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SEP 27 1990

Docket Nos. 50-325, 50-324
License Nos. DPR-71, DPR-62

Carolina Power and Light Company
ATTN: Mr. Lynn W. Eury
Executive Vice President
Power Supply
P. O. Box 1551
Raleigh, NC 27602

Gentlemen:

SUBJECT: MEETING SUMMARY - BRUNSWICK

This refers to the meeting conducted at your request in the Region II Office on September 24, 1990. The purpose of the meeting was for you to present a self-assessment of the Brunswick facility. A list of attendees and a copy of your handout are enclosed.

It is our opinion that this meeting was beneficial in that it provided a better understanding of the actions you have taken with respect to the weaknesses addressed in the last SALP report, as well as those identified through problems/events encountered during the current SALP period which ends September 30, 1990. We appreciate your discussion of the challenges you face and the goals you have set for the upcoming SALP period.

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 matter, please contact us.

Sincerely,

(Original signed by EMerschhoff/for)

Luis A. Reyes, Director
Division of Reactor Projects

- Enclosures:
1. List of Attendees
 2. Licensee Handout

cc w/encls: (See page 2)

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SEP 27 1990

cc w/encls:

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SEP 27 1990

bcc w/encls:
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RII:DRP
MG
MG Gasman
09/26/90

RII:DRP
RC
RCarroll
09/26/90

RII:DRP
DV
DVerrelli
09/26/90

RII:DRP
EM
EMerschoff
09/26/90

ENCLOSURE 1

LIST OF ATTENDEES

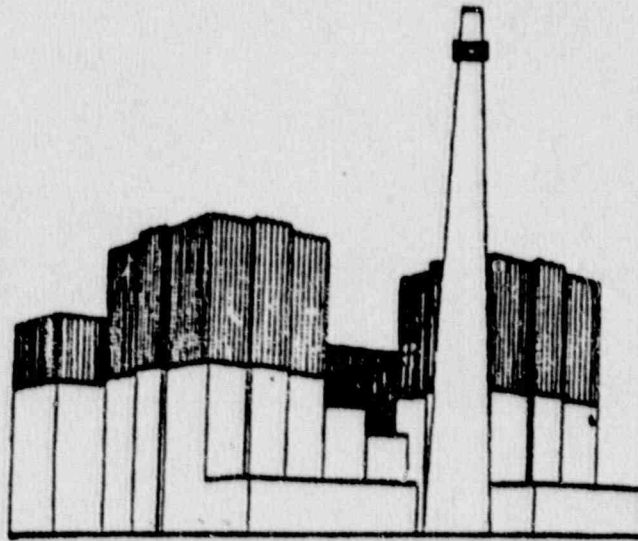
Carolina Power and Light Company

R. B. Starkey, Jr., Vice President - Brunswick Nuclear Project
J. W. Moyer, Technical Assistant to Plant General Manager
B. P. Leonard, Manager - Training
R. E. Helme, Manager - Technical Support
K. B. Altman, Manager - Regulatory Compliance
J. M. Brown, Manager - Brunswick Engineering Support
L. I. Loflin, Manager - Nuclear Licensing
M. A. Turkal, Senior Specialist - Nuclear Licensing

Nuclear Regulatory Commission

S. D. Ebnetter, Regional Administrator, Region II (RII)
J. L. Milhoan, Deputy Regional Administrator, RII
L. A. Reyes, Director, Division of Reactor Projects (DRP), RII
A. F. Gibson, Director, Division of Reactor Safety (DRS), RII
J. P. Stohr, Director, Division of Radiation Safety and
Safeguards (DRSS), RII
E. W. Merschoff, Deputy Director, DRP, RII
S. A. Varga, Director, Division of Reactor Projects II-1, Office of
Nuclear Reactor Regulation (NRR)
G. C. Lainas, A/D for Region II Reactors, NRR
R. W. Borchardt, Regional Coordinator, Office of the Executive
Director of Operations
D. M. Collins, Chief, Emergency Preparedness and Radiological
Protection Branch, DRSS, RII
D. M. Verrelli, Chief, Reactor Projects Branch 1, DRP, RII
R. E. Carroll, Acting Chief, Reactor Projects Section 1A, DRP, RII
F. Jape, Chief, Quality Assurance Programs Section, DRS, RII
H. O. Christensen, Senior Resident Inspector - Grand Gulf, DRP, RII
R. L. Prevatte, Senior Resident Inspector - Brunswick, DRP, RII
D. J. Nelson, Resident Inspector - Brunswick, DRP, RII
T. Le, Project Manager, NRR
R. D. Gibbs, Reactor Engineer, DRS, RII
M. M. Glasman, Project Engineer, DRP, RII
L. R. Moore, Reactor Engineer, DRP, RII

CAROLINA POWER & LIGHT COMPANY



**Brunswick Nuclear Project
Units 1 and 2**

**NRC Management Meeting
September 24, 1990**

CAROLINA POWER AND LIGHT COMPANY
BRUNSWICK NUCLEAR PROJECT

CP&L REQUESTED
MANAGEMENT MEETING
SEPTEMBER 24, 1990

OPENING REMARKS	RUSS STARKEY
BRUNSWICK OPERATION FROM 09/01/89 TO 09/30/90	
INTRODUCTION/OVERVIEW	RUSS STARKEY
PERFORMANCE INDICATORS	
FUNCTIONAL AREAS	
SECURITY	RUSS STARKEY
EMERGENCY PREPAREDNESS	
RADIOLOGICAL CONTROLS	
SAFETY ASSESSMENT	
MAINTENANCE/SURVEILLANCE	
PLANT OPERATIONS	JOHN MOYER
TRAINING	BRUCE LEONARD
TECHNICAL SUPPORT	BOB HELME
ENGINEERING	MORRIS BROWN
SUMMARY	RUSS STARKEY

PURPOSE

o PROVIDE INSIGHT ON:

* BRUNSWICK IMPROVING OPERATION THIS SALP PERIOD

* FOR EACH SALP FUNCTIONAL AREA:

PREVIOUS SALP CONCERNS.

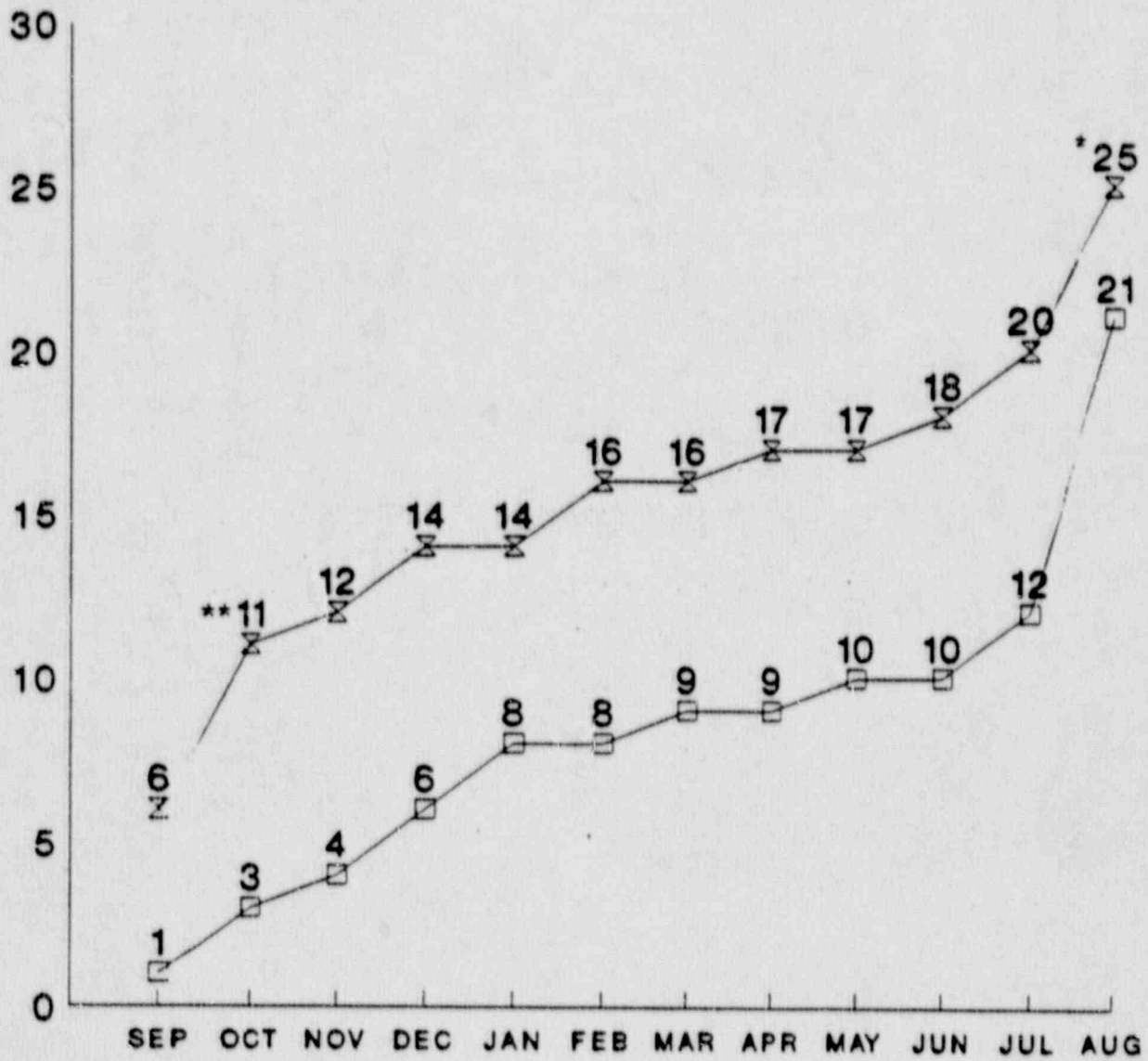
ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS.

ADDITIONAL ACTIONS TAKEN.

CONTINUING OPPORTUNITIES.

BSEP

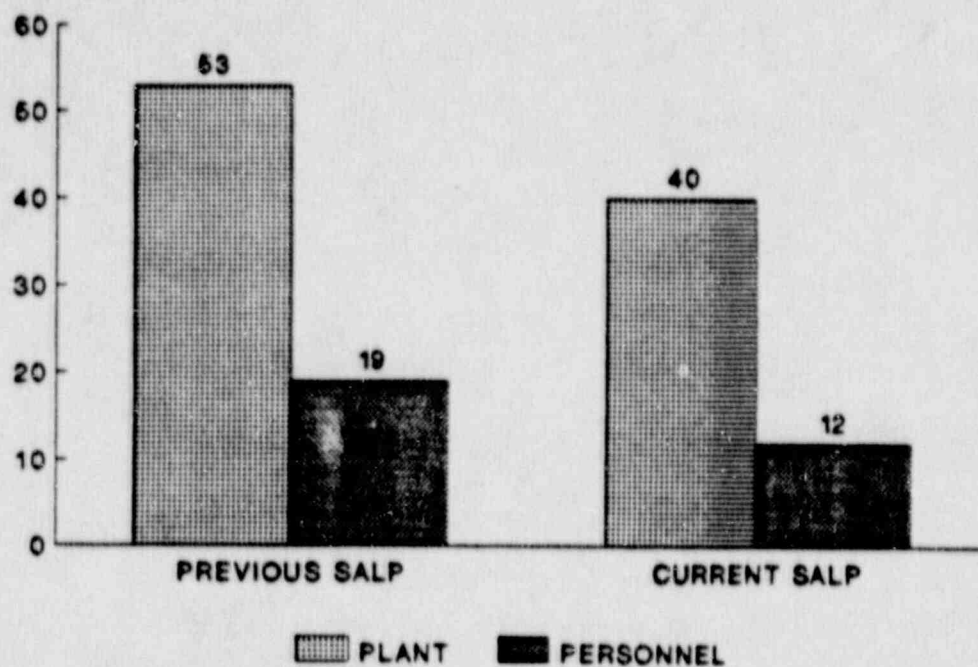
VIOLATIONS PER SALP PERIOD CUMULATIVE



1988/1989 SALP
 1989-1990 SALP

- 5 Potential Violations
- **3 Violations Attributed to DET Insp.

