



Docket File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
March 14, 1988

MEMORANDUM FOR: T. Novak, Dir., DSP
L. Shao, Dir., DEST
C. Rossi, Dir., DOE
J. Partlow, Dir., DRIS
J. Roe, Dir., DLPQ
F. Hebdon, Chief, ILRB

FROM: Martin J. Virgilio, Director
Project Directorate III-1
Division of Reactor Projects - III, IV, V
& Special Projects

SUBJECT: MURLEY BRIEFING

Enclosed is an advanced copy of PD III-1's slides for the briefing of the Executive Team, now tentatively scheduled for 3/17/88 at 8:15 a.m. in 12-B-11. Slides marked with a "P" are the primary slides our directorate plans to show. All other slides are backup for possible reference.

Sincerely,

Martin J. Virgilio

Martin J. Virgilio, Director
Project Directorate III-1
Division of Reactor Projects - III, IV, V
& Special Projects

Enclosure:
As stated

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MEETING

March 14, 1988

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FROM:

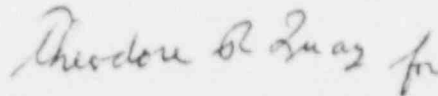
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As stated

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3/11/88

Dr J
ABR
GHolahan
3/14/88

~~DRP:DRSP~~
~~DCrutchfield~~
~~3/1/88~~

OFFICIAL RECORD COPY

PROJECT DIRECTORATE III-1

DIRECTOR: Martin Virgilio

SECRETARIES: Linda Townsend
Crystal Roberson

LICENSING ASSISTANT: Roberta Ingram

PROJECT ENGINEERS: Lynn Kelly
Bob Gilbert

PROJECT MANAGERS: Wayne Scott - BIG ROCK POINT
John Stang - COOK 1, 2
Ted Quay - FERMI-2
John Stefano - MONTICELLO
Tom Wambach - PALISADES
Dominic Dilanni - PRAIRIE ISLAND 1, 2

SIMS AS A MANAGEMENT TOOL

- TWO STUDIES PERFORMED FOR EACH PD III-1 PLANT
 - (1) RESULTS OF VERIFICATION PROGRAM FOR 12 HIGH VERIFICATION PRIORITY ISSUES REVIEWED.
 - (2) MPAs LISTED IN SIMS FOR PD III-1 PLANTS GROUPED INTO BROAD CATEGORIES (INTEGRITY OF REACTOR COOLANT PRESSURE BOUNDARY, CAPABILITY TO SHUTDOWN REACTOR AND MAINTAIN IT IN SAFE SHUTDOWN CONDITION, CAPABILITY TO PREVENT OR MITIGATE THE CONSEQUENCES OF ACCIDENTS, MAN-MACHINE INTERFACE). CURRENT STATUS OF CERTAIN ISSUES RELATED TO CONTROL ROOM AND EMERGENCY SUPPORT FACILITIES FROM MAN-MACHINE INTERFACE WERE THEN EXAMINED.
- RESULTS OF VERIFICATION STUDY SHOW REASONABLY GOOD PERFORMANCE ON PART OF LICENSEES IN IMPLEMENTATION WITH THE EXCEPTION OF FIRE PROTECTION AND ENVIRONMENTAL QUALIFICATION. CLOSE OUT LAGGING ON ATWS AND RG1.97 FOR CERTAIN PLANTS.
- RESULTS OF CONTROL ROOM/EMERGENCY SUPPORT FACILITIES STUDY SHOW CLOSE OUT AND IMPLEMENTATION COMPLETE ON ALL PD III-1 PLANTS WITH THE EXCEPTION OF DCRDR.

SIMS

ISSUES WITH HIGH PRIORITY FOR VERIFICATION

<u>ISSUE NO.</u>	<u>ISSUE DESIGNATION</u>	<u>ISSUE NAME</u>
1.	MPA B-80, SALEM ATWS 4.1	REACTOR TRIP SYSTEM RELIABILITY - VENDOR RELATED MODS
2.	MPA B-45, WASH 1400	EVENT V, PRIMARY COOLANT SYSTEM PRESSURE ISOLATION VALVES
3.	MPA D-01	MARK I CONTAINMENT LONG-TERM PROGRAM
4.	MPA B-66	NATURAL CIRCULATION COOLDOWN
5.	MPA A-17	INSTRUMENTATION TO FOLLOW THE COURSE OF AN ACCIDENT (RG 1.97)
6.	MPA B-84	STRESS CORROSION CRACKING IN BWR PIPING (GL 84-11)
7.	MPA B-58	SCRAM DISCHARGE VOLUME CAPABILITY
8.	MPA B-41	FIRE PROTECTION
9.	MPA B-60	QUALIFICATION OF CLASS IE SAFETY RELATED EQUIPMENT
10.	MPA B-62	ESF RESET CONTROL DESIGN DEFICIENCY
11.	MPA B-04	REACTOR VESSEL OVERPRESSURE PROTECTION
12.	MPA A-20	10 CFR 50.62 OPERATING REACTOR REVIEWS - BOP

