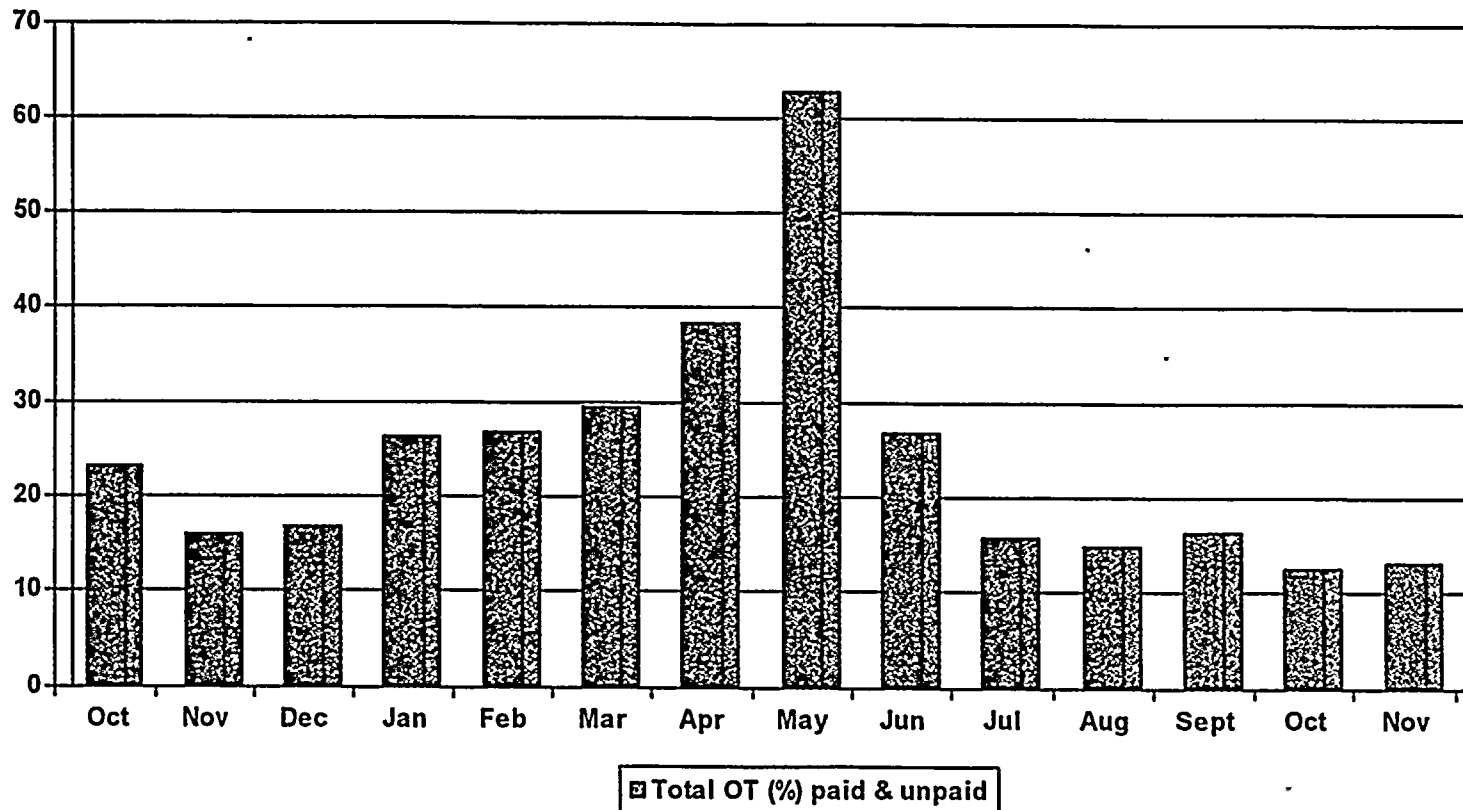
Improvement Initiatives

- **Refocus plant on shift operations**
 - ◆ **Work coordination**
 - ◆ **New shift schedule**
 - ◆ **Emergent work meeting**
 - ◆ **Plan-of-the-Day meeting**
 - ◆ **Shift distractions**
 - ◆ **Operations sets priorities**

Improvement Initiatives

- **Refocus Operations on shift operations**
 - ◆ “Every task, every job, every shift”
 - ◆ Additional operators assigned to shift
 - ◆ Protect days off
 - ◆ Mid-shift briefs
 - ◆ Removed Control Room distractions
 - ◆ Safe, error-free operation - “STAR”

Operations Overtime



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1996 - 1997

STAR Training Analysis

LOR Sessions

| | 4-97 | 5-97 | Trend |
|---|-------------|--------------|-------|
| ● Check redundant indications/diverse indications | 29/47 (62%) | 26/39 (67%) | ↑ |
| ● APP usage | 51/57 (89%) | 30/30 (100%) | ↑ |
| ● Match plant parameters with possible causes | 48/80 (60%) | 90/100 (90%) | ↑ |
| ● ACT (procedure usage) | 28/53 (53%) | 56/68 (82%) | ↑ |
| ● REVIEW | 17/33 (52%) | 49/76 (64%) | ↑ |

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Trend Legend: Improving ↑ Stable → Declining ↓

Improvement Initiatives

● Reorganized Operations

- ◆ Reevaluated supervisors and managers
- ◆ Reevaluated shift crews

● Accountability

- ◆ Effective Performance Management
- ◆ Performance Improvement Plans
- ◆ Positive reinforcement

Improvement Initiatives

● Training

- ◆ Direct Operations Manager involvement
- ◆ Higher expectations of operators
- ◆ Emphasis on competencies
- ◆ New evaluation system
- ◆ Team job-performance measures

