

APR 04 1990

*official*

Docket No. 50-395  
License No. NPF-12

South Carolina Electric & Gas Company  
ATTN: Mr. O. S. Bradham  
Vice President, Nuclear Operations  
Virgil C. Summer Nuclear Station  
P. O. Box 88  
Jenkinsville, SC 29065

Gentlemen:

SUBJECT: MANAGEMENT MEETING SUMMARY - V.C. SUMMER

This letter refers to the Management Meeting held at your request on March 12, 1990. This meeting concerned activities authorized for your V. C. Summer facility. The issues discussed at this meeting related to your self assessment of overall performance.

In accordance with 10 CFR 2.790, 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  
Charles W. Hehl /for

Luis A. Reyes, Director  
Division of Reactor Projects

Enclosures:

1. Management Meeting Summary
2. List of Attendees
3. Handout

cc w/encls:

J. L. Skolds, General Manager  
Nuclear Plant Operations  
Summer Nuclear Station  
P. O. Box 88 (Mail Code 300)  
Jenkinsville, SC 29065

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

APR 04 1990

(cc w/encls cont'd)  
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Nuclear Licensing  
Summer Nuclear Station  
P. O. Box 88 (Mail Code 612)  
Jenkinsville, SC 29065

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Executive Vice President  
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Service Authority  
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Chairman, Fairfield County Council  
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Attorney General  
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bcc w/encls:  
J. J. Hayes, NRR  
Document Control Desk

NRC Resident Inspector  
U.S. Nuclear Regulatory Commission  
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RLL:DRP  
*PAB*  
PBAlmain  
04/4/90

R11:DRP  
*FCantrell*  
FCantrell  
04/4/90

R11:DRP  
*DVerrelli*  
DVerrelli  
04/4/90

R11:DRP  
*LReyes*  
LReyes  
04/4/90

~~R11:ORA~~  
~~JMithran~~  
~~04/4/90~~

ENCLOSURE 1

MANAGEMENT MEETING SUMMARY

A Management Meeting was held in the Region II Office on March 12, 1990 to discuss the licensee's self assessment of overall performance at the V. C. Summer Nuclear Station.

The licensee opened the meeting with an overview of performance which included accomplishments from 1989 through the present. Management strategies and enhancements to continue improvements to safety and performance were also discussed.

Plant operations performance was addressed by the licensee and included a discussion of recent trends. In addition specific areas which the licensee determined a need for improvement were discussed. The licensee explained their approach to improve procedures, drawing legibility and labeling plant equipment.

The area of procedure compliance was addressed at length by the licensee in response to recent trends in events related to plant personnel failing to follow procedures.

The licensee discussed staffing increases being implemented and qualification requirements for engineering and operations personnel.

The scope of the Spring 1990 refueling outage was discussed at some length. The licensee closed the discussion by addressing long term goals and a proposed time frame for steam generator replacement and condenser upgrades.



ENCLOSURE 2

LIST OF ATTENDEES

South Carolina Electric and Gas Company

O. S. Bradham, Vice President Nuclear Operations  
J. L. Skolds, General Manager Nuclear Operations  
D. R. Moore, General Manager Engineering Services  
K. W. Nettles, General Manager Nuclear Safety

U. S. Nuclear Regulatory Commission

S. D. Ebnetter, Regional Administrator  
C. W. Hehl, Deputy Director, Division of Reactor Projects (DRP)  
A. F. Gibson, Director, Division of Reactor Safety (DRS)  
E. Merschhoff, Deputy Director, DRS  
D. M. Verrelli, Chief, Reactor Projects Branch 1, DRP  
D. M. Collins, Chief, Emergency Preparedness and Radiological Protection  
Branch, Division of Radiation Safety and Safeguards (DRSS)  
W. E. Cline, Chief, Nuclear Materials Safety and Safeguards Branch, DRSS  
J. J. Hayes, Project Manager, Office of Nuclear Reactor Regulation (NRR)  
F. S. Cantrell, Chief, Reactor Projects Section 1B, DRP  
F. Jape, Chief, Quality Performance Section, DRS  
P. Kellogg, Chief, Operational Programs Section, DRS  
R. L. Prevatte, Senior Resident Inspector - Summer, DRP  
L. P. Modenos, Resident Inspector - Summer, DRP  
P. A. Balmain, Project Engineer, DRP  
R. W. Wright, Reactor Inspector, DRS  
L. P. Zerr, Technical Intern, NRR



# **V. C. SUMMER NUCLEAR STATION**

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## **PERFORMANCE REVIEW FOR THE U. S. NUCLEAR REGULATORY COMMISSION**

► **CHALLENGES**

► **INITIATIVES**

► **RESULTS**

**PRESENTED: MARCH 12, 1990  
ATLANTA, GEORGIA**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

**NUCLEAR EXCELLENCE - A SUMMER TRADITION!**

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<b>ENGINEERING SERVICES</b> .....	<b>3</b>
D. R. Moore General Manager Engineering Services	
<b>NUCLEAR SAFETY</b> .....	<b>4</b>
K. W. Nettles General Manager Nuclear Safety	
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Station Photograph	
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# **NUCLEAR OPERATIONS DIVISION**

## **INTRODUCTION**

**O. S. BRADHAM  
VICE PRESIDENT  
NUCLEAR OPERATIONS**



# **AGENDA**

- **INTRODUCTION**

Ollie Bradham  
Vice President, Nuclear Operations

- **NUCLEAR PLANT OPERATIONS**

Jack Skolds  
General Manager  
Nuclear Plant Operations

- **ENGINEERING SERVICES**

Dave Moore  
General Manager  
Engineering Services

- **NUCLEAR SAFETY**

Ken Nettles  
General Manager  
Nuclear Safety

- **SUMMARY**

Ollie Bradham  
Vice President, Nuclear Operations

## **ACCOMPLISHMENTS DURING 1989**

- COMPLETED PROFESSIONALISM SELF-ASSESSMENT
- COMPLETED NUCLEX EVALUATION
- APPROVAL TO HIRE 103 ADDITIONAL PERSONNEL
- ACHIEVED BUDGET GOALS FOR 1989

1% UNDER O & M

2% UNDER CAPITAL

- 2 OF 3 UNIT INCENTIVE GOALS ACCOMPLISHED
- ROOT-CAUSE ANALYSIS PROGRAM IMPROVEMENT

PRESSURIZER SAFETY VALVE ISSUE  
EHC PROBLEMS

- INDUSTRIAL SAFETY RECORD FEBRUARY 21, 1990

## **INDUSTRIAL SAFETY STATISTICS**

- LAST LOST TIME CASE - MAY 2, 1989
- NUMBER OF DAYS SINCE LAST LOST TIME CASE - 296 (2/21/90)
- TOTAL NUMBER SAFE MANHOURS WORKED SINCE LAST LOST TIME CASE - 1,000,484

## **-VCSNS SAFETY RECORDS-**

- THE MOST CONSECUTIVE DAYS WORKED WITHOUT A LOST TIME INJURY - 635 DAYS
- THE MOST MANHOURS WORKED WITHOUT A LOST TIME CASE - 1,804,328(10/86 THRU 4/88)

**MAKE EVERY DAY, A SAFE DAY IN 1990**

**LET'S MAKE IT 2,000,000!**



## **STRATEGIES FOR ENHANCING EXCELLENCE**

- **EXECUTIVE DIRECTION AND CONTROL**
- **MANAGEMENT EFFECTIVENESS**
- **IMPROVE PLANT PERFORMANCE**
- **OUTAGE PERFORMANCE ENHANCEMENT**
- **LONG-RANGE PLANNING**
- **HUMAN RESOURCE DEVELOPMENT**
- **NOD EXTERNAL RELATIONS**
- **PROGRAM ENHANCEMENT**