BSEP LERS



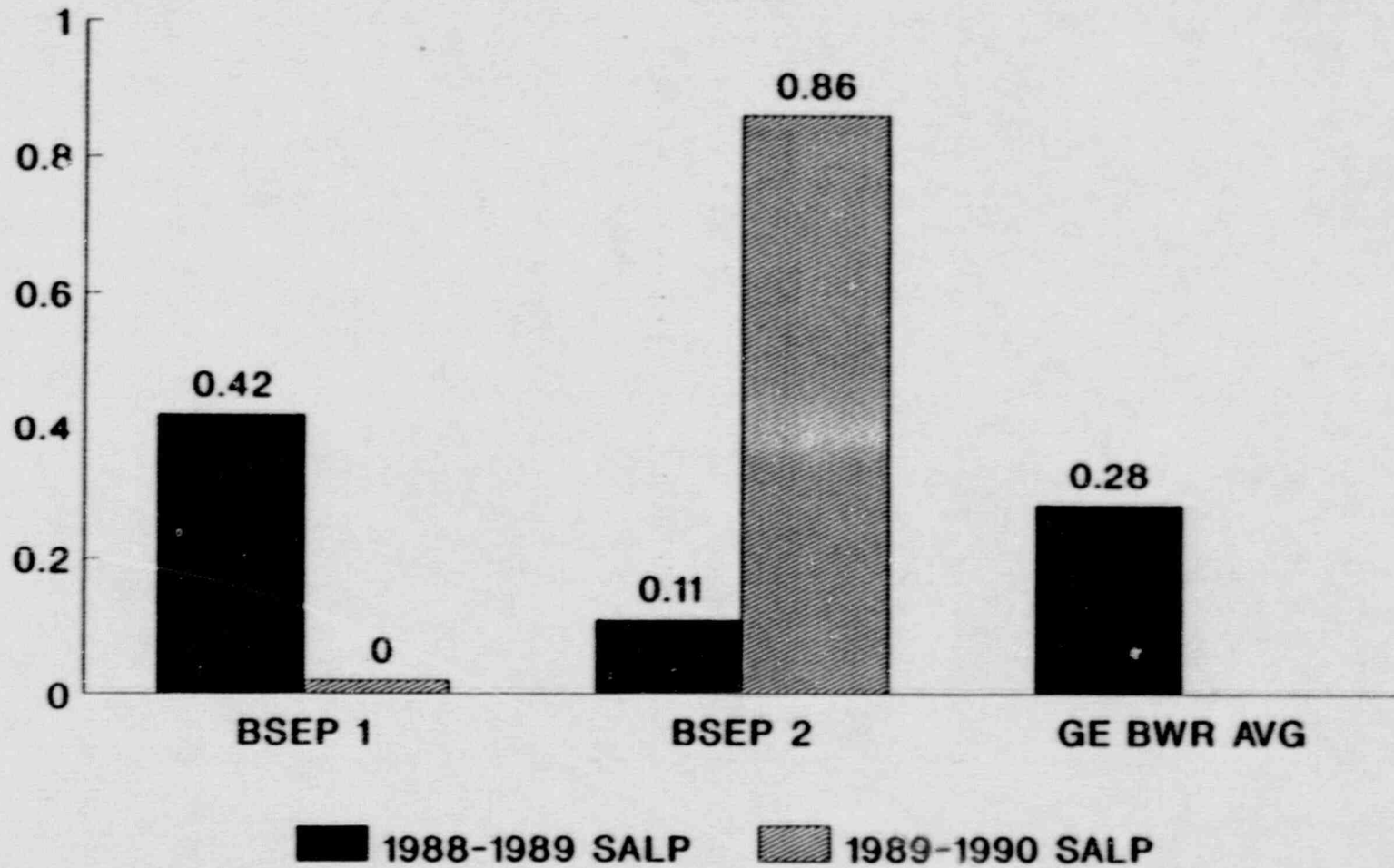
BREAKDOWN OF PLANT LERs

SALP	<u>1988-1989</u>	<u>1989-1990</u>
OTHER (INC CAL)	10	7
COMPONENT FAILURE	15	12
DESIGN/CONST.	9	9
PERSONNEL TOTAL	19	12

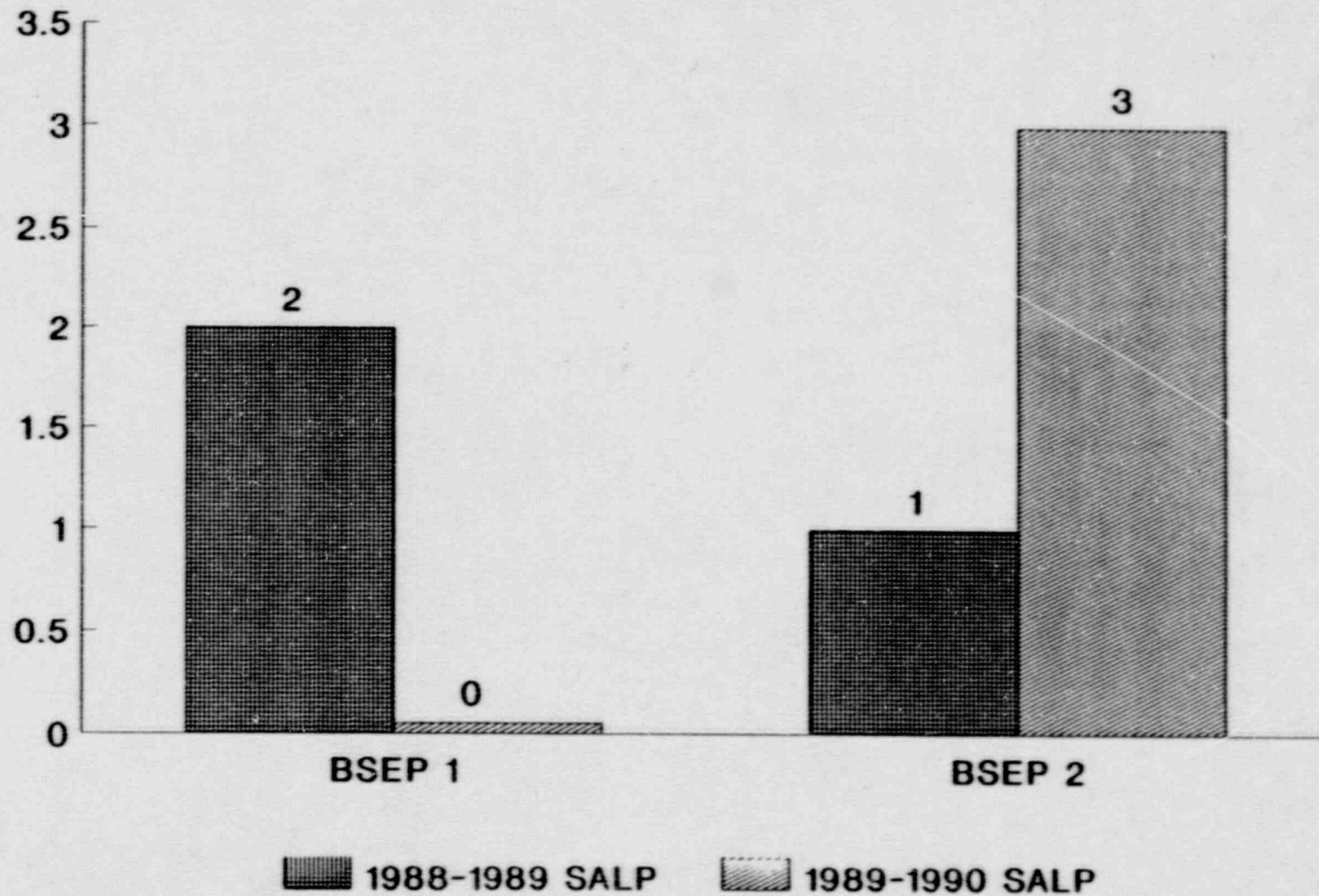
BREAKDOWN OF PERSONNEL LERs

SALP	<u>1988-1989</u>	<u>1989-1990</u>
PERSONNEL OTHER	4	1
PERSONNEL TEST/CAL	5	7
PERS MAINT	2	0
PERSONNEL OPERATING	8	4

AVERAGE NUMBER OF REACTOR TRIPS PER 1000 CRITICAL HOURS



AUTOMATIC REACTOR TRIPS



SECURITY

o PREVIOUS SALP CONCERNS:

* NO CONCERNS NOTED.

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:

* NONE REQUIRED.

SEC 1

SECURITY (CONT)

o ADDITIONAL ACTIONS TAKEN:

- * INCREASED ARMED RESPONSE FORCE MANNING AND ARMAMENT.
- * PROCURED ADDITIONAL SECURITY CONTINGENCY EQUIPMENT.
- * DEVELOPED 40 HOUR ARMED RESPONSE TACTICAL TRAINING PROGRAM.
- * INCREASED FIREARMS TRAINING CURRICULUM FROM 24 TO 36 HOURS ANNUALLY WITH EMPHASIS ON TACTICAL WEAPON FIRING.
- * INCREASED SECURITY UNIT STAFFING LEVEL FROM 3 TO 5.
- * IMPROVED COMMUNICATIONS AND COORDINATION THROUGH MONTHLY MEETINGS WITH MAINTENANCE, TECHNICAL SUPPORT, AND SECURITY.
- * INSTALLING CARD READERS IN OSC AND TSC TO RESOLVE ACCOUNTABILITY ISSUES.
- * E-FIELD UPGRADE IN PROGRESS TO REDUCE NUISANCE/FALSE ALARM RATE AND IMPROVE DETECTION CAPABILITY.

SECURITY (CONT)

o RESULTS/ACCOMPLISHMENTS:

- * SUCCESSFULLY PARTICIPATED IN AN NRC REGULATORY EFFECTIVENESS REVIEW.
- * IMPLEMENTED FITNESS FOR DUTY RULE.
- * SUPPORTED SPENT FUEL SHIPMENT PROGRAM.
- * IMPROVED PROTECTED AREA ALARM/BARRIER EFFECTIVENESS.
- * MAINTAINED A MOTIVATED AND EXPERIENCED SECURITY FORCE.
- * CONTINUED SECURITY PROGRAM EFFECTIVENESS.
- * WINNER OF BURNS SOUTHEAST UTILITIES DISTRICT 1990 PISTOL CHAMPIONSHIP AND MATCH HIGH SHOOTER AWARD.

SECURITY (CONT)

- o CONTINUING OPPORTUNITIES:
 - * REPLACEMENT OF AGING EQUIPMENT.
 - * RESPONSE FORCE ENHANCEMENT.
 - * CONTINUED EXCELLENCE OF PERFORMANCE IN SECURITY ACTIVITIES.

EMERGENCY PREPAREDNESS

o PREVIOUS SALP CONCERNS:

- * FAILURE OF CONTROL ROOM STAFF TO PROVIDE FOLLOWUP REPORTS TO OFFSITE AUTHORITIES DURING THE INITIAL STAGES OF AN EMERGENCY.
- * EMERGENCY MANAGEMENT AND COORDINATION PROBLEMS WHICH HAMPERED ACCIDENT ASSESSMENTS IN THE TECHNICAL SUPPORT CENTER.
- * FAILURE OF ONSITE PERSONNEL TO DEMONSTRATE AN EFFECTIVE USE OF THE EMERGENCY ACTION LEVEL SCHEME.
- * WEAKNESS IN DEMONSTRATION OF ONSITE ACCOUNTABILITY.
- * NEED FOR A MORE CRITICAL CRITIQUE TO MANAGEMENT ON EXERCISE PERFORMANCE.

EMERGENCY PREPAREDNESS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:

* OFFSITE NOTIFICATIONS.

- DURING THIS SALP PERIOD SOME ADDITIONAL DIFFICULTIES WERE ENCOUNTERED WITH FOLLOWUP EVENT NOTIFICATION ON THREE OCCASIONS.
- CONSISTENT WITH OTHER DUTIES THE STA NOW PROVIDES EMERGENCY PLAN RECOMMENDATIONS TO THE SHIFT FOREMAN.
- COMPLETED SPECIAL TRAINING FOR SHIFT FOREMAN AND STAs IN ADDITION TO THE ANNUAL EP TRAINING.
- FLOW CHARTED NOTIFICATION PROCESS. SUCCESSFULLY USED ON A DRILL IN SEPTEMBER 1990.
- SHIFT MANAGER POSITION CREATED WHICH WILL AID THE SHIFT FOREMAN IN REQUIRED NOTIFICATIONS.

EMERGENCY PREPAREDNESS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* ACCIDENT ASSESSMENTS IN THE TECHNICAL SUPPORT CENTER.

- REVISED PROCEDURES TO ALLOW DIRECT COMMUNICATION BETWEEN THE ACCIDENT ASSESSMENT TEAM IN THE TSC AND THE CONTROL ROOM.
- DAMAGE CONTROL TEAM UPGRADED TO INCLUDE MAINTENANCE PLANNERS AND MOVED THE DCT INTO THE TSC WITH THE ACCIDENT ASSESSMENT TEAM.
- ENHANCED THE COMMUNICATION FLOW AND THE ABILITY TO QUICKLY DISPATCH TEAMS BY UPGRADING THE OPERATION SUPPORT CENTER STAFF TO INCLUDE AN OPERATIONS LEADER (SRO), A MAINTENANCE LEADER AND AN E&RC LEADER IN ADDITION TO THE OSC LEADER.

EMERGENCY PREPAREDNESS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* EMERGENCY ACTION LEVELS

- THE STAs HAVE BEEN TRAINED TO EVALUATE EALs AND MAKE RECOMMENDATIONS TO THE SHIFT FOREMAN. THIS TRAINING WAS IN ADDITION TO THE ANNUAL EP TRAINING.
- TESTED THE ABILITY OF THE SHIFT FOREMAN AND STAs TO USE THE EAL SCHEME THROUGH TABLETOP EXERCISES.
- IMPROVED EAL FLOW CHARTS BASED ON FEEDBACK FROM LICENSED OPERATOR RETRAINING.

EMERGENCY PREPAREDNESS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* ONSITE ACCOUNTABILITY.

- ACCOUNTABILITY PROCEDURES WERE REVISED TO ENSURE ACCOUNTING OF ALL INDIVIDUALS.