Improvement Initiatives

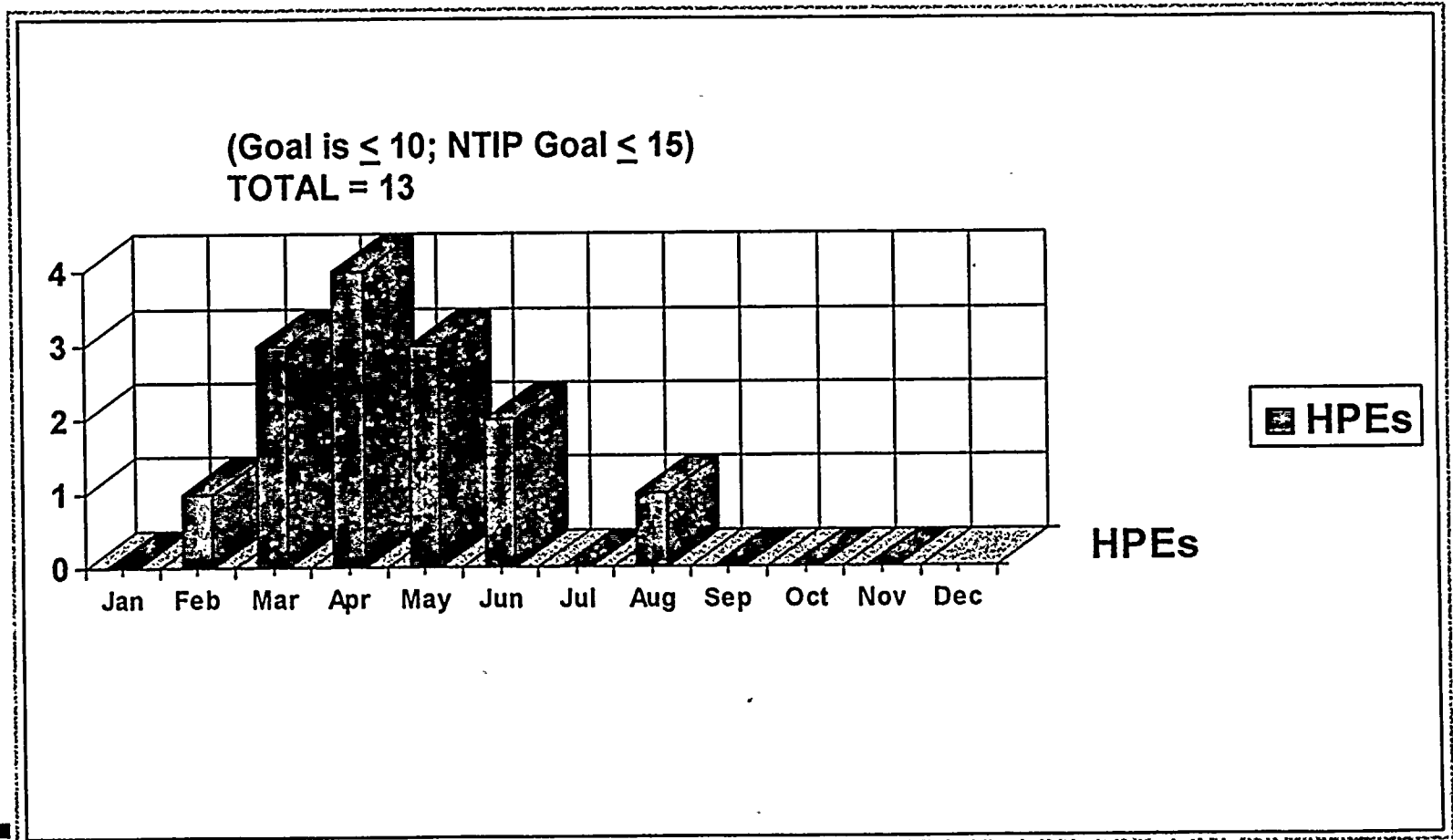
- **Operating Standards**
 - ◆ 3-way communication
 - ◆ Phonetic alphabet
 - ◆ Annunciator response
 - ◆ Pre-job briefs
 - ◆ Questioning attitude

Improvement Initiatives

● Self Assessment

- ◆ Crew self-assessments
- ◆ Identify adverse conditions
- ◆ Real-time Corrective Action Program
 - 14-day Level 1 Investigations
 - 30-day Level 3 Investigations

1997 Human Performance Events



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Joe Collins
Maintenance

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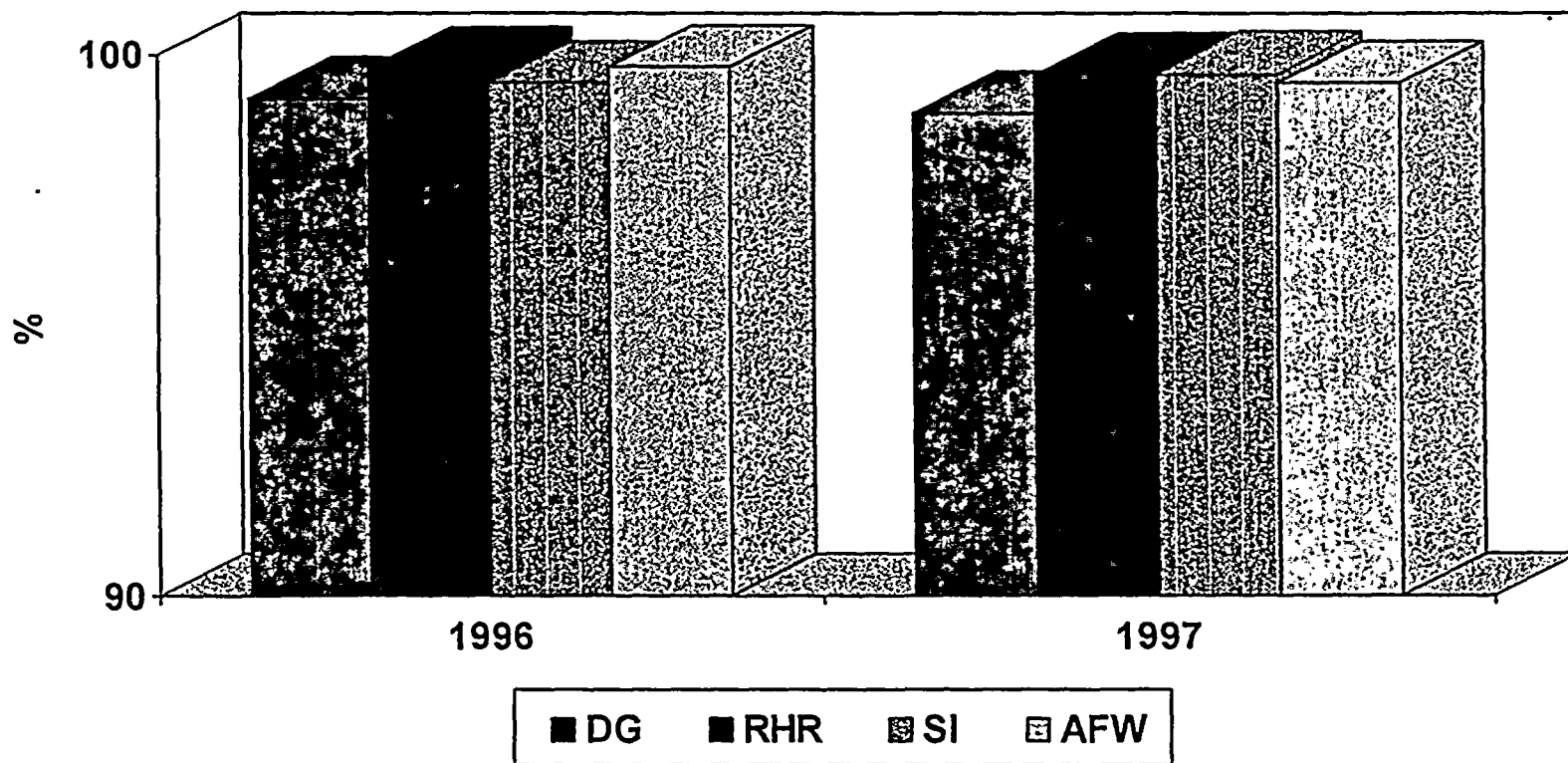
Agenda