# **STRATEGIES FOR ENHANCING EXCELLENCE**

## **IMPLEMENTATION PLAN**

- **STRATEGY MANAGERS ASSIGNED IN DECEMBER**
- **COMMUNICATE NUCLEX STUDY RESULTS TO  
EMPLOYEES**
- **PRIORITIZE STRATEGIES AND GOALS**
- **STRATEGY MANAGER ACTION PLANS DEFINED BY  
JUNE 30, 1990**
- **IMPLEMENT APPROVED WORK PLAN**
- **PERIODIC PROGRESS REPORTS TO STRATEGY  
TEAM, EMPLOYEES, AND CORPORATE  
MANAGEMENT**
- **ASSESSMENT OF EFFECTIVENESS AFTER WORK  
PLAN COMPLETION AND ANNUALLY THEREAFTER**

# **NUCLEAR PLANT OPERATIONS**

- **OPERATIONS**
- **MAINTENANCE**
- **SCHEDULING & MODIFICATIONS**
- **SECURITY**
- **CHEMISTRY & HEALTH PHYSICS**
- **EDUCATION & TRAINING**

**J. L. SKOLDS**  
**GENERAL MANAGER**



## PLANT OPERATIONS

- PLANT PERFORMANCE
- PLANT OPERATIONS
- RADIOLOGICAL CONTROLS
- MAINTENANCE / SURVEILLANCE
- EMERGENCY PREPAREDNESS
- SECURITY
- TRAINING
- PROCEDURE COMPLIANCE /  
PERFORMANCE IMPROVEMENT

## PLANT PERFORMANCE

JANUARY 1, 1989 - FEBRUARY 28, 1990

UNIT AVAILABILITY: 83.5%

UNIT CAPACITY FACTOR: 74.0%

FORCED OUTAGE RATE: 16.45%

## PLANT OPERATIONS

Previous SALP Rating: 2

### Areas Needing Improvement:

- Procedures
- Drawing Legibility
- Labeling
- Procedure Compliance
- Reactor Trips
- EOPs
- Watchstanding Administrative Controls



## **PLANT OPERATIONS (cont'd)**

### **Actions:**

- **Procedure Reviews/Walkdowns**
- **Upgraded Drawings**
- **Labeling Program**
- **Personnel Error Reduction Program**
- **EOP Upgrade**
- **Test Group**
- **Operations Standards**
- **Improved Watchstanding Administrative Controls**

## **RADIOLOGICAL CONTROLS**

**Previous SALP Rating:      1**

### **Areas Needing Improvement:**

- **Collective Dose Reduction**
- **Reduction of Source**
- **Personnel Contaminations**

### **Actions:**

- **Improved ALARA Committee**
- **Elevated Priority of ALARA Planning**
- **Emphasized Worker Accountability**
- **Fuel Inspection Planned for Refuel 5**
- **Emphasized PC Techniques in Training**
- **Stricter Controls for Spills**
- **Established More Ambitious Goals for 1990**
- **Improved ALARA Suggestion Program**

## **MAINTENANCE / SURVEILLANCE**

**Previous SALP Rating:      1**

### **Areas Needing Improvement:**

- **First Line Supervisory Involvement**
- **Procedure Compliance/Personnel Performance**
- **Worker Knowledge**

### **Actions:**

- **Shop Supervisory Involvement**
- **Personnel Error Reduction Program**
- **Improved Training**
- **Technical Manual Improvement**
- **Improved Procedures**
- **Reliability Centered Maintenance**
- **Test Group**



# **EMERGENCY PREPAREDNESS**

**Previous SALP Rating: 2**

## **Areas Needing Improvement:**

- **Training**
- **Classification**
- **Communications**

## **Actions:**

- **Development of Training Matrix**
- **Increased QA Surveillance**
- **Conducted Additional Training for SS/IED/EDs**
- **Increased Communications Drills**
- **Tested Back-Up EOF**
- **Moving EOF**
- **Development of Emergency Plan DBD**
- **Increased State and Local Interface**
- **Increased Staff**

# **SECURITY**

**Previous SALP Rating: 2 (declining)**

## **Areas Needing Improvement:**

- **Management of Security Operations**
- **Personnel Access Control**
- **Hardware**

## **Actions:**

- **New Manager, Nuclear Protection Services**
- **Increased Senior Management Involvement**
- **Improved NRC Communications**
- **Improved Training on Safeguards Events**
- **Increased Supervisory Involvement**
- **Developed Security Shift Leader Handbook**
- **Improved Badge Issuance Procedure**
- **Adding Cameras**
- **Adjusted Cameras - Masking Eliminated**
- **Replaced E-Field**

## **TRAINING**

### **Areas Needing Improvement:**

- **Shortage of Instructors**
- **Development of New Test Format**

### **Actions:**

- **Added 9 Positions**
- **21 of 24 Licensed Personnel Passed Requal Exam**
- **100% Pass Rate for New ROs/SROs**



## **PROCEDURE COMPLIANCE/PERFORMANCE**

### **IMPROVEMENT**

#### **Indicators:**

- Recent increase in frequency of personnel errors
- Procedure noncompliance
- Procedures generally adequate

#### **Actions:**

- NUCLEX
- Trending Programs
- Extensive Communications
- General Manager Involvement
- Identification of problems in each group
- Vertical slice of organization
- Establishment of monitoring system
- Division goal
- Emphasize Principles of Excellence

## **ENGINEERING SERVICES**

- **DESIGN ENGINEERING**
- **SYSTEMS & PERFORMANCE  
ENGINEERING**
- **CORE ENGINEERING &  
NUCLEAR COMPUTER SERVICES**
- **MATERIALS & PROCUREMENT  
ENGINEERING**