* CRITIQUES ON EXERCISE PERFORMANCE.

- THE DETAIL INCLUDED IN THE CRITIQUES TO MANAGEMENT HAS BEEN INCREASED.

o ADDITIONAL ACTIONS TAKEN:

- * INCREASED AUGMENTATION DRILLS FROM QUARTERLY TO MONTHLY.

EMERGENCY PREPAREDNESS (CONT)

o RESULTS/ACCOMPLISHMENTS:

- * SERIES OF COMMUNICATION DRILLS SUCCESSFULLY COMPLETED.
- * REDEMONSTRATION COMMUNICATION DRILL SUCCESSFULLY COMPLETED ON JUNE 22, 1990.
- * INITIAL AND FOLLOWUP NOTIFICATIONS COMPLETED SUCCESSFULLY FOR THREE ACTUAL EVENTS, UNUSUAL EVENT FOR HURRICANE HUGO (9/20/89) AND ALERTS FOR LOSS OF ANNUNCIATORS (9/21/89 AND 12/22/89).
- * SUCCESSFULLY COMPLETED SITE ACCOUNTABILITY DRILL ON AUGUST 3, 1990.
- * SHIFT AUGMENTATION
 - FULL AUGMENTATION DRILL REQUIRING TRAVEL TO SITE COMPLETED ON FEBRUARY 28, 1990.
 - INCREASED FREQUENCY OF AUGMENTATION DRILLS FROM QUARTERLY TO MONTHLY.
- * RECENT ACCIDENT SCENARIOS HAVE BEEN RECOGNIZED BY THE NRC AS "GRADUATE LEVEL."

EMERGENCY PREPAREDNESS (CONT)

o CONTINUING OPPORTUNITIES:

- * CONTINUE TO MAINTAIN THE EFFECTIVENESS OF IMPROVEMENTS.**
- * AGGRESSIVELY SELF-EVALUATE SCENARIOS TO IDENTIFY POTENTIAL PROBLEM AREAS AND TAKE APPROPRIATE CORRECTIVE ACTIONS.**
- * ESTABLISH AND IMPLEMENT CORRECTIVE ACTIONS ADDRESSING FAILURE TO DECLARE AN UNUSUAL EVENT FOLLOWING AUGUST 19 EVENT.**

RADIOLOGICAL CONTROLS

o PREVIOUS SALP CONCERNS:

- * COLLECTIVE RADIATION DOSE REMAINS HIGH.
- * RESPONSE TO NRC INITIATIVES LACKED TIMELINESS AND THOROUGHNESS.
- * CORPORATE AUDITS ARE INEFFECTIVE IN IDENTIFYING NEW RADIOLOGICAL DEFICIENCIES.

RADIOLOGICAL CONTROLS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:

* HIGH COLLECTIVE RADIATION DOSE.

- ESTABLISHED A CORPORATE DOSE REDUCTION PROGRAM FOCUSING ON LONG TERM IMPROVEMENTS.
- DEVELOPED AN ACTION PLAN TO REDUCE THE RADIATION EXPOSURE TO THE INDUSTRY "BEST QUARTILE" (500 PERSON-REM) BY 1995.
- BNP ALARA MULTI-DISCIPLINE TASK FORCE VISITED PLANT HATCH. 35 RECOMMENDATIONS MADE AND BEING IMPLEMENTED.

RADIOLOGICAL CONTROLS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* HIGH COLLECTIVE RADIATION DOSE (CONTINUED).

- BNP ALARA COMMITTEE ACTIVITIES:

- INCORPORATED EXPOSURE REDUCTION INTO THE SAFETY PROGRAM.
- ESTABLISHED AN EXPOSURE REDUCTION INCENTIVE PROGRAM.
- DEVELOPED ISOMETRIC DRAWING/PHOTOGRAPH LOCATOR BOARDS.
- PUBLISHED AN OUTAGE HANDBOOK FOR UNIT 1 REFUELING OUTAGE 7.
- ESTABLISHED ROUTINE MANAGER ALARA MEETINGS WITH UNIT AND SECTION MANAGERS.
- MANAGEMENT COMMITMENT TO REDUCE OUTAGE LENGTH AND SCOPE.
- ALARA INCENTIVES AND PENALTIES INCLUDED IN MAJOR OUTAGE CONTRACTS - SIX CONTRACTS IN THE UPCOMING UNIT 1 OUTAGE.

RADIOLOGICAL CONTROLS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* HIGH COLLECTIVE RADIATION DOSE (CONTINUED).

- IMPROVED REMOTE RADIATION MONITORING IN REACTOR BUILDINGS, TURBINE BUILDINGS AND RADWASTE BUILDING.
- IMPROVEMENTS MADE TO THE BNP RADIATION EXPOSURE BUDGETING PROCESS.
- IMPROVED EXPOSURE STATUSING.

RADIOLOGICAL CONTROLS (CONT)

- o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):
 - * RESPONSE TO NRC INITIATIVES.
 - DEVELOPED PROCEDURES FOR TRACKING AND TRENDING EXPOSURE FROM REWORK.
 - CORPORATE QA AUDIT OF ALARA PROGRAM
 - EXTENSIVE PERFORMANCE BASED AUDIT PERFORMED OVER A THIRTEEN MONTH PERIOD.
 - RECOMMENDATIONS AND CONCERNS ARE CURRENTLY BEING ADDRESSED BY THE NUCLEAR ENGINEERING DEPARTMENT AND BNP.

RADIOLOGICAL CONTROLS (CONT)

o ADDITIONAL ACTIONS TAKEN:

- * ESTABLISHED SINGLE POINT ACCESS AND EGRESS CONTROL TO THE RADIATION CONTROL AREA.
- * RADIATION WORK PERMITS ARE NOW REQUIRED FOR ALL ENTRIES INTO THE POWER BLOCK.
- * INSTALLED HIGHLY SENSITIVE PORTAL MONITORS AT EACH EXIT FROM THE SITE.
- * IMPLEMENTED EXTENSIVE USE OF ALARMING DOSIMETERS.

RADIOLOGICAL CONTROLS (CONT)

o RESULTS/ACCOMPLISHMENTS:

- * VERY SUCCESSFUL UNIT 2 RECIRCULATION PIPE REPLACEMENT. 476 PERSON-REM ACCUMULATED IS AMONG THE LOWEST ACHIEVED IN THE INDUSTRY.
- * CHEMICAL DECONTAMINATION PERFORMED DURING THE UNIT 2 OUTAGE IS ESTIMATED TO HAVE SAVED 664 PERSON-REM. OTHER ALARA ACTIVITIES ARE ESTIMATED TO HAVE SAVED 475 PERSON-REM.
- * REDUCTION IN PERSONNEL CONTAMINATION CASES. FROM JUNE TO AUGUST 1990 THERE WERE ONLY 10 CLOTHING CASES AND NO SKIN CONTAMINATIONS.
- * SIGNIFICANT REDUCTION IN CONTAMINATED SQUARE FOOTAGE - FROM 79,000 SQ FT LAST SALP PERIOD TO 35,000 SQ FT. 94% OF THE ACCESSIBLE AREAS AT BNP CAN BE TOURED WITHOUT PROTECTIVE CLOTHING.
- * COMPLETED 15 SPENT FUEL CASK SHIPMENTS TO THE HARRIS PLANT.
- * SUCCESSFULLY COMPLETED MORE THAN 975 RADIOACTIVE SHIPMENTS IN THE LAST 4 YEARS.
- * AVERAGE WEEKLY EXPOSURE AT BNP WITH BOTH UNITS RUNNING IS 2.5 REM (PER RWP) COMPARED WITH AN INDUSTRY AVERAGE OF 3.1 REM.

RADIOLOGICAL CONTROLS (CONT)

o CONTINUING OPPORTUNITIES:

* LOCKED HIGH RADIATION DOORS.

- DURING THIS SALP PERIOD 5 EVENTS HAVE OCCURRED IN WHICH LOCKED HIGH RADIATION DOORS WERE FOUND UNLOCKED.
- SEVERAL CORRECTIVE ACTIONS HAVE BEEN SUCCESSFULLY IMPLEMENTED TO PREVENT RECURRENCE.
 - MEMOS FROM MANAGEMENT ADDRESSING WORKER ACCOUNTABILITY.
 - TRAINING.
 - PLANT POSTING.
 - TOTAL KEY CONTROL IN E&RC.
 - SIGNATURE FORM DOCUMENTING KEY USE.
 - RAPID EGRESS IMPROVEMENTS.

RADIOLOGICAL CONTROLS (CONT)

o CONTINUING OPPORTUNITIES (CONTINUED):

* PERSONNEL CONTAMINATION EVENTS.

- CONTAMINATION EVENT INVESTIGATION REPORTS.
 - ROOT CAUSE.
 - CORRECTIVE ACTIONS.
 - IMPROVED TRENDING.
- IMPLEMENTATION OF RETRAINING PROGRAM FOR REPEAT OFFENDERS OR SPECIAL NEEDS.
- IMMEDIATE AND SECOND LINE SUPERVISOR NOTIFIED ON EVERY CONTAMINATION EVENT.
- COMMUNICATION OF GOAL STATUS VIA VIDEO AND WEEKLY MEMO.
- CONTAMINATED AREA REDUCTION THROUGH AGGRESSIVE DECONTAMINATION.

SAFETY ASSESSMENT

o PREVIOUS SALP CONCERNS:

- * SEVERAL SAFETY REVIEWS LACKED THE NECESSARY RIGOROUS QUESTIONING.
- * SAFETY REVIEWS WERE HAMPERED BY THE FAILURE TO GET THE RIGHT PEOPLE INVOLVED WHEN ISSUES EMERGED.
- * THE IMPACT OF THE ONSITE NUCLEAR SAFETY UNIT HAD DIMINISHED DUE TO REDUCED STAFFING AND SOME OF THE ONSITE NUCLEAR SAFETY UNIT SCRAM INVESTIGATION REPORTS WERE NOT INDEPENDENT.
- * PNSC REVIEW DEFICIENCIES.
- * A FEW LICENSEE REQUESTS WERE UNTIMELY AND DID NOT PROVIDE ADEQUATE TIME FOR THE STAFF TO RESOLVE THE ISSUE BY THE REQUESTED SCHEDULE.

SAFETY ASSESSMENT (CONT)

- o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:
 - * IMPROVED THE SAFETY REVIEW PROGRAM.
 - IMPLEMENTED NEW CORPORATE METHODOLOGIES ON PERFORMANCE OF SAFETY REVIEWS WHICH INCLUDED A FORMAL CORPORATE 10CFR50.59 PROGRAM BASED ON NRC APPROVED NSAC-125 GUIDANCE.
 - TRAINED 250 INDIVIDUALS ON THE NEW PROGRAM.

SAFETY ASSESSMENT (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* ENHANCED THE SAFETY REVIEW PROCESS.

- HPES PROGRAM IMPLEMENTED. 22 HPES EVALUATIONS PERFORMED TO DATE IN 1990 AND 30 PERFORMED IN 1989.
- UPGRADED THE CORRECTIVE ACTION PROGRAM TO LOWER THE THRESHOLD OF EVENT INVESTIGATION. 66 PLANT INCIDENT REPORTS PERFORMED AS OF 9/17/90 COMPARED TO 49 IN 1989.
- RESPONSIBILITY FOR THE CORRECTIVE ACTION PROGRAM ASSIGNED TO THE MANAGER OF REGULATORY COMPLIANCE.
- SCRAM INVESTIGATION TEAMS FORMED IMMEDIATELY FOLLOWING AN EVENT.
- DEVELOPED A PLANT EVENT IDENTIFICATION PROCESS TO DOCUMENT EVENTS. 87 PLANT EVENT IDENTIFICATION REPORTS INITIATED FROM 4/1/90 THROUGH 9/17/90.

SAFETY ASSESSMENT (CONT)

- o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):
 - * ONSITE NUCLEAR SAFETY ORGANIZATION IMPROVED.
 - ONS FULLY STAFFED WITH THE ADDITION OF A PRINCIPLE ENGINEER FROM OPERATIONS.
 - ONS NO LONGER PARTICIPATES ON SCRAM INVESTIGATION TEAM AS A TEAM MEMBER.
 - * SAFETY REVIEW TRAINING, BASED ON THE NEWLY DEVELOPED CORPORATE PROGRAM, HAS BEEN INITIATED FOR PNSC MEMBERS.
 - * UNTIMELY REQUESTS.
 - AN 18-MONTH AGENDA OF REGULATORY REQUIRED LICENSING ACTIONS DEVELOPED TO FACILITATE INTERNAL AND NRC COMMUNICATIONS.

SAFETY ASSESSMENT (CONT)

o ADDITIONAL ACTIONS TAKEN:

- * IMPROVED THE QUALITY OF LERs BY TRAINING EVENT INVESTIGATORS AS HPES EVALUATORS AND TRANSFERRING PERSONNEL WITH OPERATIONS EXPERIENCE INTO REGULATORY COMPLIANCE POSITIONS.