- Strengths
- Challenges
- Improvement Initiatives
- Summary

Strengths

- **Safety system availability**
 - ◆ **Safety system availability is important to us**
 - ◆ **We manage safety system availability by**
 - **Planning**
 - **Preparation**
 - **Execution**
 - ◆ **The results**

Safety System Availability



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CONSTRUCTION PRODUCTS

| | DG | RHR | SI | AFW |
|------|-------|-------|-------|-------|
| 1996 | 99.18 | 99.75 | 99.49 | 99.79 |
| 1997 | 98.92 | 99.64 | 99.65 | 99.48 |

Strengths (continued)

● **Support of shift operations**

- ◆ **Crew turnover**
- ◆ **Emergent work meeting**
- ◆ **On-shift Maintenance support**

Strengths (continued)

● **Predictive maintenance techniques**

- ◆ **SF6**
- ◆ **Thermography**
- ◆ **Vibration Analysis**
- ◆ **Oil Analysis**
- ◆ **Checworks**

Strengths (continued)

● Training

◆ Maintenance management involvement

- Training Program Committee

- Adjunct instructors

- Real-time trainer

Strengths (continued)

● Training

◆ Loop Trainer

- Duplicates plant environment
- Equates to the Plant Reference Simulator



Strengths (continued)

● Training

◆ Tangible results

- DG training to support 10-year inservice inspection
- CRDM connector
- AFW steam turbine disassembly and inspection in RFO7