**D. R. MOORE  
GENERAL MANAGER**

# **TECHNICAL SUPPORT**

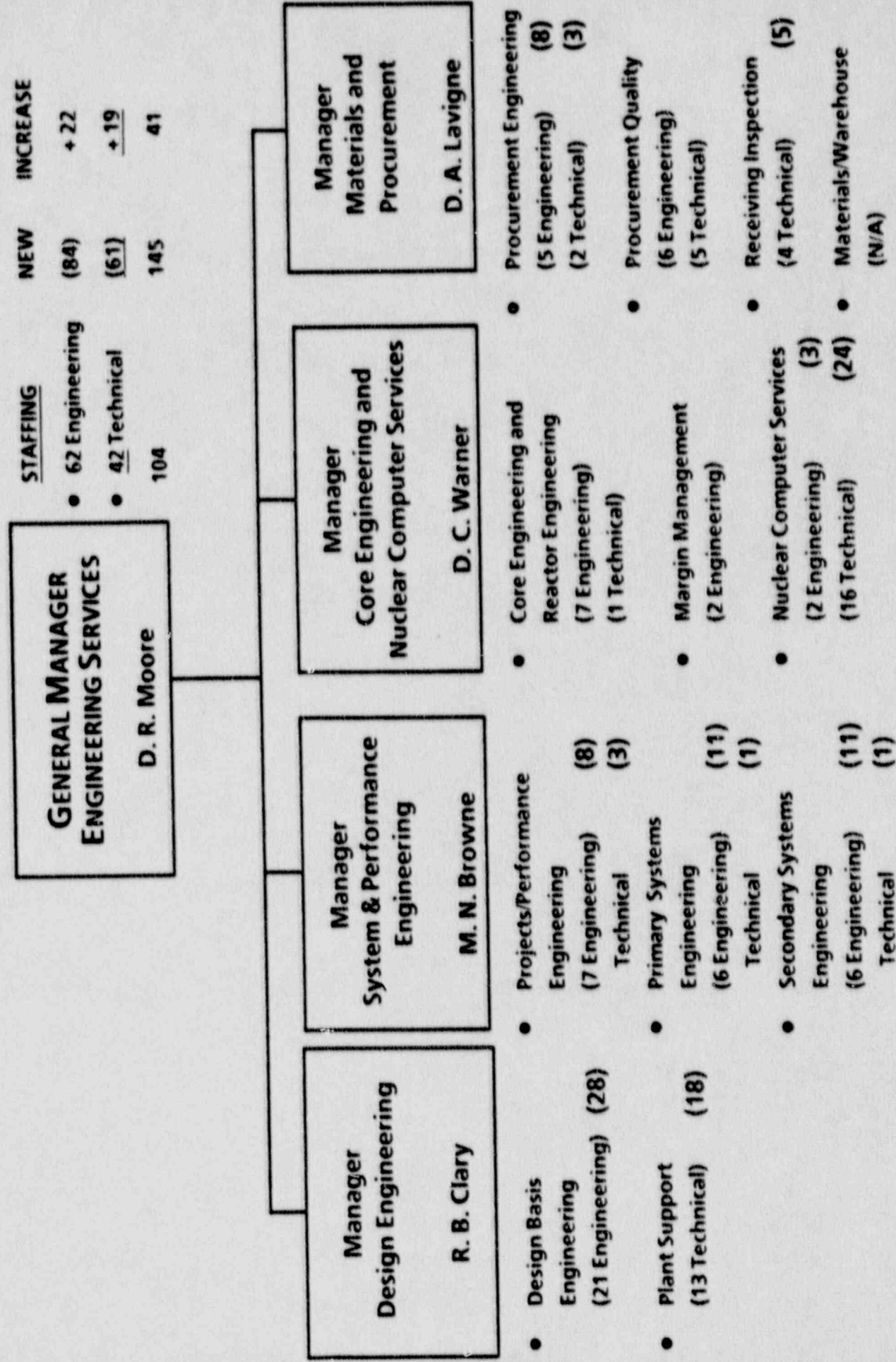
**(Engineering Services)**

**Previous SALP Rating - 2**

- **Staffing Status**
- **System Engineer Program Status**
- **Steam Generator Status**
- **Engineering Issues**
  - **Problem Identification**
  - **Design Basis/Licensing Basis Documents**
  - **Drawing Legibility**
  - **IPE/PRA Milestones**



# ENGINEERING SERVICES GROUP



## STAFFING LEVEL

### DESIGN ENGINEERING

	PREVIOUS	INCREASE	PRESENT
MANAGEMENT/SUPERVISION	5	0	5
ENGINEERS	21	7	28
SPECIALISTS	9	5	14
TOTAL	35	12	47

### NEW POSITIONS - (03/12/90)

FILLED	6
PROCESSING	3
OPEN	3

## ***STAFFING LEVEL***

### **Systems & Performance Engineering**

	<u>Previous</u>	<u>Increase</u>	<u>Present</u>
Management/Supervision	4	0	4
Engineers	19	11	30
Specialists	<u>0</u>	<u>5</u>	<u>5</u>
Total	23	16	39

### **New Positions - (3/12/90)**

Filled	3
Processing	8
Open	5



## ***SYSTEM ENGINEER QUALIFICATION STATUS***

- **13 Engineers Fully Qualified on One (1) System**
- **4 Engineers About to Qualify on First System**
- **5 Engineers in Process on First Qualification**
- **Qualified Engineers Working on Other Systems**

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**46 of 84 Engineers Completed Nuclear Technical Training**

**35 of 84 Have Professional Engineering Licenses**

# REFUEL 4 (RF4) STEAM GENERATOR TUBE PLUGGING

	S/G A	S/G B	S/G C	TOTAL
# PLUGGED BEFORE RF 4	117 (2.5%)	293 (6.3%)	129 (2.8%)	539 (3.8%)
# PLUGGED DURING REFUEL 4	180 (3.9%)	233 (5.0%)	175 (3.7%)	588 (4.2%)
# OF PLUGGED TUBES RECOVERED DURING RF 4 (F*, MISPLUGS)	17	19	0	36
TOTAL # PLUGGED	280 (6.0%)	507 (10.9%)	304 (6.5%)	1091 (7.8%)
# MEETING F* CRITERIA DURING RF 4	97 (2.1%)	203 (4.3%)	69 (1.5%)	369 (2.6%)
# OF RF 4 PLUGGED TUBES THAT ARE L* CANDIDATES	95 (2.0%)	77 (1.6%)	51 (1.1%)	**233 (1.7%)

**\*\* 39.6% (233/588) OF THE TUBES PLUGGED DURING REFUEL 4 (FAILED TO MEET F\* CRITERIA) WOULD HAVE BEEN CANDIDATES FOR MEETING THE L\* CRITERIA.**

# STEAM GENERATOR PROJECT

## RF 5 WORKSCOPE

TASK	SGA		SGB		SGC	
	HL	CL	HL	CL	HL	CL
TUBE ECT	4394*		4167*		4372*	
PLUG ECT	275		394		302	110
PULL PLUG**	192	0	51	0	279	0
PAP	5	0	111	0	2	0
PLUG**	299	107	148	97	403	124
SLEEVE**	100		100			
STABILIZE U-BEND	1		1		5	
VERIFICATION INSPECTION	Yes	Yes	Yes	Yes	Yes	Yes
FOREIGN OBJECT SEARCH & RETRIEVAL IN SIG "C"						

\* Approximately 23% of these tubes will be inspected from the hot leg tubesheet over the U-bend to the top support plate of the cold leg.

\*\* Projected Numbers.



## PROBLEM IDENTIFICATION / RESOLUTION

- STEAM BREAK INVESTIGATION
  - CHILLER - SERVICE WATER FLOW RATES (CHILLER WATER) - PART 21
  - ROOT CAUSE EVALUATION - DC GROUND
- CUMULATIVE EFFECTS - IEN 88-86  
SUPP. 1
- ELECTRICAL SSFI - DEGRADED VOLTAGE CALCULATIONS
  - SERVICE WATER SSFI - MODIFICATION TO FIX POTENTIAL FLOODING
  - PRESSURIZER SAFETY VALVE EVALUATIONS
  - IDENTIFICATION/RESOLUTION OF PROBLEMS RESULTING FROM JULY 11 PLANT TRIP

# **DESIGN BASIS DOCUMENT (DBD) PROGRAM STATUS**

<b>DBDs ISSUED Thru 1989</b>	<b>24</b>
<b>DBDs UNDER DEVELOPMENT DURING 1989 (To Be Issued During 1990)</b>	<b>11</b>
<b>LICENSING BASIS DOCUMENT (1990)</b>	<b>1</b>
<b>DBDs PLANNED (1990 - 1991)</b>	<b>12</b>
<b>DBDs PLANNED (1992)</b>	<b>7</b>
<b>DBD PROGRAM TOTAL</b>	<b><u>55</u></b>

# **DRAWING CONTROL PROGRAM** **ENHANCEMENTS**

## **REVISED PROGRAM TO ENSURE:**

- **Correct drawing/revisions Maintained in Control Room**
- **All Control Room Essential Drawing are Supplemented with Interim Drawings during Modification Process**