SAFETY ASSESSMENT (CONT)

o RESULTS/ACCOMPLISHMENTS:

- * SUCCESSFUL IMPLEMENTATION OF THE HPES PROGRAM. ASSIGNED A FULL TIME HPES COORDINATOR.
- * SUCCESSFUL IMPLEMENTATION OF SCRAM INVESTIGATION TEAMS. RECENT TEAM INVESTIGATIONS HAVE BEEN VERY THOROUGH.
- * INCREASED REGULATORY COMPLIANCE INTERACTIONS AMONG THE THREE NUCLEAR SITES.
- * QA DEPARTMENT HAS SUCCESSFULLY IMPLEMENTED PERFORMANCE BASED AUDITS.

SAFETY ASSESSMENT (CONT)

o CONTINUING OPPORTUNITIES:

- * MAINTAIN GOOD RESULTS ACHIEVED BY HPES AND CORRECTIVE ACTION PROGRAMS.
- * CONTINUE DEVELOPMENT OF THE 18-MONTH AGENDA.
- * COMPLETE ESTABLISHMENT OF CORPORATE NUCLEAR ASSESSMENT DEPARTMENT.

MAINTENANCE/SURVEILLANCE

o PREVIOUS SALP CONCERNS:

- * INADEQUATE COMPONENT IDENTIFICATION LABELING.
- * ISOLATED EXAMPLES OF INADEQUATE PROCEDURES OR FAILURE TO FOLLOW PROCEDURES.
- * CONTROL OF FUSES.
- * ISI/IST PROGRAM
- * POST MAINTENANCE TESTING NOT ADEQUATELY PRESCRIBED AND/OR PERFORMED.
- * RECURRING PROBLEMS WHICH LACKED THE NECESSARY ATTENTION FOR PROMPT AND COMPLETE RESOLUTION.
- * SHORTED INSTRUMENT LEADS CAUSING UNNECESSARY SAFETY SYSTEM ACTUATIONS.

MAINTENANCE/SURVEILLANCE (CONT)

- o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:
 - * COMPONENT IDENTIFICATION LABELING.
 - ESTABLISHED CENTRALIZED LABELING GROUP.
 - DEVELOPED LABEL CONTROL PROCEDURE.
 - FIVE YEAR COMPREHENSIVE RELABELING PLAN.
 - COLOR CODING LABELS IN COMMON FACILITIES.
 - * ISOLATED EXAMPLES OF INADEQUATE PROCEDURES OR FAILURE TO FOLLOW PROCEDURES.
 - PROCEDURE UPGRADE CONTINUES.
 - FREQUENTLY CITED AS EXCELLENT EFFORT.
 - FAILURE TO FOLLOW PROCEDURES IS BEING DEALT WITH BY WORK CONTROL PROCESS ENHANCEMENTS.
 - * FUSE CONTROL
 - ESTABLISHED FUSE CONTROL PROGRAM.
 - CHARACTERIZED DURING THE 1989 DET AUDIT AS BEING A PROACTIVE CORRECTIVE ACTION.

MAINTENANCE/SURVEILLANCE (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* ISI/IST PROGRAM.

- NO CORPORATE POLICY OR ORGANIZATIONAL GUIDANCE FOR THE ISI/IST PROGRAM.
- DEVELOPED CORPORATE GROUP GUIDELINE.
- IST PROGRAM HAD NOT INCORPORATED THE GOOD PRACTICES OF THE PREDICTIVE MAINTENANCE PUMP VIBRATION PROGRAM.
- IMPLEMENTED POLICY NOTICE TO ASSURE VIBRATION INFORMATION IS PROVIDED TO PROGRAM ENGINEER.
- DEVELOPED A VIBRATION MONITORING PROGRAM IN THE TECH SUPPORT ORGANIZATION.

* POST MAINTENANCE TESTING NOT ADEQUATELY PRESCRIBED AND/OR PERFORMED.

- DEVELOPED PROCEDURE FOR POST MAINTENANCE TESTING REQUIREMENTS.
- PLANNERS WERE TRAINED ON PROCEDURE.

MAINTENANCE/SURVEILLANCE (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* RECURRING PROBLEMS WHICH LACKED THE NECESSARY ATTENTION FOR PROMPT AND COMPLETE RESOLUTION.

- HIGH HPCI TURBINE OIL MOISTURE.
 - REPLACED STEAM SUPPLY VALVES.
 - RANDOM SAMPLING OF HPCI LUBE OIL.
 - PROCEDURE BEING DEVELOPED BY
ENGINEERING TO INVESTIGATE RECENT
MOISTURE INTRUSION ON UNIT 2.
- PROBLEMS WITH KEEP-FILL SYSTEMS.
 - INVESTIGATION DETERMINED A PRESSURE
CONTROL VALVE DESIGN PROBLEM.
 - THE NUCLEAR ENGINEERING DEPARTMENT
IS DEVELOPING DIRECT REPLACEMENT
MODIFICATIONS TO REPLACE THE
PRESSURE CONTROL VALVES WITH AN
IMPROVED VALVE DESIGN.

MAINTENANCE/SURVEILLANCE (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* RECURRING PROBLEMS WHICH LACKED THE NECESSARY ATTENTION FOR PROMPT AND COMPLETE RESOLUTION (CONTINUED).

- MAINTENANCE OF DIESEL GENERATOR BUILDING
BASEMENT FIRE PROTECTION FEATURES.
 - HALON FIRE PROTECTION SYSTEM PLANT
MODIFICATION HAS BEEN COMPLETED.
- MAINTENANCE OF AUX TRANSFORMER BUS DUCT.
 - INSPECTED AND REPAIRED THE UNIT 2
BUS DUCTS.
 - UNIT 1 BUS DUCTS ARE SCHEDULED FOR
INSPECTION DURING THE 1990 REFUELING
OUTAGE.
 - PLAN TO INSTALL BUS DUCT FILTER
DRAINS.
 - A BUS DUCT PREVENTATIVE MAINTENANCE
PROGRAM WILL BE DEVELOPED BASED ON
UNIT 1 AND UNIT 2 INSPECTION
RESULTS.

MAINTENANCE/SURVEILLANCE (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* SHORTING OF INSTRUMENT LEADS DURING MSTs.

- TEST CLIPS ARE BEING INSTALLED.
- AS OF AUGUST 13, 1990, 92 OF 179 TEST CLIPS HAVE BEEN INSTALLED ON UNIT 2.
- INSTALLATION OF 135 OF 180 TEST CLIPS IS EXPECTED DURING THE UNIT 1 OUTAGE.

MAINTENANCE/SURVEILLANCE (CONT)

o ADDITIONAL ACTIONS TAKEN:

- * DEVELOPED A TOP 10 MOST TROUBLESOME WR/JO LIST.
 - PROBLEMS SELECTED BY OPERATIONS.
 - ITEMS WORKED AS EMERGENT.
- * DEVELOPED SOP 2.45 FOR MAINTENANCE WORK ORDER MANAGEMENT WITH RESPECT TO CORPORATE, NRC, AND INPO GOALS.
- * WR/JO REWORK.
 - ESTABLISH A 3% REWORK GOAL.
 - LOW REWORK RATE IS MAINTAINED. PRESENTLY AT 2.47%. THIS PERCENTAGE EQUATES TO APPROXIMATELY 90 WR/JOs OUT OF A TOTAL OF 3600.
 - PARTICIPATED IN THE ALARA PROJECT QUALITY TEAM ON REWORK.

MAINTENANCE/SURVEILLANCE (CONT)

- o ADDITIONAL ACTIONS TAKEN (CONTINUED):
 - * CLEARANCE RESOURCE CENTER IS ACTIVATED AND MANNED BY MAINTENANCE AND OPERATIONS PRIOR TO UNIT OUTAGES.
 - * INVESTIGATING USE OF BAR CODES FOR PLANT EQUIPMENT LABELING.
 - * WORK CONTROL PROCESS.
 - INITIATED A PRE-JOB AND POST-JOB CREW BRIEFING.
 - DEVELOPED STANDARDS OF EXCELLENCE IN MAINTENANCE.
 - DEVELOPED POST WORK FORCE AUDIT.
 - ESTABLISHED SHIFT MANAGER POSITION.

MAINTENANCE/SURVEILLANCE (CONT)

0 RESULTS/ACCOMPLISHMENTS:

* WR/JO BACKLOG REDUCTION.

- OVER THE PAST TWO YEARS, WR/JO BACKLOG HAS BEEN REDUCED BY 46%.
- 23% REDUCTION IN TOTAL BACKLOG FOR THIS SALP PERIOD.
- 66% REDUCTION IN NON-OUTAGE Q-LIST BACKLOG > 3 MONTHS OLD.
- 51% REDUCTION IN Q-LIST BACKLOG > 2 YEARS OLD.
- 61% REDUCTION IN PLANNER BACKLOG.

MAINTENANCE/SURVEILLANCE (CONT)

o RESULTS/ACCOMPLISHMENTS (CONTINUED):

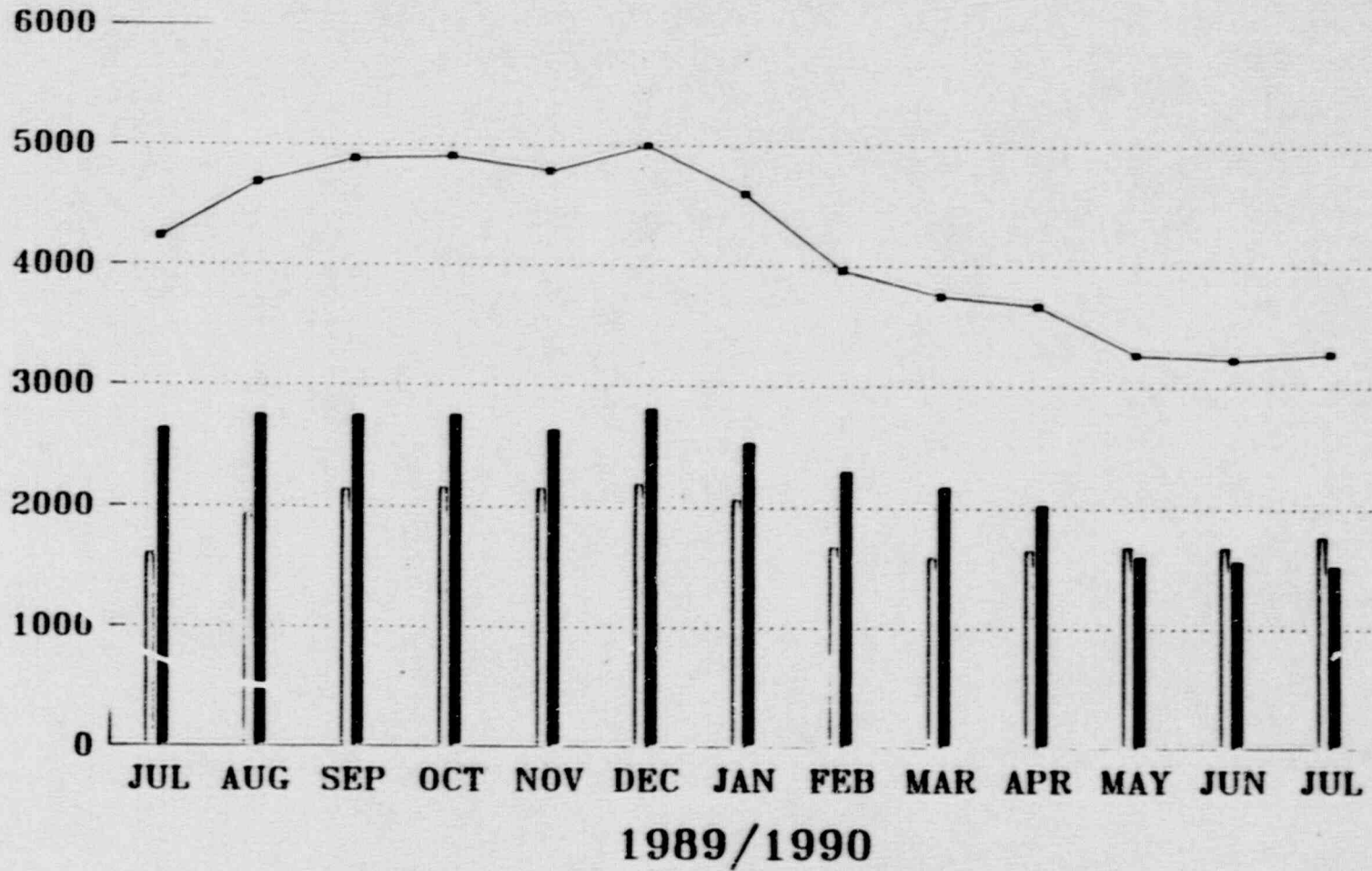
* ECCS AVAILABILITY

- INPO PERFORMANCE INDICATORS SHOW BRUNSWICK IMPROVING AND ABOVE AVERAGE FOR THE INDUSTRY.
- CONTRIBUTING FACTORS FOR THIS TREND ARE:
 - DEFERRED DISCRETIONARY SYSTEM MAINTENANCE UNTIL UNIT OUTAGES.
 - REVISING SURVEILLANCE PROCEDURES.
 - INCREASED MANAGEMENT ATTENTION.

* CONTROL ROOM INDICATION TROUBLE TAG REDUCTION.