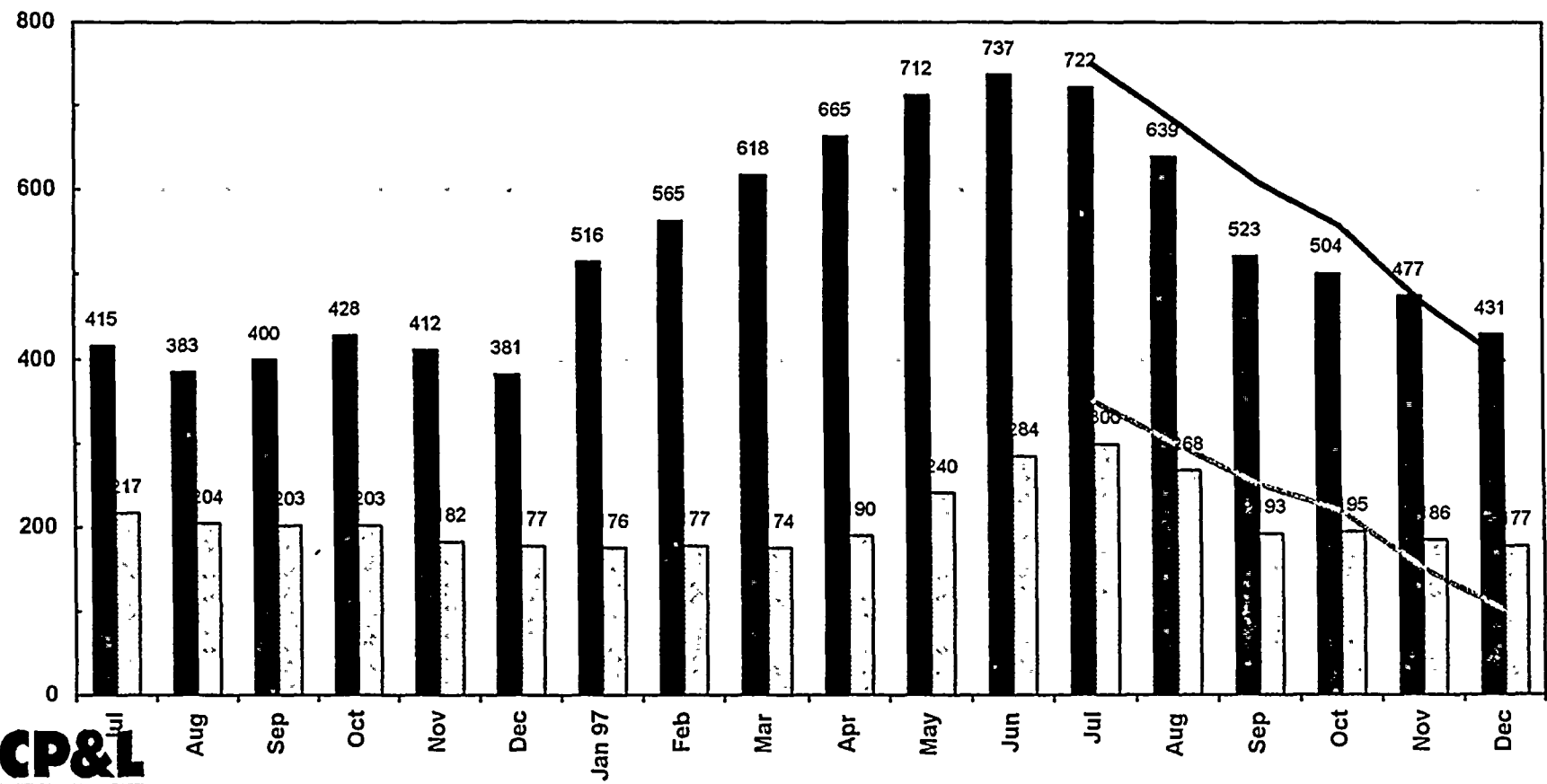


Challenges

- **Achieve and maintain backlog targets**

TOTAL ELECTRICAL AND MECHANICAL MAINTENANCE BACKLOG

| | |
|--|---|
| <p>Indicator: Numbers of total open online backlog CM's and of those open longer than 17 weeks. Goals by year end: Total backlog less than 400 WR/JO's > 17 weeks less than 100</p> | <p>Query: Backlog CM's: WCC=A,B WR/JO # ends with 1 Type= ,10,20 System<8501 Skill=EL,ME Status<Field complete Date initiated > 17 weeks prior to current date</p> |
|--|---|



Total WR/JO's
 > 17 Weeks
 Total Goal
 > 17 Weeks Goal

* April 4 - June 6, 1997 Refueling Outage

Challenges (continued)

- **Achieve and maintain backlog targets**
- **Achieve the right balance between “Skill of the Craft” and “Procedure-Directed”**
- **Continual improvement of Surveillance Test Procedures**

Improvement Initiatives

- **Maintenance reorganization**

- ◆ **Culture**

- ◆ **Focus**

- **Effective use of work scheduling**

- ◆ **Integrating of maintenance resources**

- ◆ **Shifting schedule adherence from weekly to daily**

Summary

- **Maintenance is continuing to improve**
 - ◆ **Process and procedure improvements through self-assessment, crew critiques, and operating experience feedback**
 - ◆ **Skill improvements through continuing training, diagnostic testing, and supervisory coaching**
 - ◆ **Culture improvement through focused management attention**

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Tony Cockerill
Engineering

CP&L
—————

Agenda

- Strengths
- Challenges
- Improvement Initiatives

Strengths

- **Support of shift operations**
- **Maintenance Rule**
- **Significant engineering assessments**
- **Response to Generic Letter 96-01**
(Testing of safety-related logic circuits)
- **Ongoing review of Technical**
Specification Surveillance Procedures

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Strengths

- FSAR review and continued use
- Engineering support of plant reliability and availability
- Use of operating experience information

Strengths

- **Support of shift operations**

- **Maintenance Rule**

- ◆ **Participated in NRC Pilot Program**

- ◆ **Self-assessment in December 1996**

- ◆ **NRC Baseline Inspection in July 1997**

- ◆ **“With recent improvements, progress towards a comprehensive Maintenance Rule Program is adequate”**

Strengths

- ◆ **Benefits achieved**
 - **Prioritize work load**
 - **Focus on problem areas**
 - **Things are getting fixed**
- ◆ **(A)(1) List - 27 systems**
 - **8 systems are in Monitoring Phase**
 - **19 systems are in Investigation (Corrective Action)**
- ◆ **(A)(3) assessment completed**

Strengths

- **Significant Engineering assessments**
 - ◆ **RPS SSFI - industry experts**
 - ◆ **EQ - NAS with industry experts**
 - ◆ **Safe Shutdown Analysis - industry experts**
 - ◆ **Engineering Assessment - NAS**
 - ◆ **Corporate Assessment of Engineering**
 - ◆ **SSEI on AFW System**
 - ◆ **ISI/IST Program Assessment**
 - ◆ **Maintenance Rule (A)(3) Assessment**

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Strengths

- **Response to Generic Letter 96-01 Testing of safety-related logic circuits**
- **Ongoing review of Technical Specification Surveillance Procedures**
- **FSAR Review**
 - ◆ **340 CRs, 5 LERs, 2 USQs**

Strengths

- **Engineering support of plant reliability and availability**
 - ◆ **Evaluation of containment liner**
 - ◆ **Installation of cavity seal ring**
 - ◆ **Modified EDG protection logic (GL 96-01)**
 - ◆ **Resolved inadvertent tripping of NSW pumps**
 - ◆ **Improved work practices in the switchyard**
 - ◆ **Replaced ESW pump and motor to increase margin**
 - ◆ **Resolution of Thermolag issue**

Strengths

- **Use of operating experience information**
 - ◆ **Analyzed SG tubing common tap for single failure [NSAL 96-004]**
 - ◆ **Inaccessible in-core thimbles**
 - ◆ **Connecting non-seismic pipe to seismically qualified lines**

Challenges

- **Complete commitments in our 50.54f response**
- **Improve quality of design packages**

Challenges

- **Major projects planned**
 - ◆ **SG replacement**
 - ◆ **Computer replacements**
 - ◆ **Complete spent fuel pools C & D**
 - ◆ **Replace feedwater isolation valves**
 - ◆ **Evaluate replacement of reciprocating air compressors**
 - ◆ **Resolve the year 2000 computer issue**

Improvement Initiatives

- **Engineering workload management**
 - ◆ **Pilot program in the Electrical Unit being implemented in Mechanical and Technical Services**
 - ◆ **Excel spreadsheet used to schedule work at the engineer level**
 - ◆ **Actual man-hours are tracked and compared with estimate**
 - ◆ **Has given engineers a sense of control and achievement**



Improvement Initiatives

- Using the Work Control Center's scheduling tool, modifications are being scheduled for implementation, document update, and turnover

Improvement Initiatives

● Problem Solving

- ◆ Strong disciplined approach
- ◆ Examples

Improvement Initiatives

- **Engineering programs**
 - ◆ **Review of program procedures**
 - ◆ **MOV Improvement Plan**
 - ◆ **EQ improvement**
 - ◆ **ISI/IST 10-year plan**
 - ◆ **Implementing SAMGs**