## **TIGHTENED STANDARDS FOR DRAWING LEGIBILITY:**

- **Level I - 100% Legibility as Determined by Doc. Control**
- **Level II - Legibility Requirements Determined by User**
- **Level III - Acceptable As-Is**

## **INSTALLED INTERGRAPH SYSTEM:**

- **Drawings will be maintained by Computer**
- **Eliminates further Deterioration of Drawing**
- **Used for Drawing Enhancements**



## IPE TASKS

1. PROJECT MANAGEMENT
2. INFORMATION COLLECTION
3. DATA COLLECTION & DATA BASE
4. INITIATING EVENTS
5. PLANT DAMAGE STATES
6. SUPPORT STATE MODEL & QUANTIFICATION
7. EVENT TREE DEVELOPMENT
8. SYSTEM DESIGN DOCUMENTATION
9. FAULT TREE DEVELOPMENT
10. SYSTEMS INTERACTION EVALUATION
11. HUMAN RELIABILITY ASSESSMENT
12. FAULT TREE QUANTIFICATION
13. ACCIDENT SEQUENCE QUANTIFICATION
14. INTERNAL FLOODING ASSESSMENT
15. RECOVERY ACTION EVALUATION
16. EVALUATION OF SEQUENCE ANALYSIS
17. SENSITIVITY & IMPORTANCE ANALYSIS
18. IMPAIRED CONTAINMENT ANALYSIS
19. CONTAINMENT SYSTEMS ANALYSIS
20. CONTAINMENT STRUCTURAL ASSESSMENT
21. CONTAINMENT EVENT TREE
22. SOURCE TERM ANALYSIS & EVALUATION
23. EVALUATION OF IPE RESULTS
24. PROJECT DOCUMENTATION
25. INDEPENDENT REVIEWS
26. PROJECT REVIEW
27. IPE SUBMITTAL REPORT

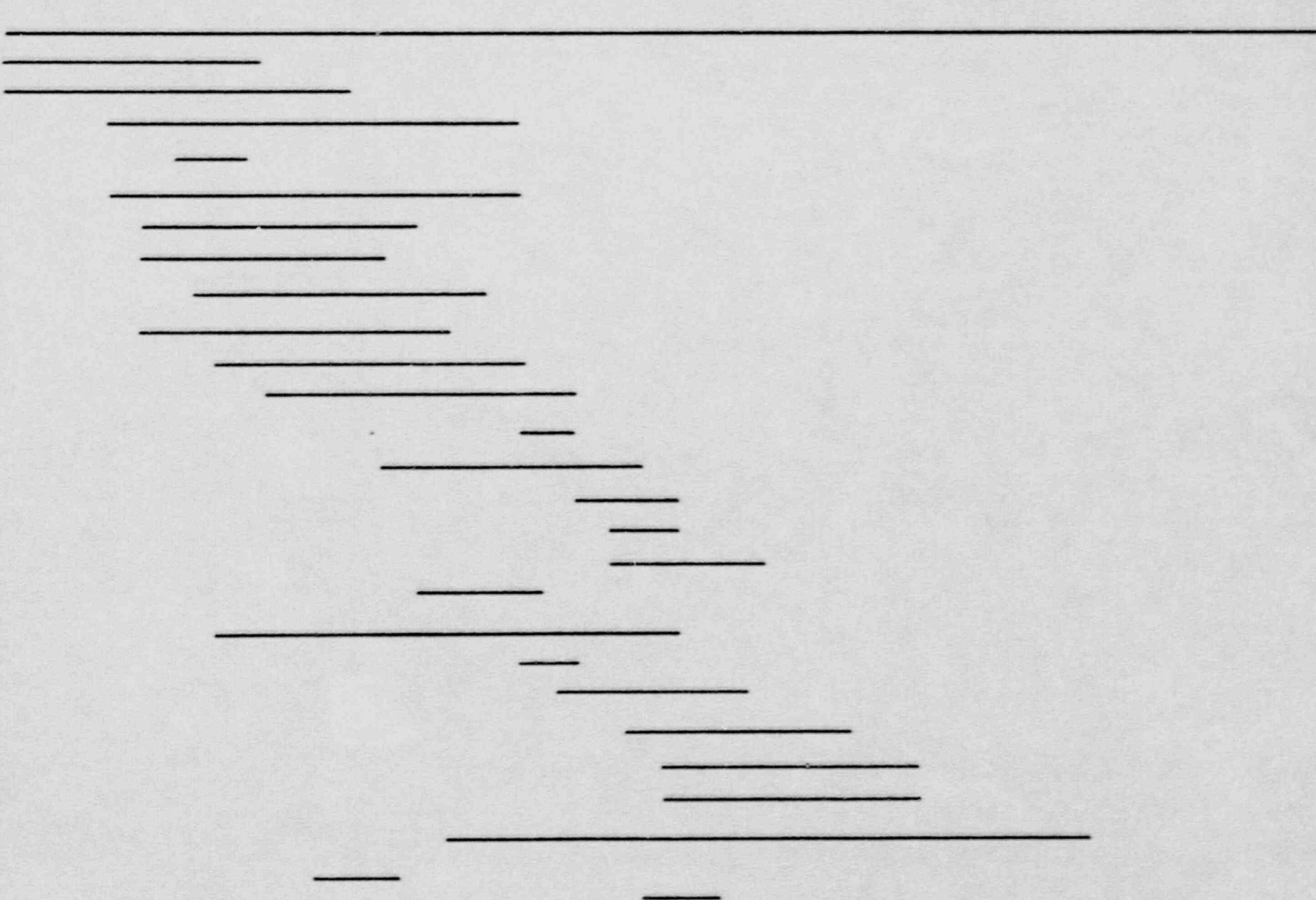
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1990

1991

1992

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# **NUCLEAR SAFETY**

- **TECHNICAL OVERSIGHT**
- **QUALITY SYSTEMS**
- **CORPORATE HEALTH PHYSICS  
& ENVIRONMENTAL PROGRAMS**
- **NUCLEAR LICENSING**

**K. W. NETTLES  
GENERAL MANAGER**



# ***SAFETY ASSESSMENT QUALITY VERIFICATION***

***PREVIOUS SALP RATING: 2***

- **Trending Overview**
- **Safety System Functional Reviews**
- **Root Cause Analysis**
- **ALARA Review Initiatives**
- **Operating Experience Status**
- **NOD Plant Management Overview**
- **Licensing Status**
- **Staffing**

# ***TRENDING OVERVIEW***

- **Quality-Based Trending**
  - **Audit/Surveillance Findings**
  - **Programmatic Concerns**
  - **NCN's**
  - **Work Practice Observations**
  
- **Technical-Based Trending**
  - **NPRDS**
  - **NCN's**
  - **R&R Logs**
  - **ISI Pump Maintenance**
  - **Vibration of Rotating Equipment**
  - **Equipment Aging and Performance Trending**
  - **Off-Normal Occurrences**
  - **Station Battery Inspections**
  
- **Future Initiatives**
  - **Integration of All Trending Programs**
  - **Strengthening of Root Cause Analysis**

## ***SAFETY SYSTEM FUNCTIONAL REVIEWS (SSFR'S)***

- **SSFR'S Completed**
  - **Emergency Feedwater**
  - **Emergency Power**
  - **Service Water**
  - **DG Services**
  - **Component Cooling Water**
  - **HVAC**
- **SSFR's Scheduled For 1990**
  - **Residual Heat Removal**
  - **RB Structure and Containment Systems**
- **SSFR's Scheduled Beyond 1990**
  - **Safety Injection**
  - **Chemical and Volume Control**
  - **Reactor Make-up Water**
  - **Reactor Protection Control System**
  - **Rod Control**
  - **Fire Service**