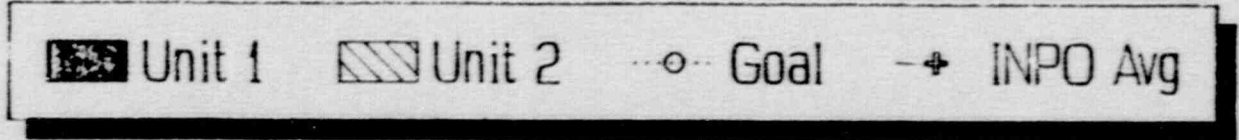
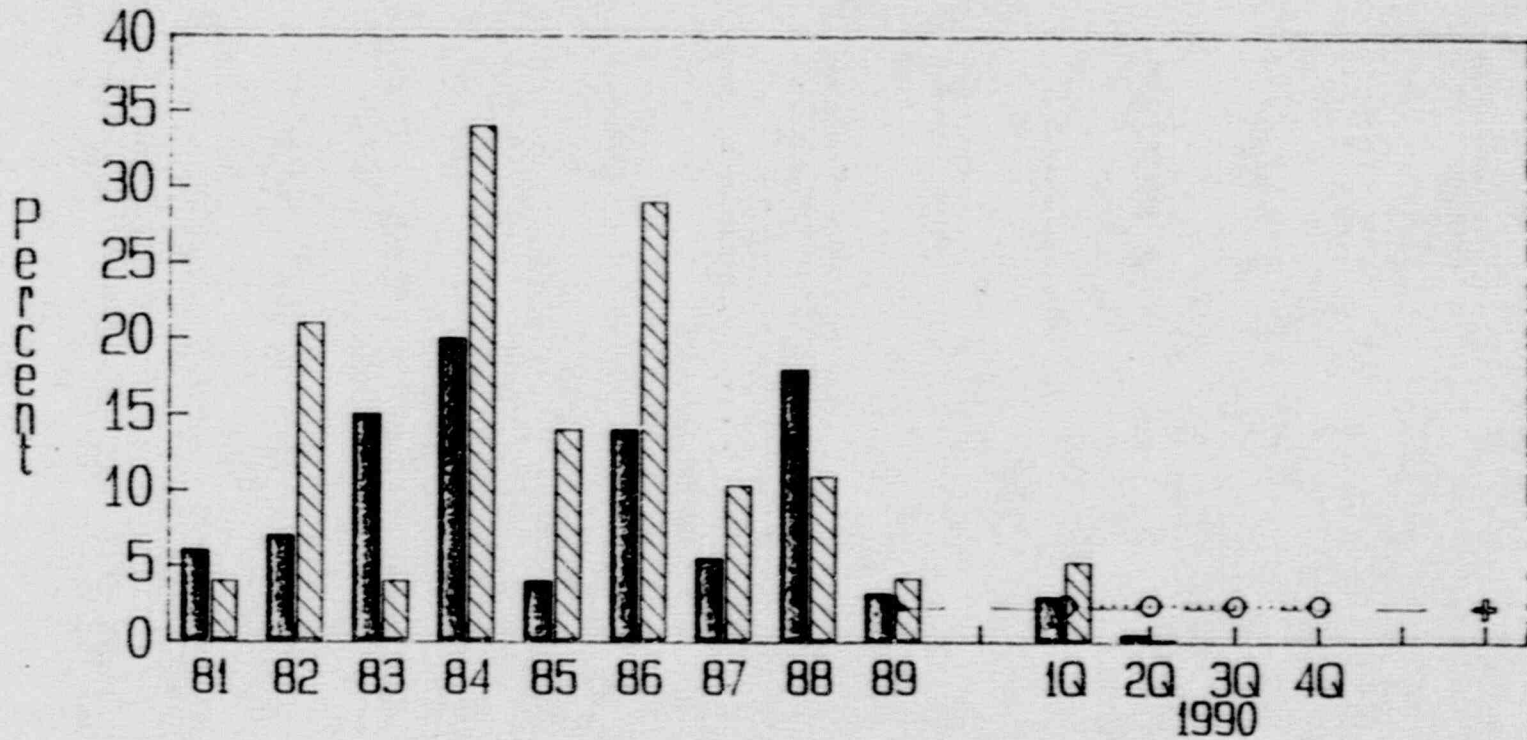
- AS GOOD OR BETTER THAN INPO'S INDUSTRY MEDIAN FOR OUT-OF-SERVICE CONTROL ROOM INDICATORS.