Improvement Initiatives

● Equipment upgrades

- ◆ Replacing process cabinets power supplies
- ◆ Replacing Control Room recorders
- ◆ Upgrading Security x-ray machines
- ◆ Replacing turbine building sump radiation monitor

Summary

- CP&L personnel perform the FSAR Review, GL 96-01 Response, Technical Specification Surveillance Procedures review
- Outsourcing work has been limited
- Engineering is more disciplined and focused



Karl Neuschaefer
Plant Support

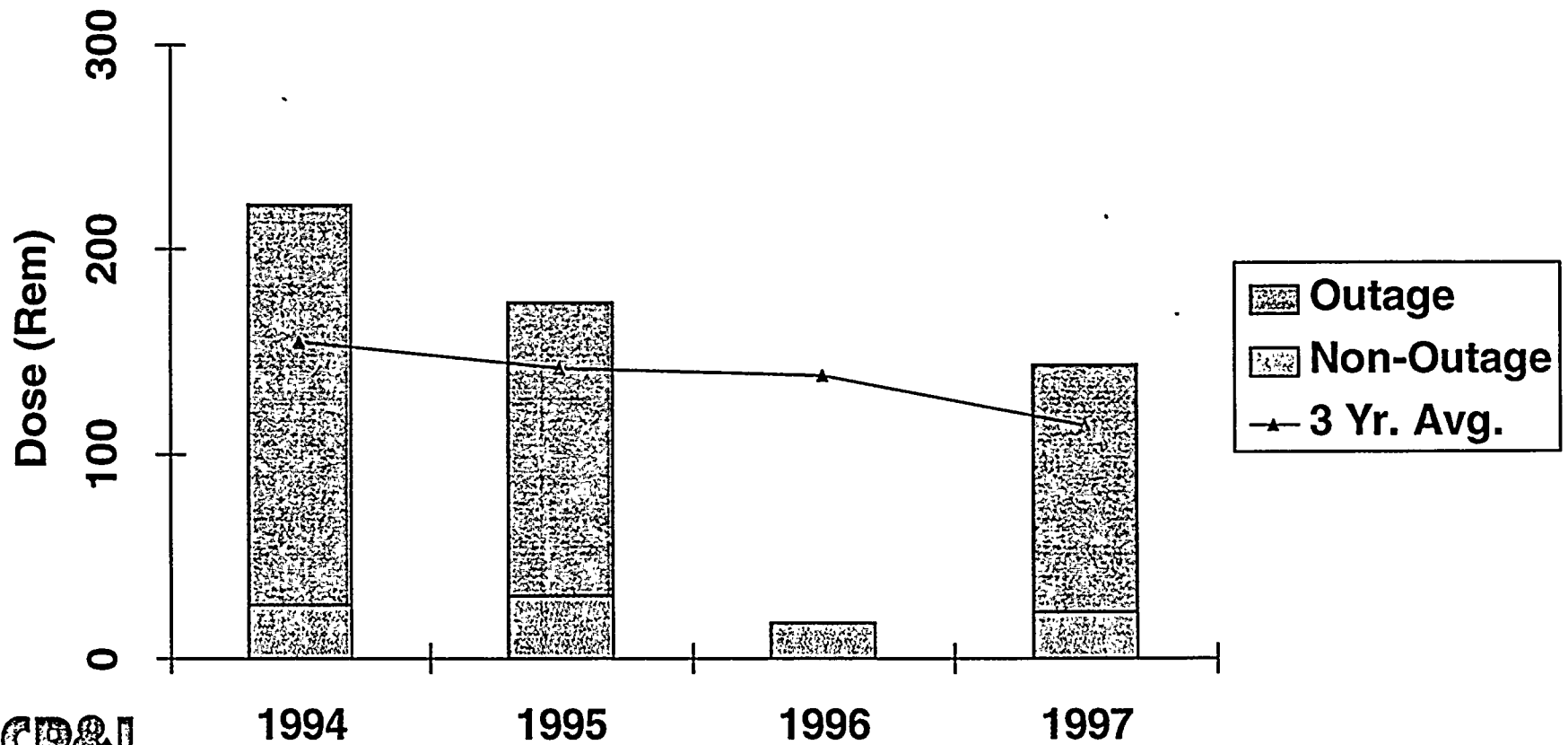
CP&L
CONSTRUCTION PRODUCTS & LOGISTICS



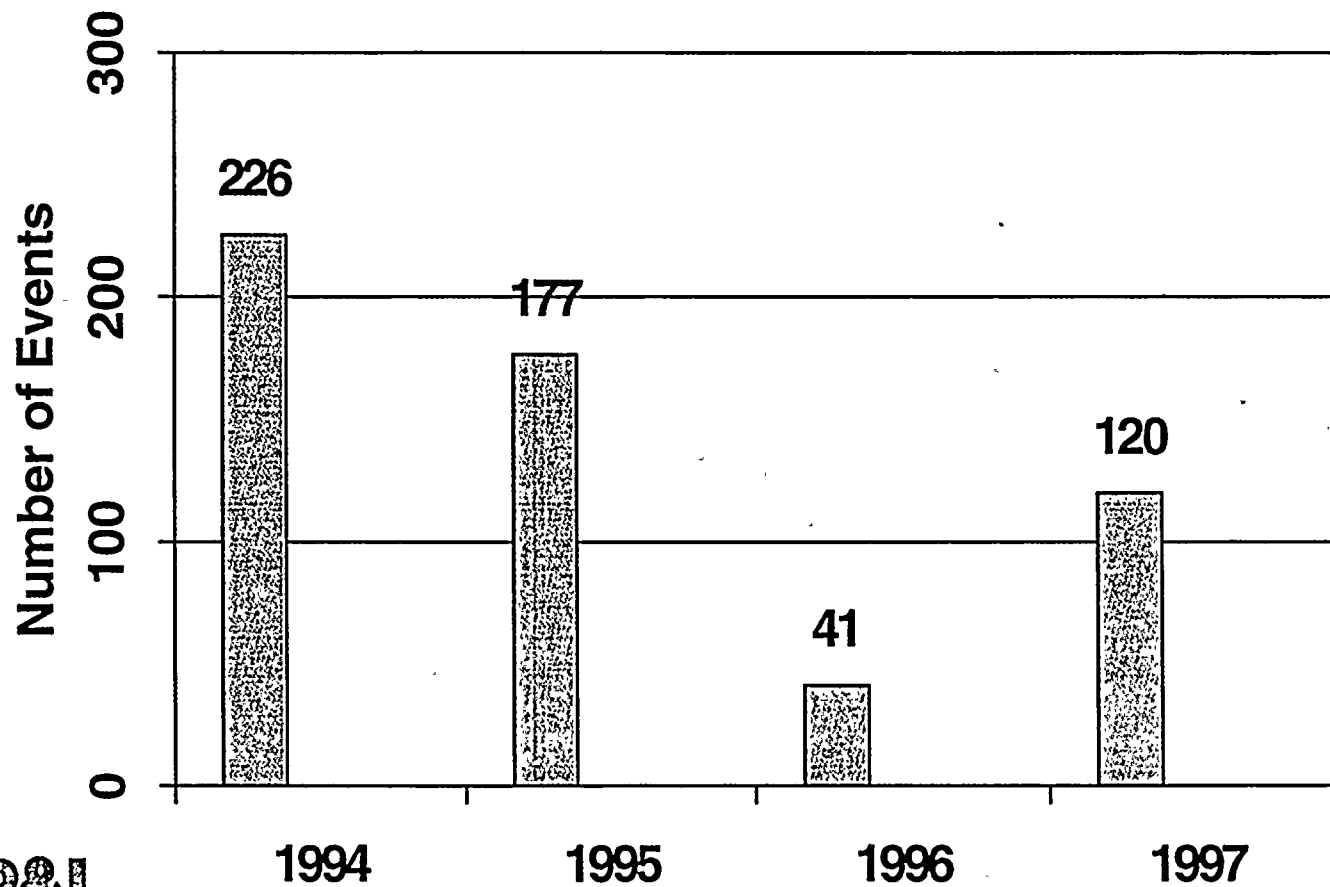
RP Strengths

- **Continued improvement in performance as evidenced by major radiation protection indicators**
- **Strong self-assessments**
- **Low threshold for problem identification**