## ***SSFR STATUS***

	<u>OPEN</u>	<u>CLOSED</u>	<u>TOTAL</u>
<b>Emergency Feedwater</b>	<b>7</b>	<b>33</b>	<b>40</b>
<b>Emergency Power</b>	<b>9</b>	<b>22</b>	<b>31</b>
<b>Service Water</b>	<b>13</b>	<b>14</b>	<b>27</b>
<b>Diesel Generator</b>	<b>10</b>	<b>6</b>	<b>16</b>
<b>Component Cooling</b>	<b>13</b>	<b>3</b>	<b>16</b>
<b>Air Handling</b>	<b>18</b>	<b>0</b>	<b>18</b>

## ***SSFR STATUS***

	<u>EFW</u>	<u>EPS</u>	<u>SWS</u>	<u>DG</u>	<u>CCW</u>	<u>HVAC</u>
<b>MODIFICATIONS</b>						
Hardware	2	4	4	4	1	4
Design Documents	6	13	12	9	7	6
Testing and/or Procedural Upgrading	23	14	10	6	11	9
Software (FSAR, Tech. Spec., etc.)	7	5	1	1	0	3
No Changes	7	5	3	1	0	2

# ***ROOT CAUSE ANALYSIS ISSUES***

- **Training**
- **Root-Cause Analysis Manual**
- **HPES Initiative**
- **MRB Root Cause Analysis Team Actions**
- **Proactive Posture**



# ***CHP ALARA REVIEW INITIATIVES***

- **RFO #5 Continuous ALARA Review of Activities**
- **Inter-Utility Participation In ALARA Reviews**
- **Performance Based ALARA Reviews**
- **Increased Technical Support**

# ***OPERATING EXPERIENCE***

- **Current Status - Industry Issues**
  - **48 - Screening/Evaluation**
  - **80 - Implementation**
  - 128 Total Backlog**
  
- **Averages For Past Twelve (12) Months**
  - **17.8 - Received Per Month**
  - **18.1 - Closed Per Month**
  
- **Initiatives**
  - **Strengthen In-House Program**
  - **Continue Reduction of Backlog**

# ***PLANT MANAGEMENT OVERVIEW INITIATIVE***

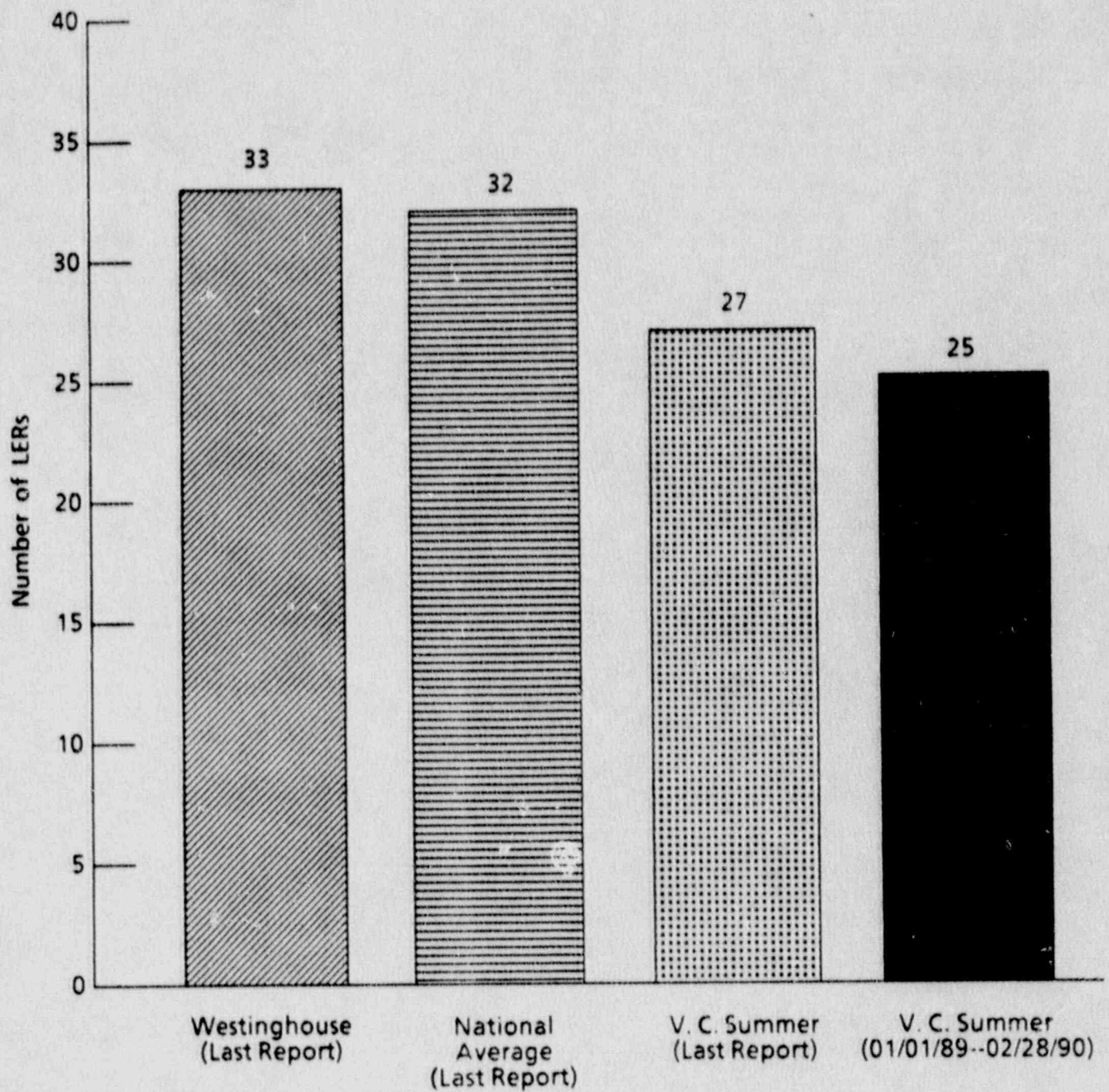
- **VP/GM's Periodic Overview of Plant Operations/Trends**
  - **Performance Indicators**
  - **Trending Overview**
- **Programs and Hardware**
- **Assess Overall Plant Performance**
- **Identify Initiatives**
- **Proactively Pursue Improvements**