TOTAL WR/JO BACKLOG



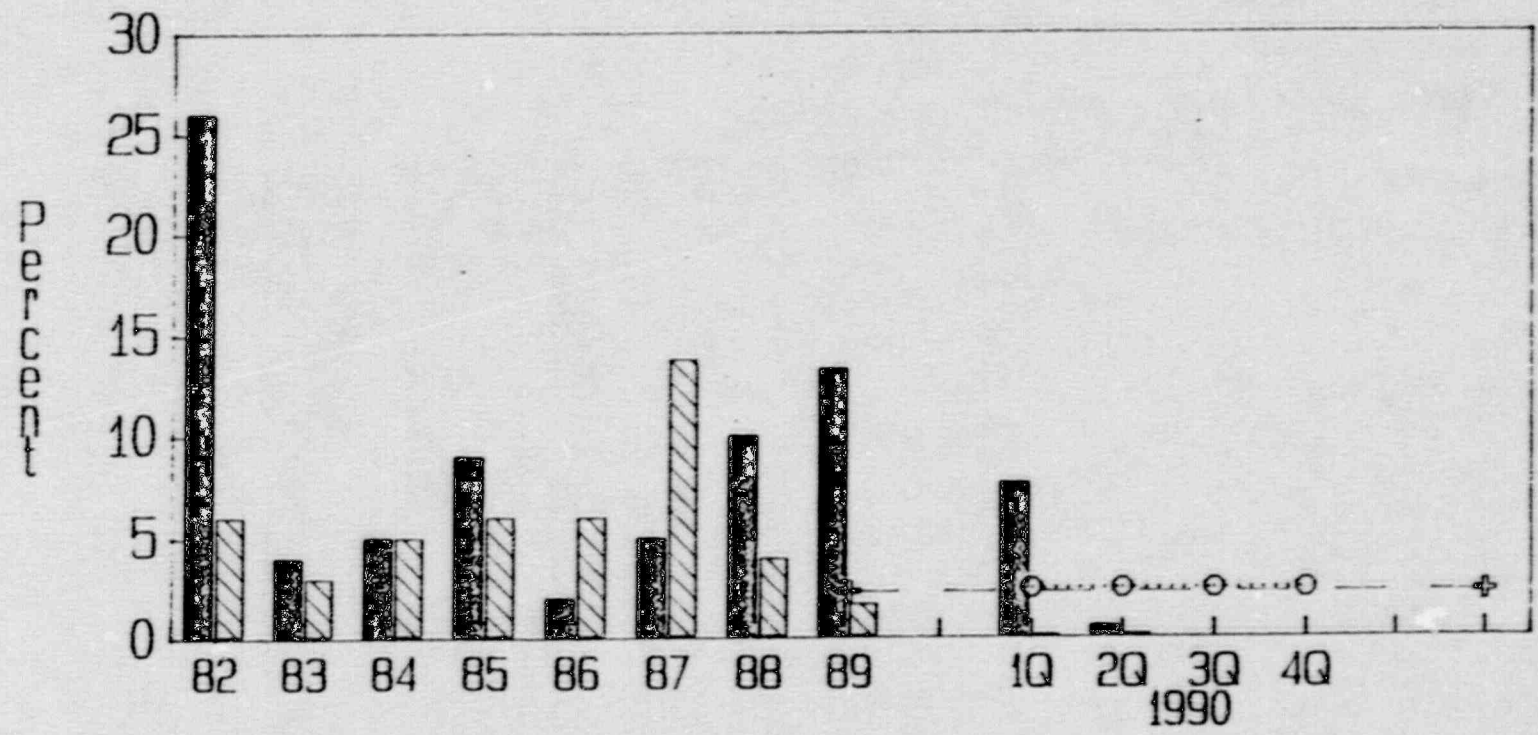
—●— TOTAL BACKLOG □ TOTAL OUTAGE ■ TOTAL NONOUTAGE

Safety System Unavailability HPCI



INPO Indicator
T4a

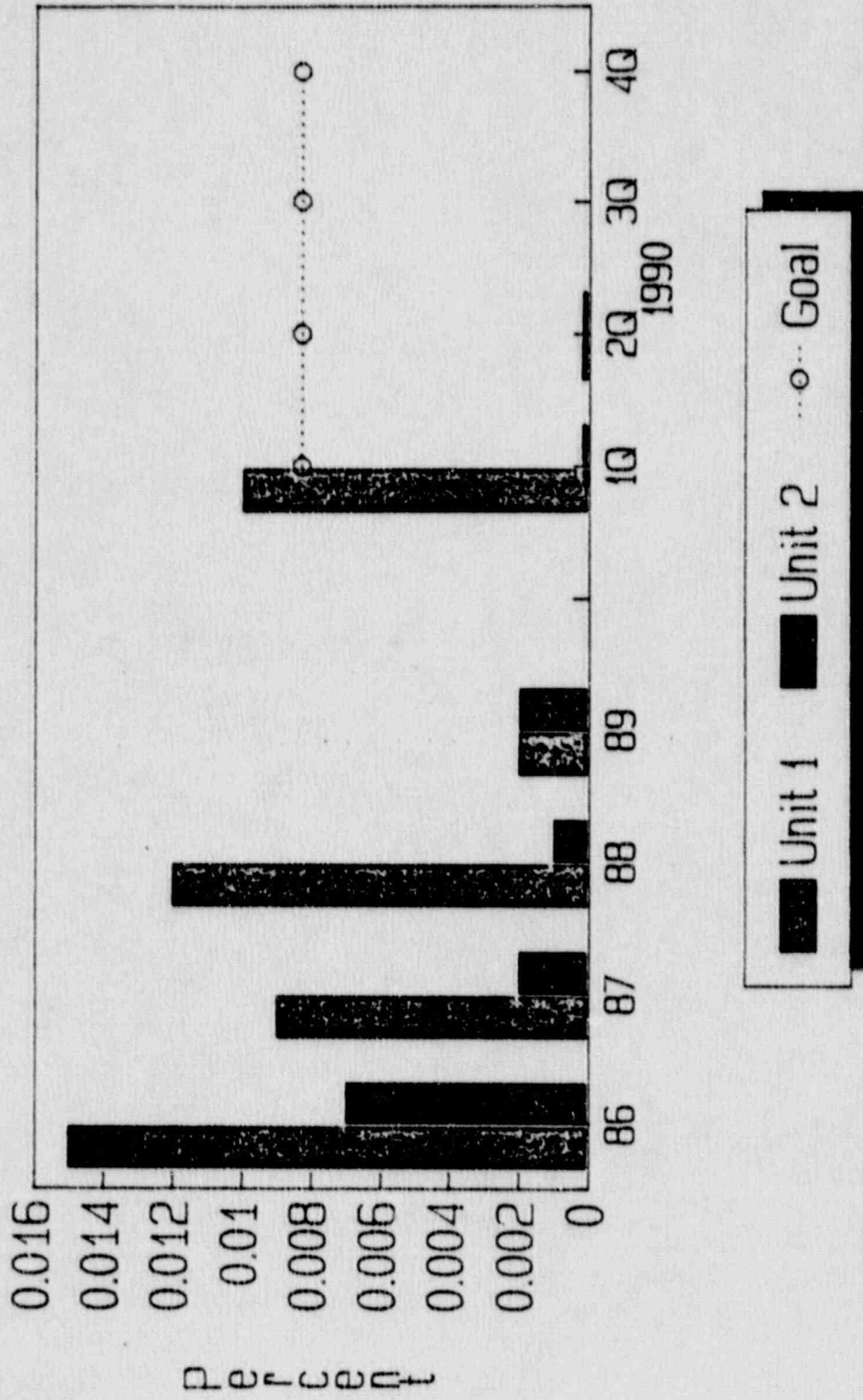
Safety System Unavailability RCIC



Unit 1
 Unit 2
 ○ Goal
 + INPO Avg

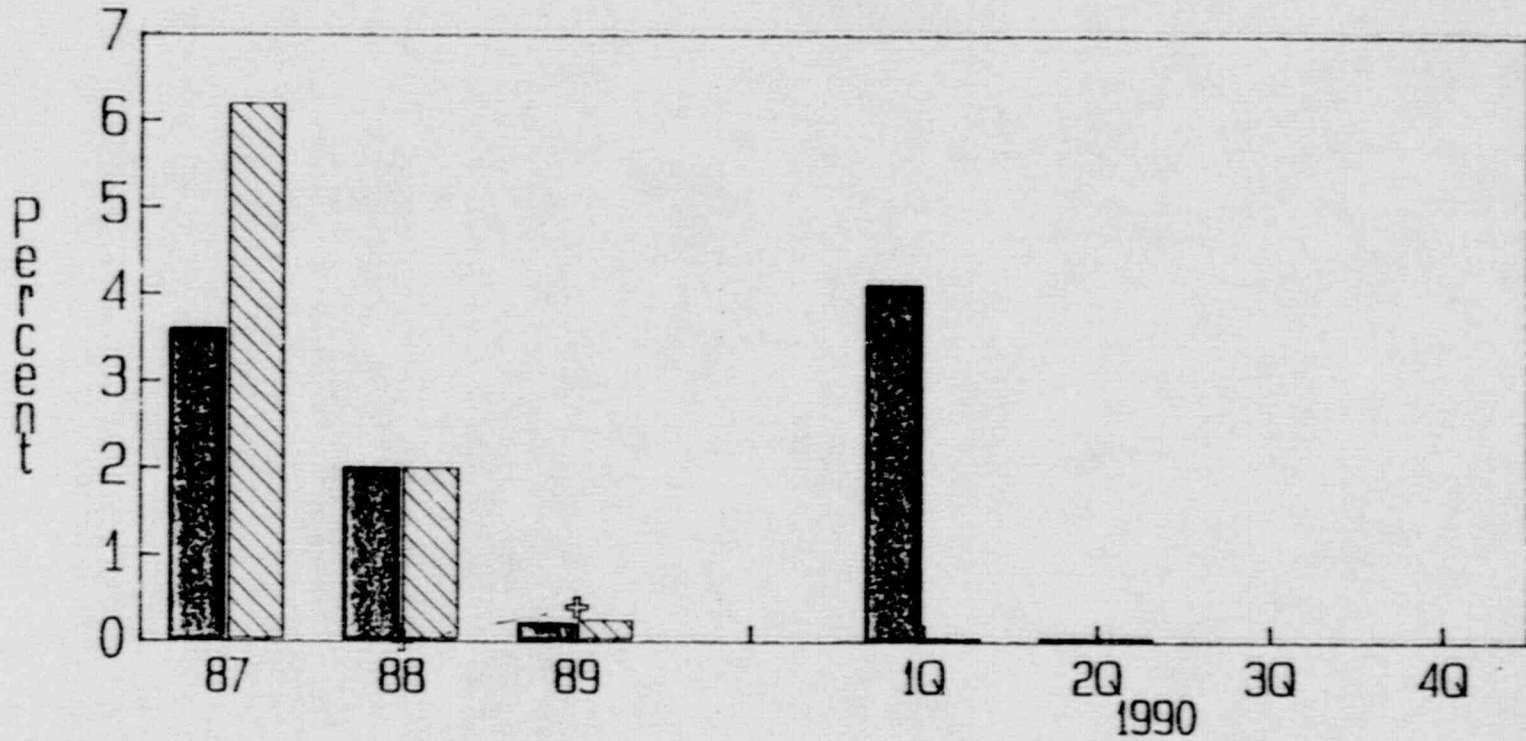
INPO Indicator
T4b

Safety System Unavailability RHR



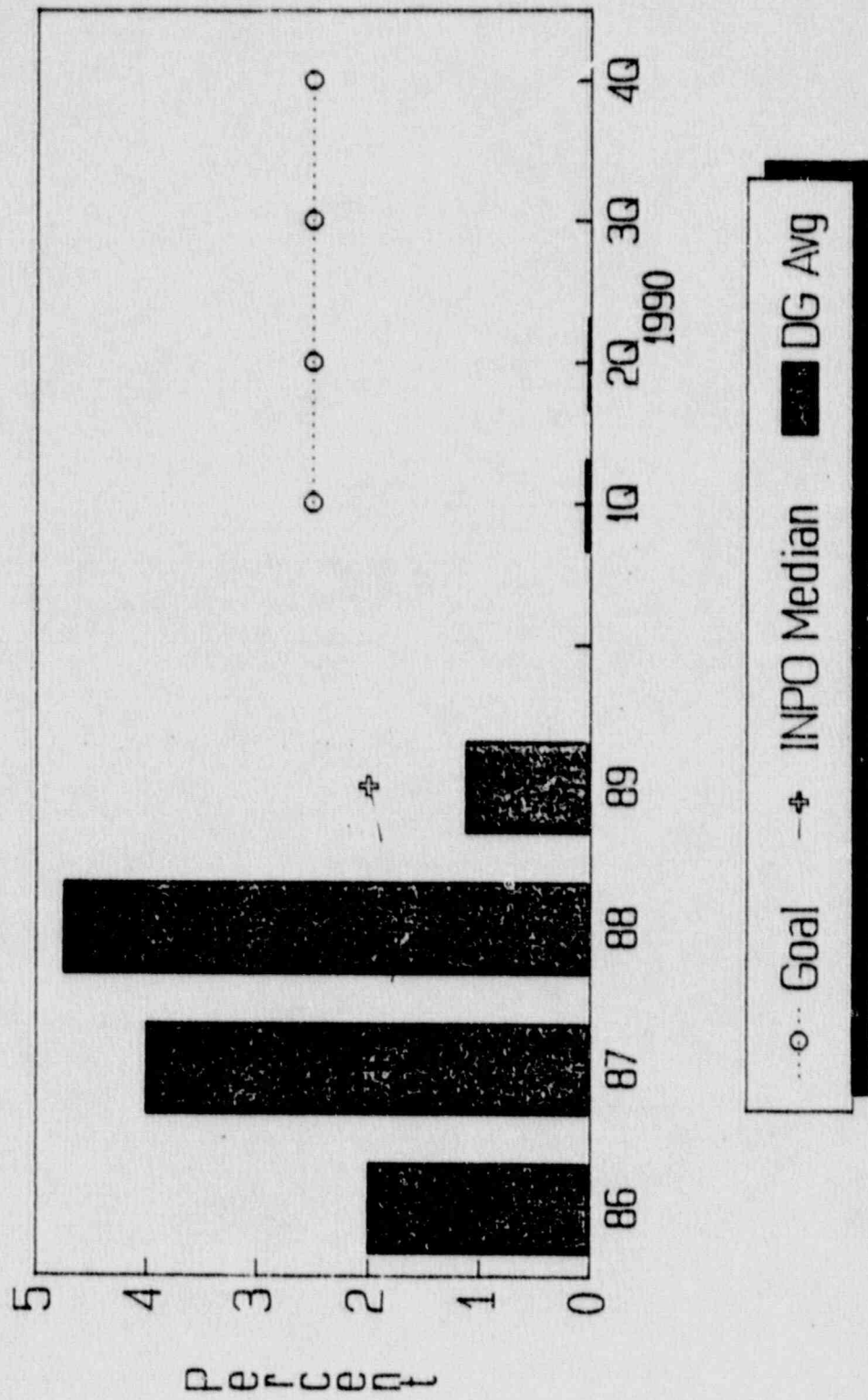
INPO Indicator
A3a

Safety System Unavailability Torus Cooling



Unit 1 Unit 2 INPO Median

Safety System Unavailability Diesel Generators



INPO Indicator
T5a

PLANT OPERATIONS

- o PREVIOUS SALP CONCERNS:
 - * PROBLEMS CONTROLLING PLANT CONDITIONS FOR A SHUTDOWN UNIT.
 - * PERSONNEL ERRORS IN CONFIGURATION CONTROL AND CLEARANCES.
 - * FAILURE TO PRE-APPROVE EXCESS OVERTIME FOR OPERATIONS PERSONNEL.

PLANT OPERATIONS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:

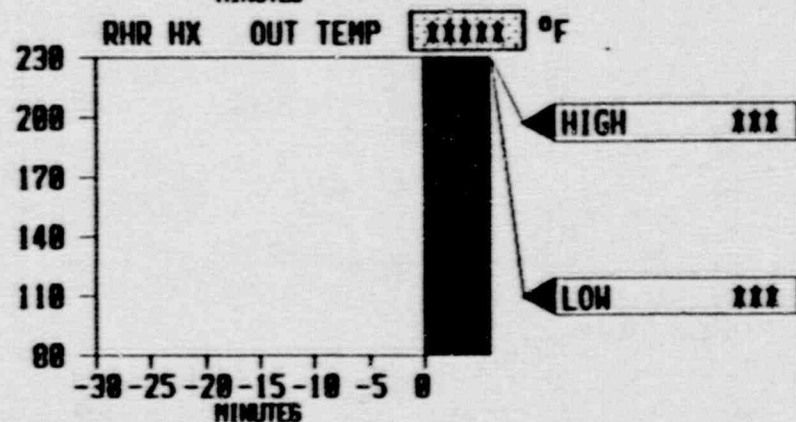
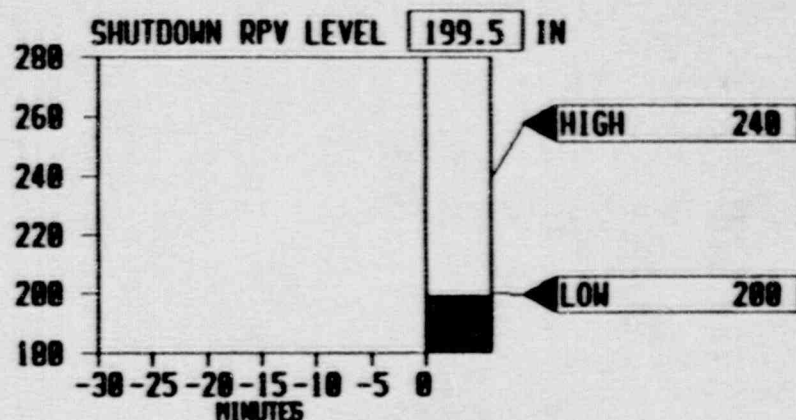
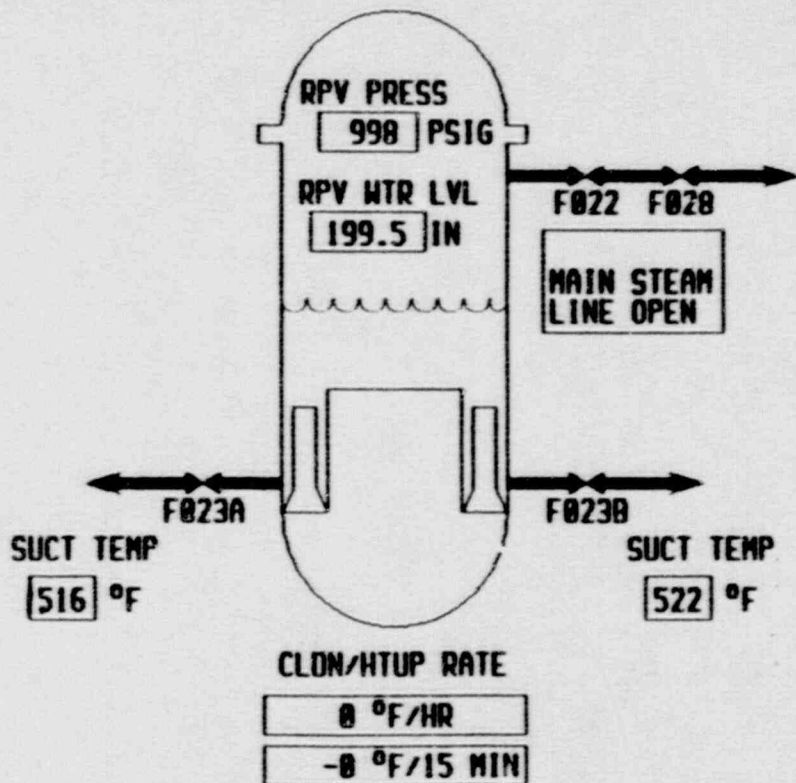
* CONTROLLING PLANT CONDITIONS FOR A SHUTDOWN UNIT.

- ESTABLISHED A COMPUTER DISPLAY OF SHUTDOWN PARAMETERS.
- PROCEDURALIZED THE REVIEW OF PLANT CONDITION REQUIREMENTS FOR CLEARANCES.
- INITIATED A FORMAL SEMIANNUAL MANAGEMENT REVIEW OF EVENTS.
- ENHANCED GENERAL OPERATING PROCEDURES TO CLARIFY AND EXPAND REQUIRED OPERATOR ACTIONS DURING SHUTDOWN CONDITIONS.

920

SHUTDOWN DISPLAY

BSEP 2 000
11-SEP-1990 15:55:15



RX PWR 98 %	RPV WTR LVL 185.6 IN	RPV PRESS 998 PSIG	SC TEMP NORMAL	SC INTEG NORMAL	SC WTR LVL NORMAL	SC RAD NORMAL		SRV ALL SHUT	GRP ISOL
DW PRESS 0.5 PSIG	DW TEMP 122 °F	PC TEMP 109 °F	SUPP POOL WTR LVL -2 FT -4 IN	SUPP POOL TEMP 86 °F	SUPP CHMBR PRESS 0.3 PSIG	PC H ₂ 0.4 %	PC O ₂ 1.1 %	NO SCRAM	NO DG OPER CMND

PLANT OPERATIONS (CONT)

- o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS
(CONTINUED):
 - * PERSONNEL ERRORS IN CONFIGURATION CONTROL
AND CLEARANCES.
 - ESTABLISHED A DEDICATED CLEARANCE
CENTER.
 - CORPORATE INVOLVEMENT IN CLEARANCE TASK
FORCE.
 - EMPHASIZED USE OF ADVERSE CONDITION
REPORTING BY INDIVIDUALS.
 - BEGAN INDEPENDENT PREPARATION REVIEW OF
SAFETY-RELATED CLEARANCES.
 - EMPHASIZED VALVE POSITION VERIFICATION
IN REAL-TIME TRAINING.

PLANT OPERATIONS (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* FAILURE TO PRE-APPROVE EXCESS OVERTIME FOR OPERATIONS PERSONNEL.