Radiation Dose



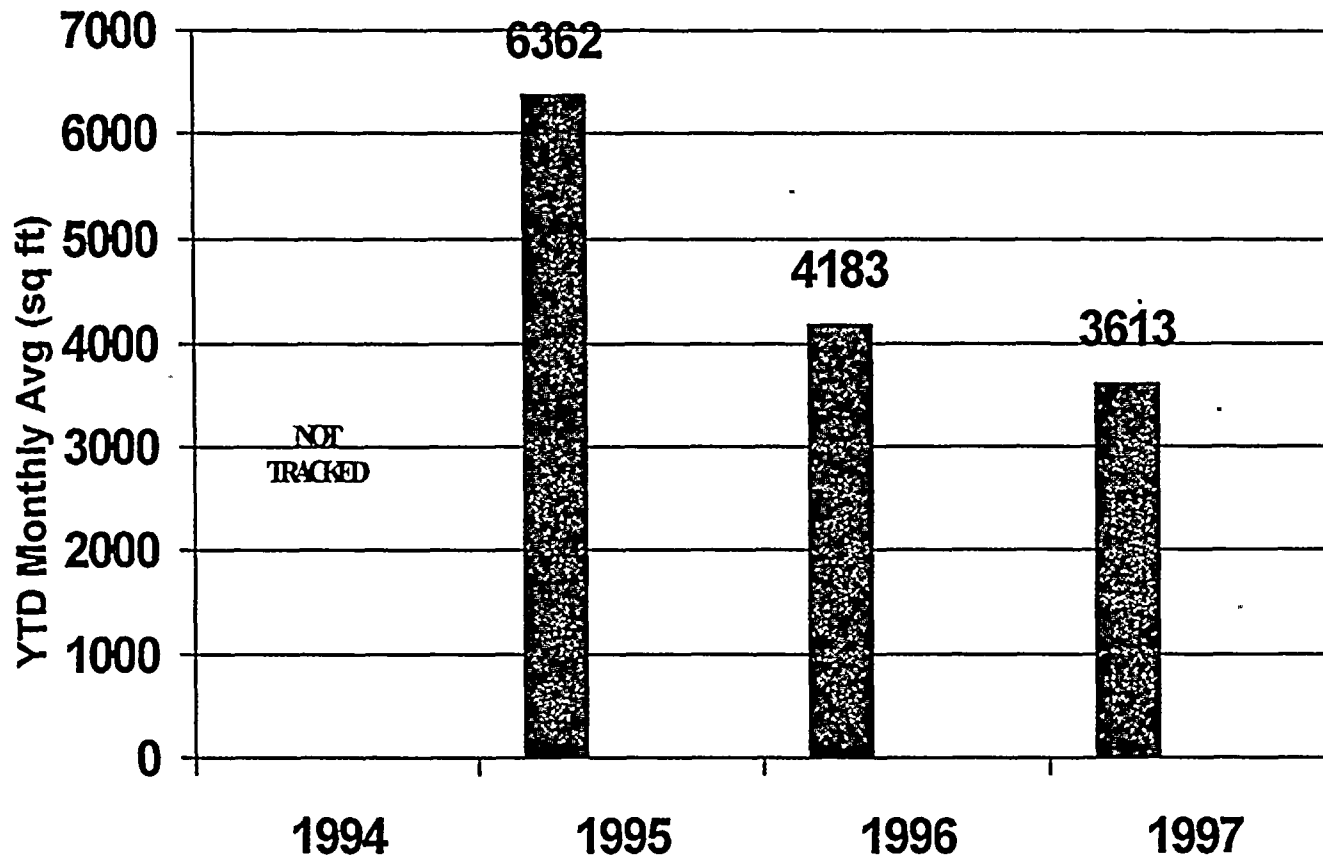
Personnel Contaminations



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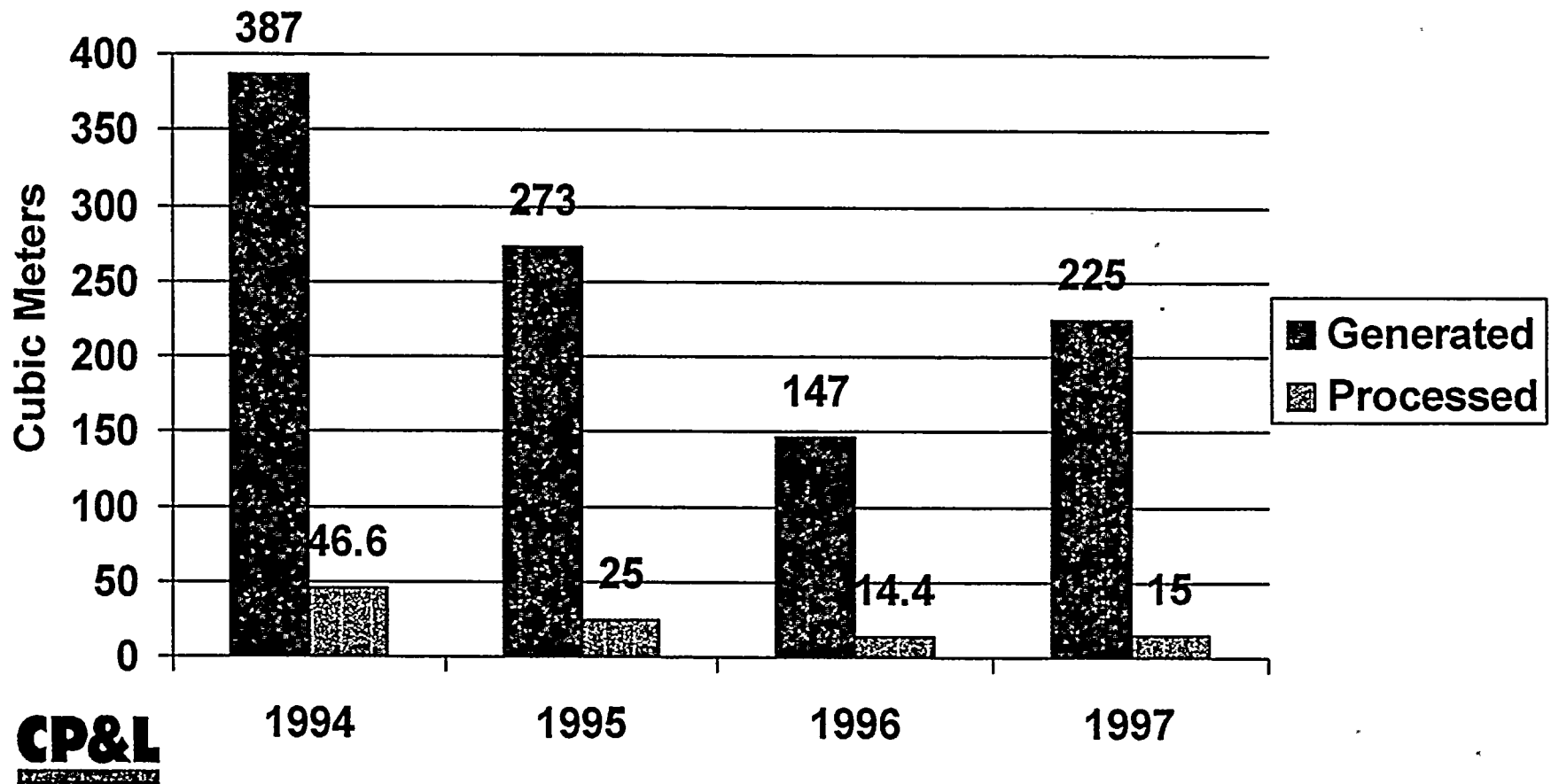


Contaminated Floor Area



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Radioactive Waste Generated and Processed