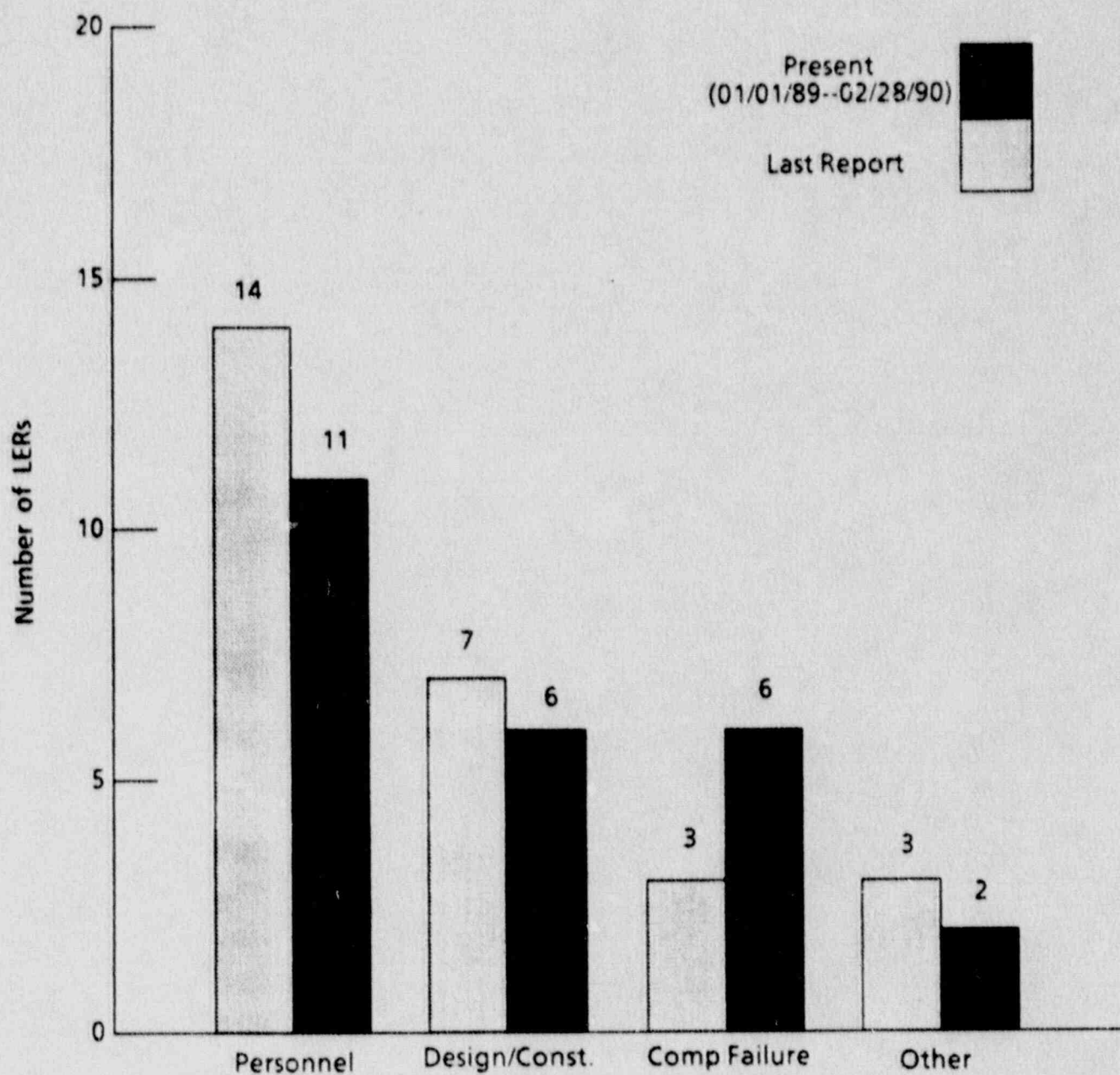
## ***LICENSING STATUS***

- **LER's**
- **Violations**
- **Refueling Outage #5 Submittals**
  - **Eight (8) Submittals**
  - **S/G Tube Sleaving**
  - **F\* Criteria Renewal**
  - **RTD By-Pass Manifold Elimination**
- **Licensing Basis Document - NSAC125**
  - **License Basis**
  - **Design Basis**
  - **Adequate 10CFR50.59 Evaluations**

# LER COMPARISON

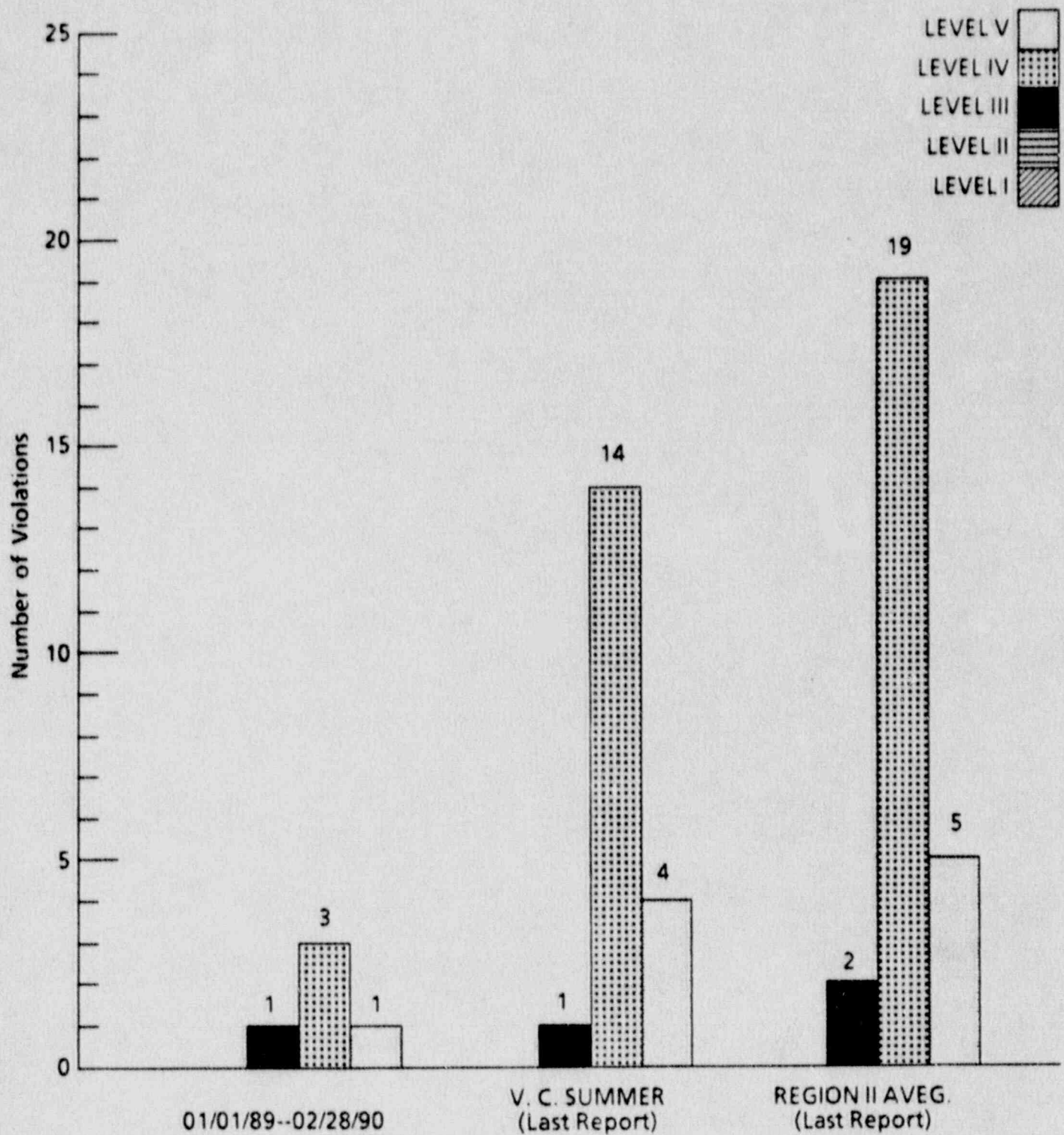


# V. C. SUMMER LERs





# VIOLATIONS SUMMARY



# ***STAFFING INITIATIVES***

- **Quality Systems**

- Four (4) QA Engineers
- Improved Technical Expertise
- Quality-Based Technical Support
- Performance Based Auditing Support
- Schedule - 4/90