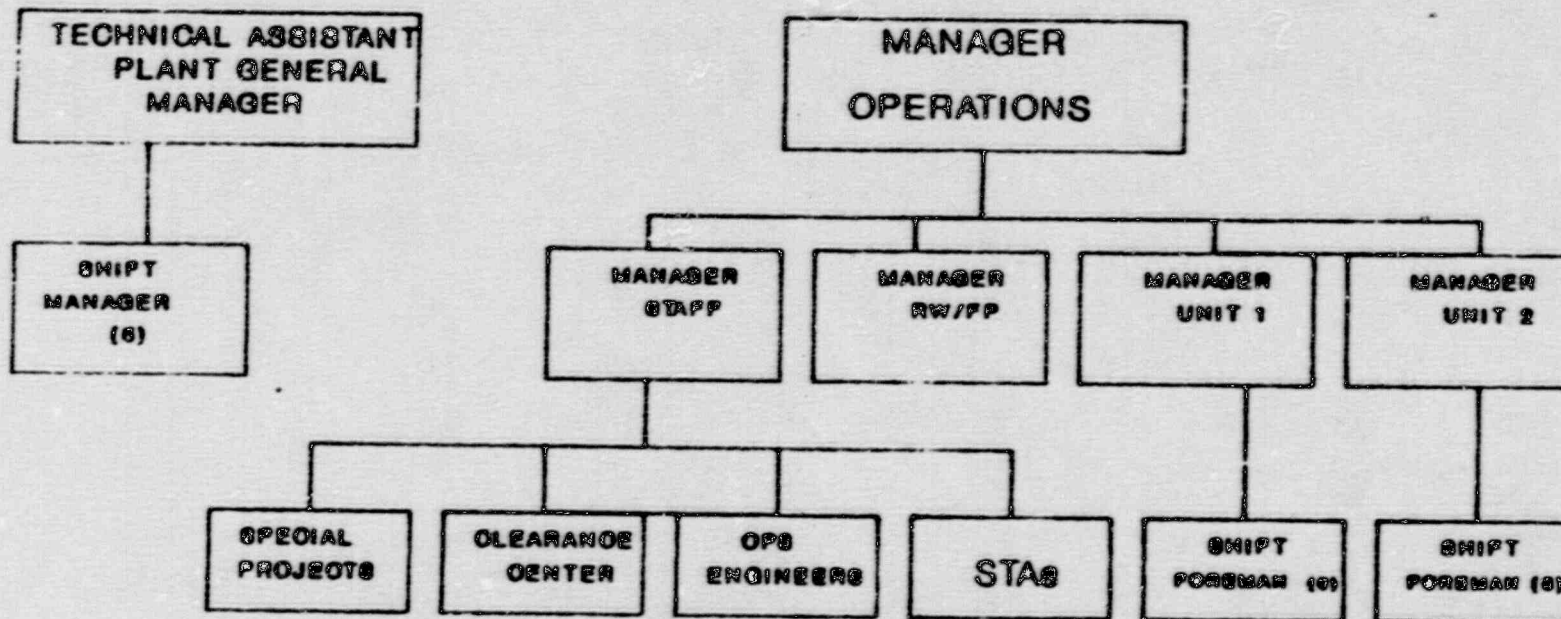
- EMPHASIZED INDIVIDUAL ACCOUNTABILITY.
- REQUIRED NOTIFICATION OF SUPERVISOR BY
INDIVIDUAL WHEN SCHEDULED FOR OVERTIME
BY ANOTHER SUPERVISOR.
- FIVE (5) SHIFT ROTATION INCREASED NUMBER
OF PERSONNEL PER SHIFT.

PLANT OPERATIONS (CONT)

o RESULTS/ACCOMPLISHMENTS:

- * SIGNIFICANT REDUCTION IN CLEARANCE ERRORS.
 - ONLY 5 CLEARANCE ERRORS SINCE ESTABLISHMENT OF CLEARANCE CENTER.
 - NINE CLEARANCE ERROR LERs IN 1989, ONLY 1 THUS FAR THIS YEAR.
 - OVERALL NUMBER OF ERRORS TRENDING DOWN.
- * PERSONNEL ERROR LERs ALSO DOWN FROM LAST YEAR.
 - 10 LAST YEAR ONLY 4 THUS FAR THIS YEAR.
- * THERE HAVE BEEN NO REPEAT OCCURRENCES OF UNAUTHORIZED OPERATOR OVERTIME DURING THIS SALP PERIOD.
- * RECRUITING/HIRING PRACTICES.
- * INCREASED MANAGEMENT PRESENCE.
- * OPERATIONS UNIT REORGANIZATION.
 - COMMAND CONTROL PROJECT QUALITY TEAM.

BRUNSWICK STEAM ELECTRIC PLANT OPERATIONS



Minimum facility Shift Crew Composition - both units at power

Shift Foremen	- 1
Sr. Reactor Operator	- 2
Reactor Operator	- 6
Auxiliary Operator	- 6
STA	- 1

Sr. Control Operator	Sr. Control Operator
Control Operator	Control Operator
Sr. Ass. Operator	Sr. Ass. Operator
Ass. Operator	Ass. Operator

PLANT OPERATIONS (CONT)

- o CONTINUING OPPORTUNITIES:
 - * OVERALL IMPROVEMENT OF THE LICENSED OPERATOR REQUALIFICATION PROGRAM.
 - * VALVE POSITION CONTROL PROGRAM.
 - INTERIM PROGRAM IN PLACE.
 - AOs PERFORMING WALKDOWNS OF 1 SYSTEM PER UNIT PER WEEK.
 - * AUTOMATED CLEARANCE PROGRAM IMPLEMENTATION.
 - * REVISED OPERATING SHIFT STRUCTURE.
 - * IMPROVED WORK CONTROL PROCESS.

TRAINING (CONT)

o ADDITIONAL ACTIONS TAKEN:

- * AGGRESSIVE MANAGEMENT DIRECTION TO UPGRADE LICENSED OPERATOR TRAINING PROGRAMS.
 - PRELIMINARY ANALYSIS OF CAUSAL FACTORS CONTRIBUTING TO LICENSED OPERATOR PROGRAM WEAKNESSES.
 - CP&L TASK GROUP ANALYZED PROBLEMS AND IDENTIFIED CAUSAL FACTORS.
 - CP&L AND INDUSTRY TASK GROUP CONDUCTED AN OBJECTIVE EVALUATION OF TRAINING AT BNP USING CRITERIA REGULATORY DOCUMENTS.
 - ALLOCATION OF RESOURCES TO OBTAIN SERVICES TO ADDRESS ACCELERATED REMEDIAL TRAINING OF OPERATORS.
 - COMMITMENT TO EVALUATE AND UPGRADE PERFORMANCE BASED TRAINING FOR LICENSED AND NONLICENSED OPERATORS AND SHIFT TECHNICAL ADVISORS. COMPREHENSIVE ACTION PLAN DEVELOPED TO VALIDATE CURRENT TRAINING PROGRAM CONTENT TO INCLUDE ANALYSIS OF JOB TASKS AND SUBSEQUENT DEVELOPMENT.

TRAINING (CONT)

o ADDITIONAL ACTIONS TAKEN (CONTINUED):

- * TRAINING MANAGER POSITION FILLED WITH INDIVIDUAL ON REVERSE LOAN FROM INPO.
- * INITIATIVE TO UPGRADE ALL TRAINING PROGRAMS.
 - COMPREHENSIVE EVALUATION OF BNP TRAINING PROGRAMS AND PRACTICES USING INDUSTRY STANDARDS OF EXCELLENCE TO IDENTIFY AREAS OF IMPROVEMENT.
 - APPLICATION OF LESSONS LEARNED FROM OPERATOR PROGRAM UPGRADE.
 - JOB SURVEYS OF ELECTRICAL AND INSTRUMENT AND CONTROL TECHNICIANS TO VALIDATE TASK LIST AND CURRENT TRAINING PROGRAM CONTENT.
 - INCREASED INVOLVEMENT OF LINE MANAGEMENT IN TRAINING PROCESS.

TRAINING (CONT)

o RESULTS/ACCOMPLISHMENTS:

- * ACCREDITATION RENEWAL FOR CHEMISTRY TECHNICIAN, RADIOLOGICAL PROTECTION TECHNICIAN, AND TECHNICAL STAFF AND TECHNICAL STAFF MANAGERS.

- * IMPLEMENTATION OF PROJECTS TO UPGRADE SIMULATOR FIDELITY TO ENHANCE OPERATOR TRAINING.
 - MODELS BEING UPGRADED.
 - NUCLEAR BOILER THERMAL HYDRAULIC (INLET TO VESSEL TO TURBINE STOP VALVES).
 - NUCLEAR CORE.
 - CONTAINMENT.
 - ELECTRICAL DISTRIBUTION - 4160, 480, 120 VAC.

TRAINING (CONT)

o RESULTS/ACCOMPLISHMENTS (CONTINUED):

* MODELS UNDER CONTRACT FOR UPGRADE OR IN-HOUSE UPGRADE.

- CONDENSATE AND FEEDWATER.
- MAIN TURBINE AND EXTRACTION STEAM.
- 125/250 VOLT DC DISTRIBUTION.
- HVAC INCLUDING RADIATION TRANSPORT AND
STEAM LEAK DETECTION.

TRAINING (CONT)

- o CONTINUING OPPORTUNITIES:
 - RE-ESTABLISH A SATISFACTORY LICENSED OPERATOR REQUALIFICATION PROGRAM.
 - UPGRADE ALL TRAINING PROGRAMS.

ENGINEERING EFFECTIVENESS

- o DEALS WITH TWO ENGINEERING ORGANIZATIONS:
 - * ON-SITE: TECHNICAL SUPPORT
 - * CORPORATE: NUCLEAR ENGINEERING DEPARTMENT

- o PREVIOUS SALP CONCERNS:
 - * SYSTEM ENGINEERING PROGRAM.
 - * TECHNICAL SUPPORT INVOLVEMENT.
 - * ENGINEERING/TECHNICAL SUPPORT INTERFACE.
 - * DESIGN BASIS ISSUES.

TECHNICAL SUPPORT

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:

* SYSTEM ENGINEERING PROGRAM.

- ORGANIZATION FRAMEWORK STABLE.
- COLLATERAL DUTIES SHIFTED OUT.
- ORGANIZATION MISSION AND VISION:
 - ESTABLISHED.
 - UNDERSTOOD FROM TOP-TO-BOTTOM.
- FUNCTIONS PROCEDURALLY DEFINED IN ENP-01.
- ACCOUNTABILITIES, BASIC WORK FUNCTIONS, AND PERFORMANCE MEASURES:
 - PROCEDURALLY ESTABLISHED.
 - BEING USED.
- WORK MANAGEMENT SYSTEM IN PLACE.

TECHNICAL SUPPORT (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* SYSTEM ENGINEERING PROGRAM (CONTINUED).

- PERSONNEL:

- THREE YEAR DEVELOPMENT PLANS IN PLACE.
- 3 ENGINEERING VACANCIES (1 OFFER OUTSTANDING).
- 12.8 YEARS AVERAGE NUCLEAR EXPERIENCE.
- 85% ARE TECHNICALLY DEGREEED.
- PROGRESSION PATH ESTABLISHED.

TECHNICAL SUPPORT (CONT)

- o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):
 - * SYSTEM ENGINEERING PROGRAM (CONTINUED).
 - TRAINING:
 - PROCEDURES REVISED.
 - SUPERVISORS ACCOUNTABLE.
 - TRAINING MATRIX IN PLACE.
 - 37% COMPLETED TECHNICAL STAFF AND MANAGEMENT TRAINING.
 - 33% OF SYSTEMS WITH CERTIFICATION UNDERWAY.
 - GE TRAINING BEING PROVIDED.

TECHNICAL SUPPORT (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* SYSTEM ENGINEERING PROGRAM (CONTINUED).

- TRENDING:
 - PROCEDURE IN PLACE.
 - 20% OF SYSTEMS NOW BEING TRENDED
(100% TO BE COMPLETE BY END OF 91).
- SYSTEM ASSESSMENT PROCEDURE IN PLACE.
 - SCHEDULE DEVELOPED.
- CP&L TECH SUPPORT MANAGERS MEETING AT
LEAST QUARTERLY TO DRIVE SENSIBLE
CONSISTENCY.
- NUCLEAR ENGINEERING DEPARTMENT AND TECH
SUPPORT MANAGEMENT MEETING MONTHLY.
- IMPROVING PER CUSTOMER.
- IMPROVING PER INPO.

TECHNICAL SUPPORT (CONT)

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS (CONTINUED):

* TECHNICAL SUPPORT INVOLVEMENT.

- DAILY REVIEWS OF TROUBLE TICKETS AND OPERATION LOGS.
- FULL TIME ASSIGNMENT OF STAFF TO SITE WORK FORCE CONTROL GROUP.
- MANAGER OF TECHNICAL SUPPORT RELOCATED NEXT TO MAINTENANCE MANAGER AND TECHNICAL ASSISTANT TO PGM.

TECHNICAL SUPPORT (CONT)

o RESULTS/ACCOMPLISHMENTS:

* ACTION ITEMS REDUCED FROM 1025 TO 612 IN THE LAST YEAR.