RP Challenges

- **Lack of a permanent disposal facility for low-level radioactive waste**

Chemistry Strengths

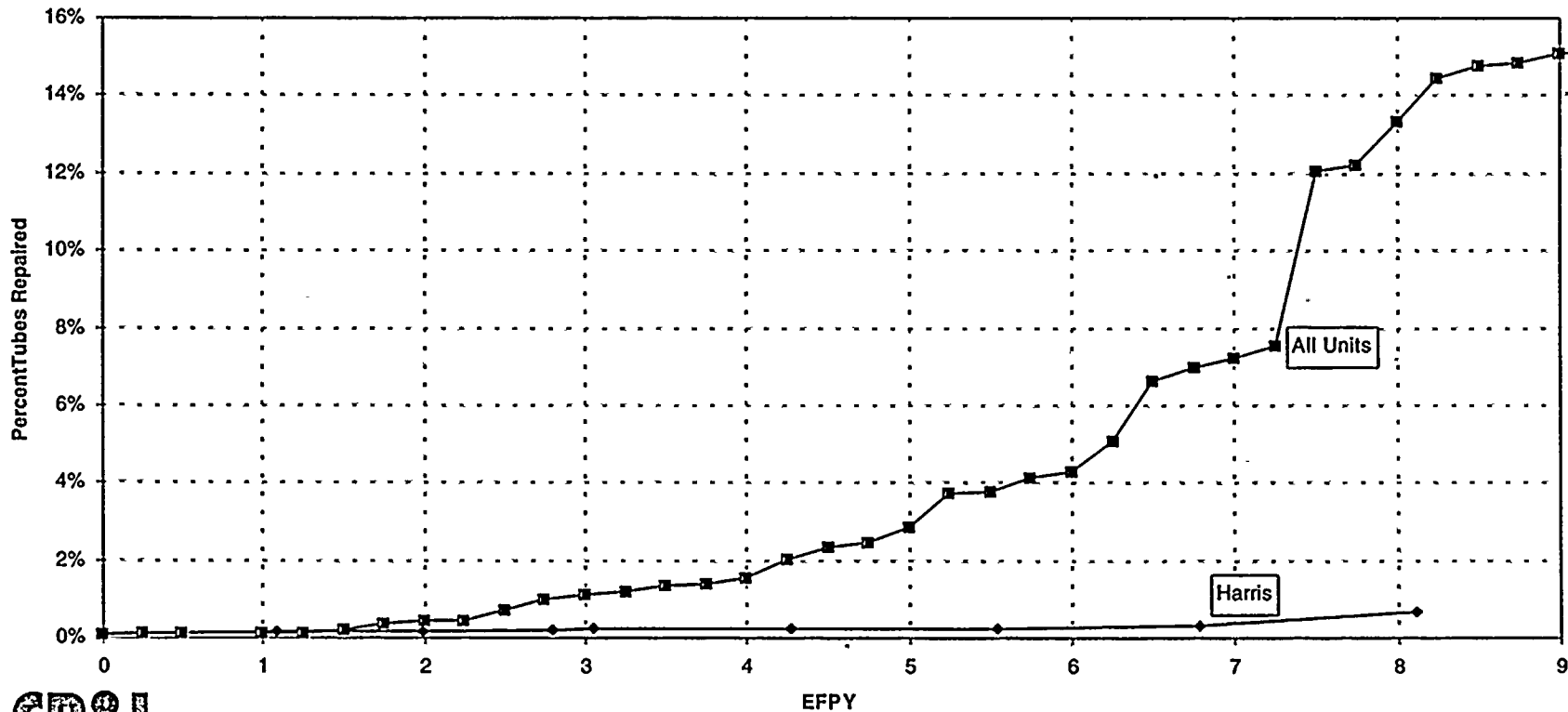
- **Tight control of primary and secondary water chemistry**
- **Continued reduction in liquid and gaseous effluents**