- **Nuclear Licensing**

- Three (3) Licensing Engineers
- Improved Technical Review of Submittals
- Increased Technical Involvement in Licensing Issues
- Schedule - In Progress - 12/90

- **Operating Experiences (OE)**

- Two (2) Engineers and Two (2) Specialists
- Further Reduction of OE Backlog
- Improved In-House OE Program
- Trending
- Root Cause Analysis
- Schedule - In Progress - 12/90

# **NUCLEAR OPERATIONS DIVISION**

## **SUMMARY**

**O. S. BRADHAM  
VICE PRESIDENT  
NUCLEAR OPERATIONS**

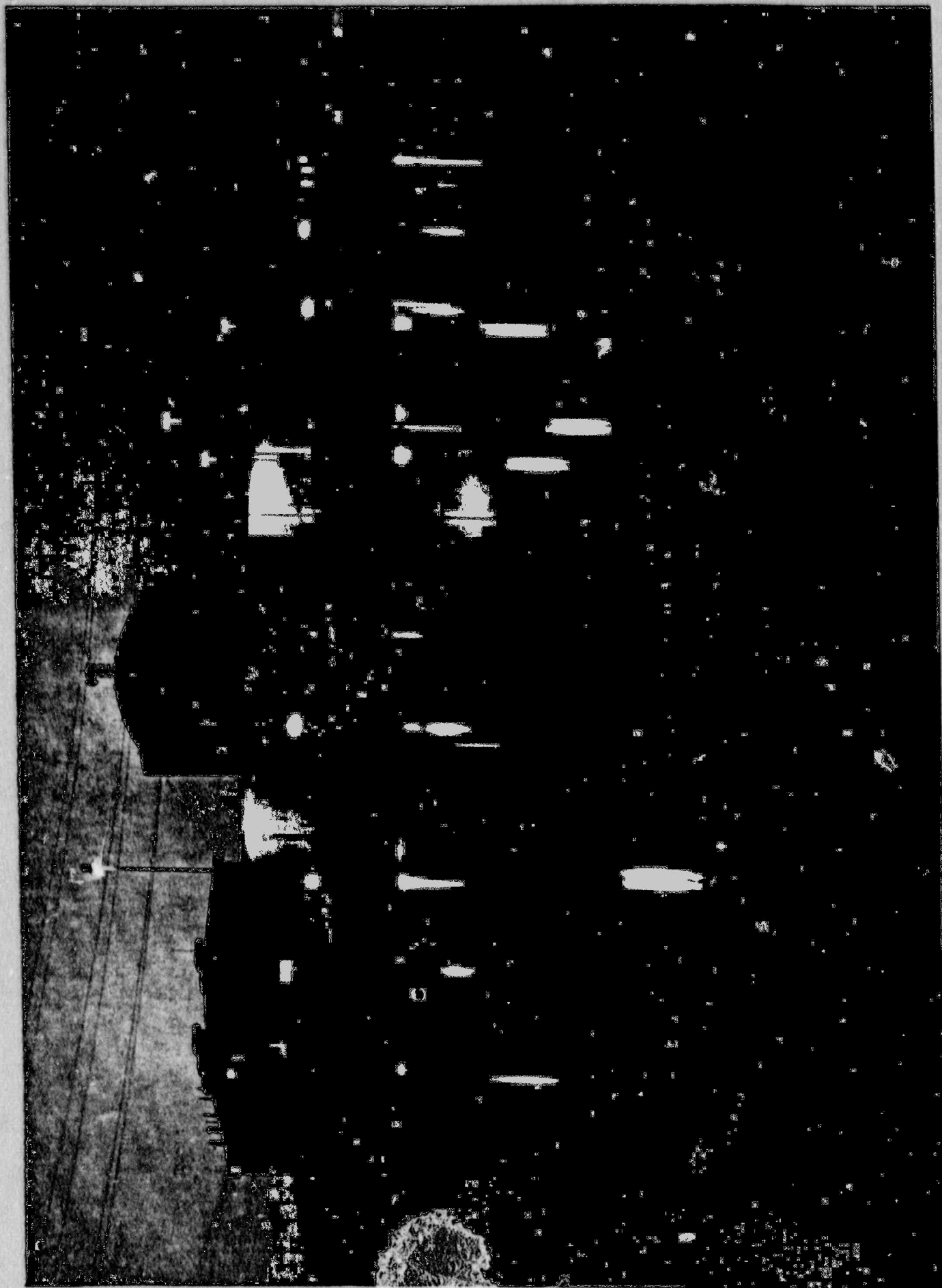


## **1990 PLUS INITIATIVES**

- **IMPLEMENT STRATEGIES FOR ENHANCING EXCELLENCE**
- **STRENGTHEN OUR MANAGEMENT OVERVIEW TRENDING PROGRAM TO ASSURE PRECURSORS ARE IDENTIFIED AND ADDRESSED**
- **STEAM GENERATOR REPLACEMENT CONTEMPLATED FOR MID TO LATE 90's**
- **UP RATE UNIT TO "STRETCH POWER" OF 2,910 MWT AND 990 MWE DURING OR AFTER STEAM GENERATOR REPLACEMENT**
- **CONDENSER UPGRADE AND REPLACEMENT PLANNED FOR EARLY 90's**

## **CONCLUSIONS**

- **INITIATIVES PRODUCING POSITIVE BENEFITS**
- **CONTINUE AGGRESSIVE APPROACH TO PROBLEM-SOLVING**
- **CORPORATE MANAGEMENT ATTENTION AND SUPPORT VERY GOOD**
- **COMMITTED TO ACHIEVING EXCELLENCE**
- **COMMITTED TO ENSURING REACTOR SAFETY**



V. C. Summer Nuclear Station



# SOUTH CAROLINA ELECTRIC & GAS COMPANY

NUCLEAR EXCELLENCE



A SUMMER TRADITION!



G. S. BRADHAM  
VICE PRESIDENT  
NUCLEAR OPERATIONS

## NUCLEAR OPERATIONS DIVISION



J. L. SKOLDS  
GENERAL MANAGER  
NUCLEAR PLANT OPERATIONS



M. B. WILLIAMS  
GENERAL MANAGER  
ADMINISTRATIVE & SUPPORT SERVICES



D. R. MOORE  
GENERAL MANAGER  
ENGINEERING SERVICES



K. W. NETTLES  
GENERAL MANAGER  
NUCLEAR SAFETY

- ADMINISTRATION
- FACILITIES
- BUDGET & COST CONTROL
- PROJECT CONTROLS

- DESIGN ENGINEERING
- MATERIALS & PROCUREMENT
- SYSTEMS & PERFORMANCE ENGINEERING
- CORE ENGINEERING & NUCLEAR COMPUTER SERVICES