* EWRs UNDER CONTROL:

- KEEPING UNDER GOAL OF 100 TO BE DISPOSITIONED.

- 231 REMAIN TO BE WORKED.

- NRC ITEMS CLOSED BY INSPECTORS.

* ISI/IST:

- COMPLETED INSERVICE TESTING SOFTWARE DEVELOPMENT.

- DEVELOPING CONSOLIDATED SNUBBER DATA BASE FOR USE BY ALL GROUPS INVOLVED IN SNUBBER ACTIVITIES.

- DEVELOPED TEST BOOKS AS GUIDES FOR LLRT TECHNICIANS WHICH INCLUDE SYSTEM TEST SEQUENCE, DRAINING LINEUPS, LLRT TEST DRAWINGS, AND FIELD PHOTOGRAPHS.

TECHNICAL SUPPORT (CONT)

o RESULTS/ACCOMPLISHMENTS (CONTINUED)

- CONSOLIDATING SITE NDE INSPECTION REQUIREMENTS TO THE CORPORATE NDE GROUP.
- INCORPORATED ASME XI EQUIPMENT INTO VIBRATION MONITORING PROGRAM TO BETTER USE EXISTING MAINTENANCE SUPPORT SERVICES.
- DEVELOPED POST-MAINTENANCE TESTING GUIDELINES FOR INSERVICE INSPECTION ACTIVITIES TO ASSIST PLANNERS IN COMPLETING PMTRs.
- DEVELOPING CONTROLLED CHECKLISTS FOR OUTAGE PREPARATION ACTIVITIES THAT ARE ROUTINELY PERFORMED EACH OUTAGE.
- DEVELOPING TEST TAG PROCEDURE TO ELIMINATE THE NEED FOR CLEARANCES FOR LLRTs.

TECHNICAL SUPPORT (CONT)

- o RESULTS/ACCOMPLISHMENTS (CONTINUED)
 - * SUCCESSFUL REACTOR SYSTEMS GROUP ACTIVITIES IN SUPPORT OF THE CP&L SPENT FUEL SHIPPING PROGRAM.
 - * IMPROVED NPRDS REPORTING TIMELINESS. NOW BETTER THAN INDUSTRY STANDARDS.
 - * STRONG SUPPORT PROVIDED BY MAINTENANCE SUPPORT ENGINEERS AND COMPONENT ENGINEERS.

TECHNICAL SUPPORT (CONT)

o CONTINUING OPPORTUNITIES:

* SYSTEM ENGINEERING.

- TRAINING AND CERTIFICATION.

- TRENDING.

- SYSTEM ASSESSMENTS.

* IMPROVE SELF-ASSESSMENT CAPABILITY.

* CONTINUE TO IMPROVE ROOT CAUSE ANALYSIS.

* STRONG EFFORT NEEDED ON REDUCING/ELIMINATING TEMPORARY CONDITIONS.

- SMALL MOD EFFORT.

- "TOP 10".

ENGINEERING EFFECTIVENESS

- o DEALS WITH TWO ENGINEERING ORGANIZATIONS:
 - * ON-SITE: TECHNICAL SUPPORT
 - * CORPORATE: NUCLEAR ENGINEERING DEPARTMENT

- o PREVIOUS SALP CONCERNS:
 - * SYSTEM ENGINEERING PROGRAM.
 - * TECHNICAL SUPPORT INVOLVEMENT.
 - * ENGINEERING/TECHNICAL SUPPORT INTERFACE.
 - * DESIGN BASIS ISSUES.

CENTRAL DESIGN ORGANIZATION

o ACTIONS TAKEN IN RESPONSE TO SALP CONCERNS:

* ENGINEERING/TECHNICAL SUPPORT INTERFACE.

- FULLY IMPLEMENT CENTRAL DESIGN ORGANIZATION.
- ESTABLISHED BUDGET ITEMS TO ASSIST TECHNICAL SUPPORT.
- ESTABLISHED PERIODIC MEETINGS BETWEEN KEY MEMBERS OF ENGINEERING AND TECHNICAL SUPPORT.
- 10 MOST WANTED OPERATIONS DESIGN SOLUTIONS PROGRAM BEING DEVELOPED.

* DESIGN BASIS ISSUES.

- PERFORMED AUDIT OF THE ELECTRICAL DISTRIBUTION SYSTEM MARCH 1990.
- COMPLETED REVIEW OF SERVICE WATER MODIFICATIONS, AND SAFETY SYSTEM FUNCTIONAL INSPECTION RESULTS ON 3 SYSTEMS FOR TRENDS - JUNE 1990.

CENTRAL DESIGN ORGANIZATION (CONT)

o RESULTS/ACCOMPLISHMENTS:

* ENGINEERING/TECHNICAL SUPPORT INTERFACE.

- ENGINEERING SECTION DEDICATED TO BRUNSWICK.
- ONSITE SUPPORT UNIT.
- IMPROVED COMMUNICATIONS AND INTERFACE WITH PLANT ORGANIZATIONS.
- ACTION IN INQUIRIES FROM TECHNICAL SUPPORT.
- ACTION ON ITEMS DETERMINED ESSENTIAL BY ENGINEERING.
- SMALL MODIFICATIONS DEVELOPED IN RESPONSE TO TECHNICAL SUPPORT.
- DIRECT REPLACEMENT PACKAGES DEVELOPED IN RESPONSE TO TECHNICAL SUPPORT.
- IMPROVED VISIBILITY ON ENGINEERING ACTIONS TO OPERATORS.
- IMPROVED OPERATIONS INPUT ON SETTING DESIGN PRIORITIES.

CENTRAL DESIGN ORGANIZATION (CONT)

o RESULTS/ACCOMPLISHMENTS (CONTINUED):

* DESIGN BASIS ISSUES.

- INITIATED ACTIONS TO RECONSTITUTE ELECTRICAL SYSTEMS DESIGN BASIS.
- INITIATED ACTIONS TO RECONSTITUTE DESIGN BASES PER NUMARC GUIDANCE - PLANNED COMPLETION - DECEMBER 1993.

CENTRAL DESIGN ORGANIZATION (CONT)

o CONTINUING OPPORTUNITIES:

- * CONTINUE EFFORTS ON COMMUNICATIONS AND TEAMWORK.
- * CONTINUE INITIATIVES TO SUPPORT THE OPERATIONS UNIT.
- * COMPLETE PROJECTS TO RECONSTITUTE THE DESIGN BASES.

SUMMARY

- o OVERALL PERFORMANCE AND RESULTS ACHIEVED IN EACH FUNCTIONAL AREA EVALUATED BY THE SALP PROCESS HAVE GENERALLY BEEN IMPROVING DURING THIS SALP PERIOD.

- o WE BELIEVE WE UNDERSTAND WHERE OUR PROBLEM AREAS ARE AND WE ARE DEALING PROACTIVELY WITH THEM.
 - * AGGRESSIVELY CORRECTING TRAINING DIFFICULTIES AND IMPROVING OPERATIONAL PERFORMANCE.

 - * THE WORK CONTROL PROCESS IN GENERAL IS BEING MADE STRONGER.

- o WE HAVE BEEN AND ARE RESULTS ORIENTED.

SUMMARY (CONT)

- o SEVERAL MUTUAL ORGANIZATIONAL GOALS HAVE BEEN ESTABLISHED SUCH THAT EACH ORGANIZATIONAL UNIT CAN UNDERSTAND ITS IMPACT ON THE OVERALL SUCCESS OF THE BRUNSWICK PLANT.
- * THESE GOALS ARE FOCUSED ON A STRETCH FOR CONTINUED IMPROVEMENT.
- * EXAMPLES INCLUDE:
 - RADWASTE IN-LEAKAGE REDUCTION OF 10%.
 - DEVELOP CLEARANCE SOFTWARE TO CAPTURE ROUTINE CM/PM CLEARANCE BOUNDARIES AND ASSOCIATED PLANT PARAMETERS AND HAVE IT IMPLEMENTED DURING 1991.
 - REDUCE THE NUMBER OF PERSONNEL CONTAMINATIONS BY 10%.
- * 12 OF THE 21 GOALS ARE BEING MET AND ACTIONS ARE BEING TAKEN TO IMPROVE IN THE REMAINING 9 AREAS.

SUMMARY (CONT)

- o THE THREE RECENT SCRAMS ON UNIT 2 WERE THE FIRST IN PAST 19.3 REACTOR MONTHS OF COMBINED UNIT OPERATION. THE PREVIOUS AUTOMATIC REACTOR SCRAM AT POWER OCCURRED ON 6/17/89.

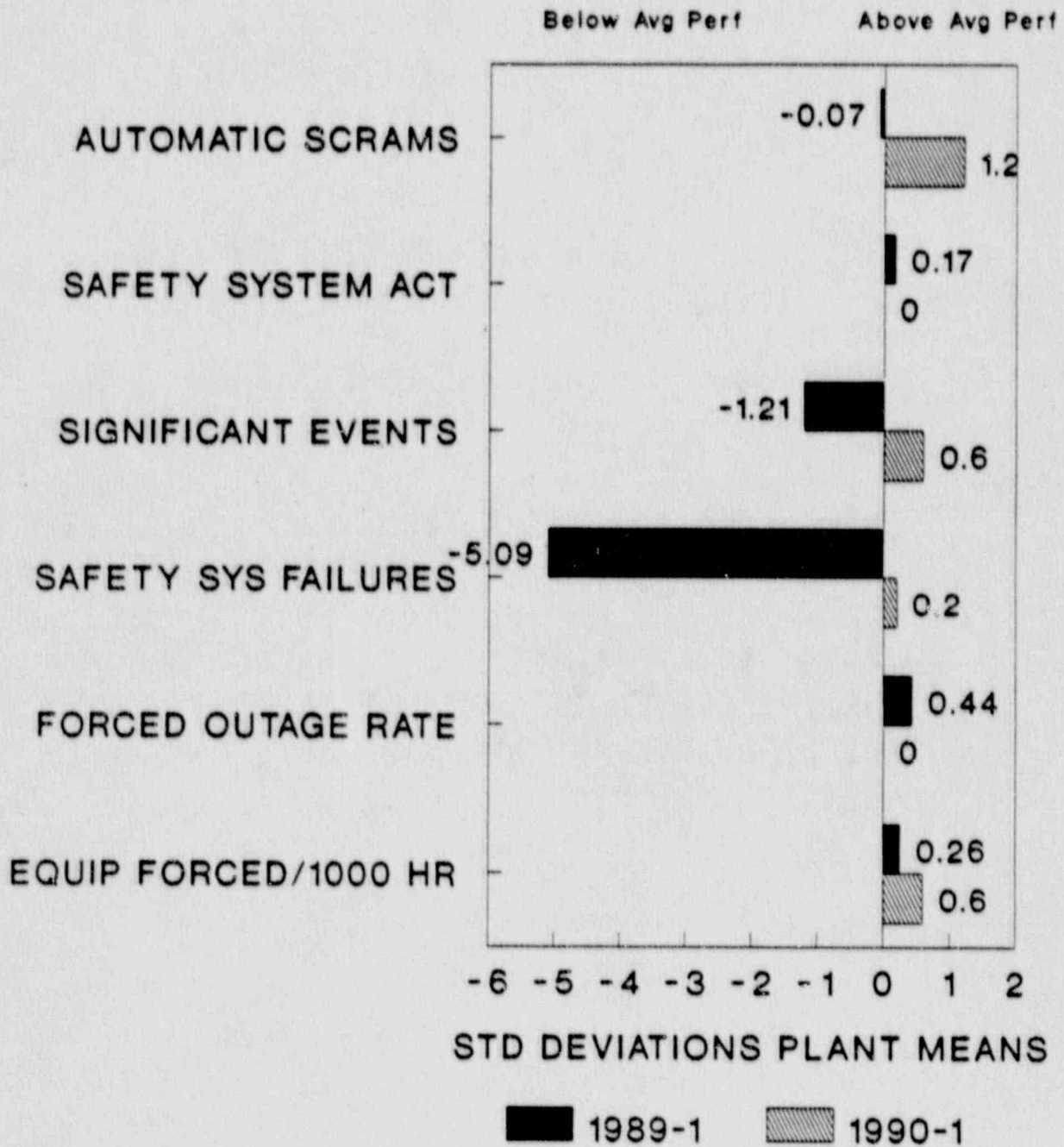
- ★ CAUSES OF THE THREE RECENT SCRAMS:

- A BLOWN FUSE.
- PERSONNEL ERROR ON THE PART OF A TECHNICIAN PERFORMING A PERIODIC TEST.
- STARTUP LEVEL CONTROL VALVE DIFFICULTIES.

- o RECENT EVENTS ARE ABERRATIONS, NOT INDICATIVE OF THE BROAD, GENERALLY IMPROVING TRENDS DEMONSTRATED DURING THE SALP PERIOD. OVERALL PROGRAMS, INCLUDING PROGRESS TOWARD COMPLETION OF THE INTEGRATED ACTION PLAN, HAVE YIELDED POSITIVE RESULTS AND SHOW THE SITE GENERALLY TRENDING IN THE RIGHT DIRECTION.

AEOD BRUNSWICK UNIT 1

1989-1 vs 1990-1



AEOD BRUNSWICK UNIT 2

1989-1 vs 1990-1