2
3
4

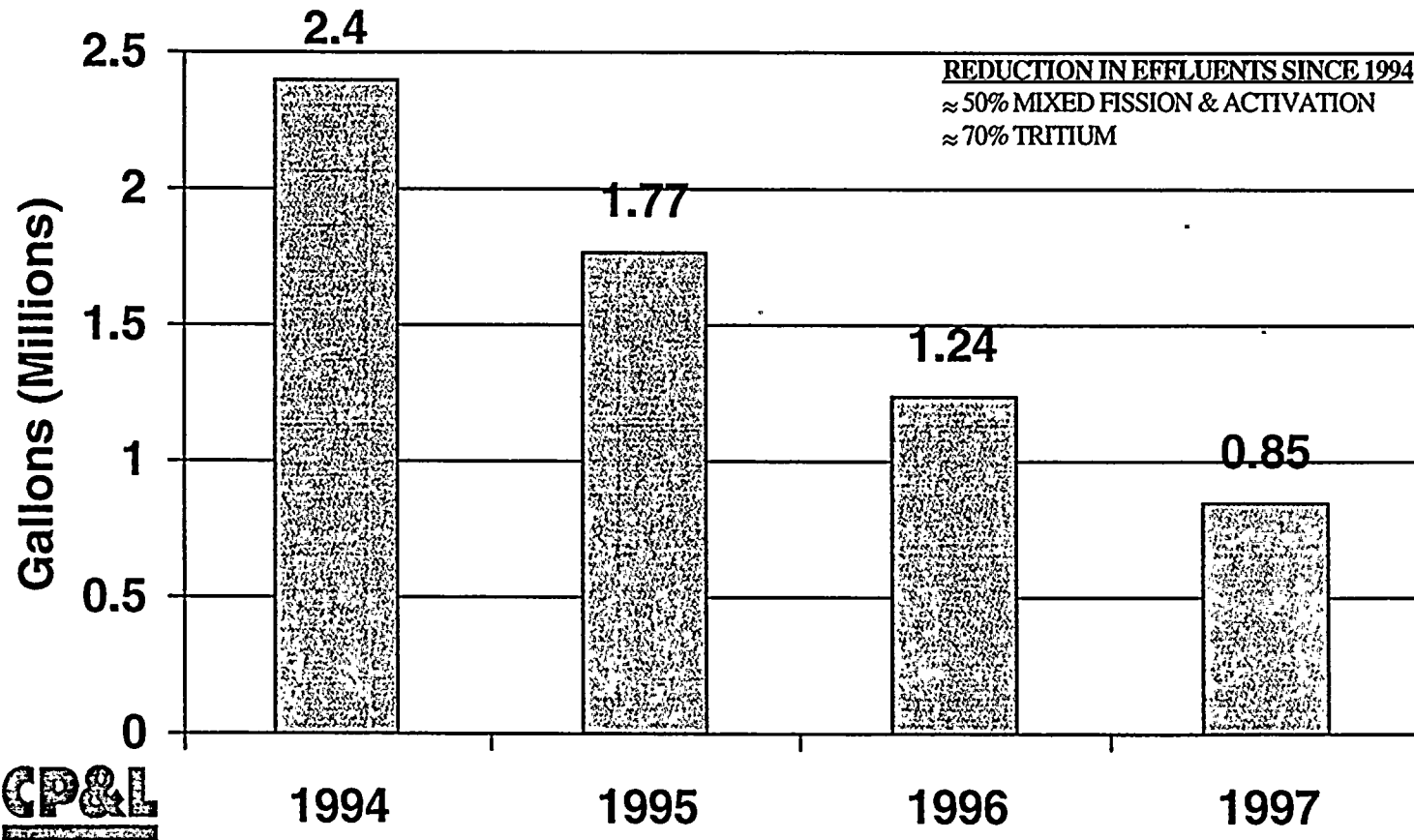


Steam Generator Tube Performance

Worldwide Steam Generator Tube Degradation
Preheater Westinghouse Designed SGs w/Inconel 600 Low Temperature Mill Annealed Tubing



Liquid Effluent Batch Release Volumes



EP Strengths

- **High quality emergency response facilities**
- **Effective implementation of drills and exercises**
- **Effective use of critiques**
- **Strong performance during the ingestion pathway exercise**

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Security Strengths

- **Sustained high quality performance**
 - ◆ **Strong self-assessment program**
 - ◆ **Quality Security training program.**
 - ◆ **Consistently low personnel-error rate**
 - ◆ **Strong relationship to local law enforcement**

Security Improvements

- **Reduced compensatory measures through effective maintenance support**
- **Upgraded Security range facility**
- **Upgraded weapons implemented into the site-defense strategy**
- **Upgrade of x-ray inspection units**
- **Improved access authorization**

Fire Protection Strengths

- **Strong self assessments**
- **Proactive Thermolag resolution**
 - ◆ **Testing of Harris-specific configurations**
 - ◆ **Aggressive self-identification and correction of problems**
 - ◆ **Independent industry expert review of evaluations**