- TECHNICAL OVERSIGHT
- QUALITY SYSTEMS
- CORPORATE HEALTH PHYSICS & ENVIRONMENTAL PROGRAMS
- NUCLEAR LICENSING



G. G. SAULT  
GENERAL MANAGER  
OPERATIONS & MAINTENANCE



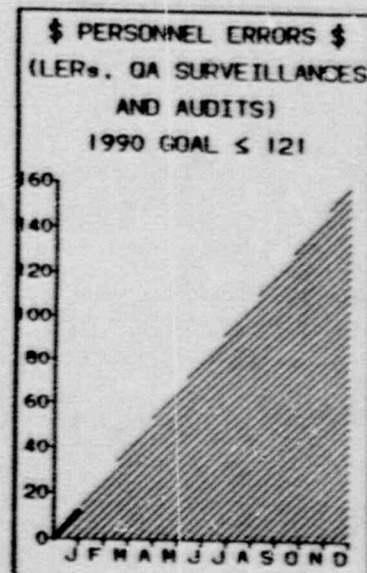
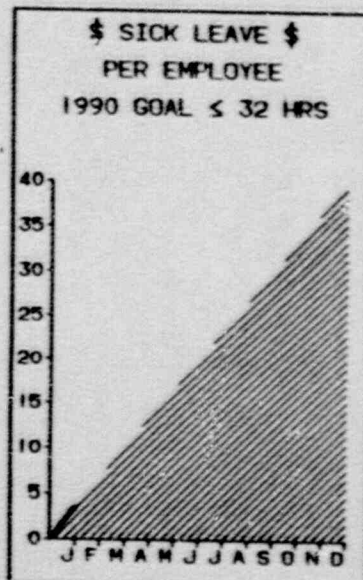
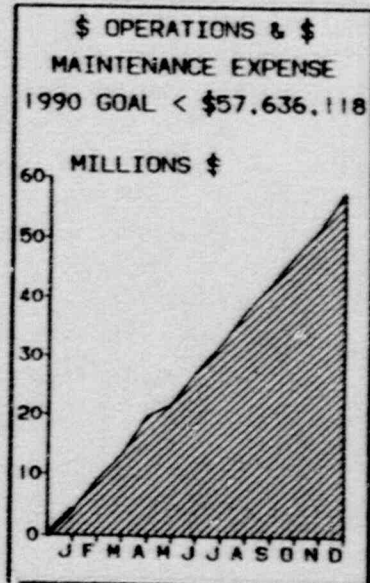
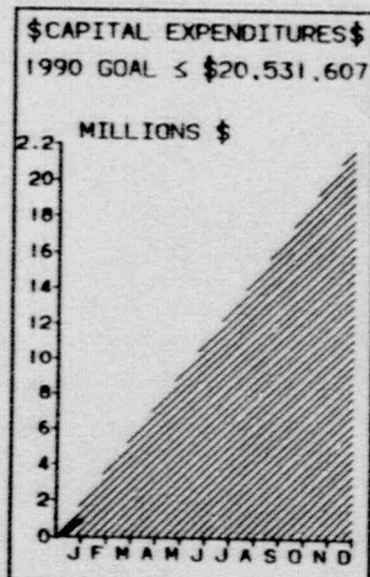
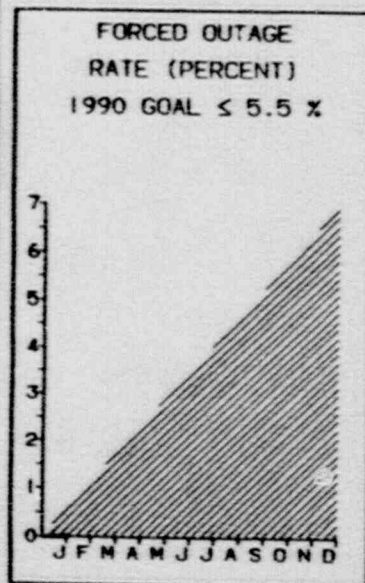
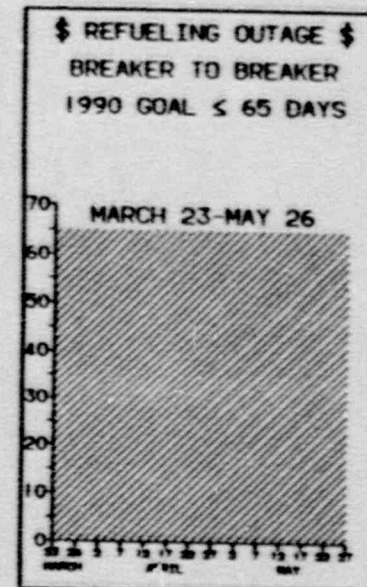
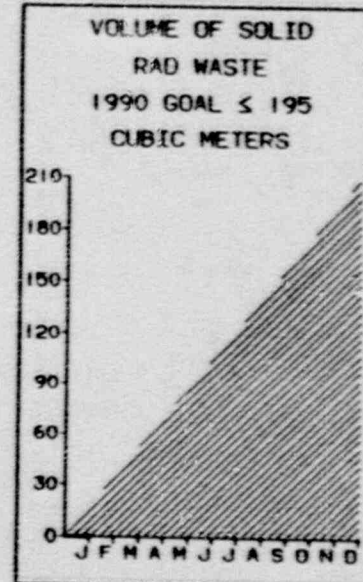
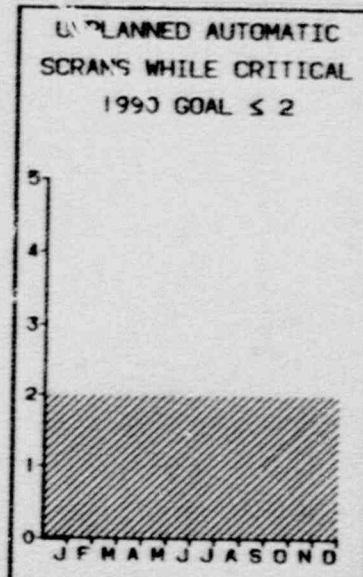
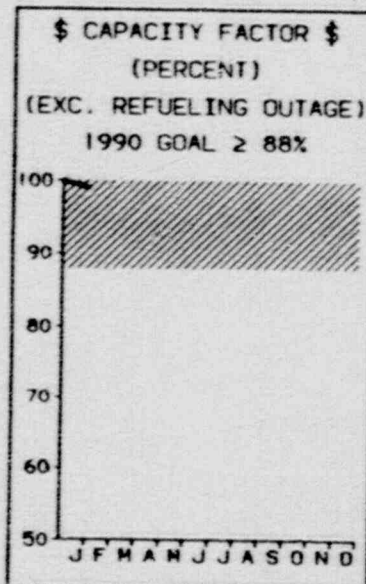
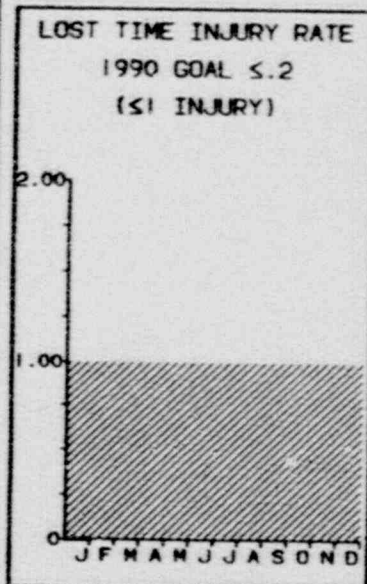
M. D. QUINTON  
GENERAL MANAGER  
STATION SUPPORT

- OPERATIONS
- SCHEDULING & MODIFICATIONS
- MAINTENANCE SERVICES

- NUCLEAR PROTECTION SERVICES
- CHEMISTRY & HEALTH PHYSICS
- NUCLEAR OPERATIONS EDUCATION & TRAINING
- NUCLEAR TECHNICAL EDUCATION & TRAINING



# 1990 V. C. SUMMER NUCLEAR STATION PERFORMANCE FACTORS AND GOALS KEEP US IN THE BLUE



\$ SIGN INDICATES AN INCENTIVE BONUS GOAL