MPAs

RELATED TO MAN/MACHINE INTERFACE

1. MPA-F-08 DETAILED CONTROL ROOM DESIGN
REVIEW PROGRAM PLAN I.D.1.1
2. MPA-F-63 TECHNICAL SUPPORT CENTER
III.A.1.2
3. MPA-F-64 OPERATIONAL SUPPORT CENTER
III.A.1.2
4. MPA-F-65 EMERGENCY OPERATIONS FACILITY
III.A.1.2
5. MPA-F-71 DETAILED CONTROL ROOM DESIGN
REVIEW I.D.1.2 (FOLLOW-UP TO F-8)

PALISADES PLANT
DOCKET NO. 50-255

• PROJECT MANAGER: TOM WAMBACH BACKUP: BOB GILBERT

• REGION III:

BRANCH CHIEF: WILLIAM GULDEMOND

SECTION CHIEF: BRUCE BURGESS

SENIOR RESIDENT: ERIC SWANSON

• SUMMARY

LICENSEE: CONSUMERS POWER COMPANY

LOCATION (SITE): EAST COAST OF LAKE MICHIGAN IN MICHIGAN
35 MILES NORTH OF INDIANA BORDER

LOCATION (GEN. OFFICES): JACKSON, MICHIGAN

POPULATION: 10 MILES = 35,000 50 MILES = 1,000,000

REACTOR TYPE: COMBUSTION ENGINEERING - 2 LOOP, 4 PUMPS

AE: BECHTEL CORP.

CONTAINMENT: LARGE - DRY

POWER: 2530 Mwt

COOLING: FORCED DRAFT COOLING TOWERS -- UHS - LAKE MICHIGAN

OPERATING LICENSE DATE: 03/24/71 (LOW POWER)

3/23/73 (100% POWER)

• PLANT STATUS

OPERATING CYCLE 7 - COMPLETED 10-MONTH MAINTENANCE OUTAGE - 3/87

COMPLETED 45-DAY MAINTENANCE OUTAGE - 11/87

COMPLETED 56-DAY OUTAGE S/G TUBE LEAK - 1/88

• PLANNED OUTAGES

CYCLE 8 REFUELING OUTAGE - 9/88

PALISADES PLANT

STRENGTHS

- **NEW AGGRESSIVE MANAGEMENT**
- **PLANT OPERATOR PERFORMANCE**
- **ENGINEERING SUPPORT STAFF ON-SITE**

WEAKNESSES

- **DESIGN BASIS DOCUMENTATION**
- **LICENSING PLANNING AND SCHEDULING**

PALISADES PLANT
DOCKET NO. 50-255

SIGNIFICANT ISSUES

- MONITORING MATERIAL CONDITION OF PLANT
- CONFIGURATION MANAGEMENT PROGRAM
- CONVERT POL TO FTOL
- PTS RULE COMPLIANCE
- POSSIBLE NEW LICENSEE (BECHTEL, ET AL)
- REVISED RPS WITH VARIABLE HIGH POWER
TRIP

PALISADES PLANT
DOCKET NO. 50-255

MAJOR OPERATING EVENTS

● LOSS OF OFF-SITE POWER

- JULY 14, 1987 loss of off-site power for 7.5 hours
- D/G's responded as designed
- Backfeed through Main Transformer
- AIT
- Proposed Corrective Modifications

● LOSS OF DECAY HEAT REMOVAL

- October 15, 1987 Loss of DHR for 29 minutes (37 F incr.)
- Valve Testing - Jumpered controls of wrong valve
- Cycling LPSI loop discharge valve
- Water spills from loop and LPSI pump cavitates
- Operator trips pump
- Valve testing discontinued
- Valve testing resumed with operators controlling valves

PALISADES PLANT

SALP SUMMARY		
BEGINNING OF PERIOD	11/84	11/85
END OF PERIOD	10/85	4/87
PLANT OPERATIONS	2	2
RADIOLOGICAL CONTROLS	2	2
MAINTENANCE	3	3
SURVEILLANCE	3	2
FIRE PROTECTION	2	2
EMERGENCY PREPAREDNESS	2	2
SECURITY AND SAFEGUARDS	2	2
OUTAGES	NR	2
QUALITY PROGRAMS AND ADMINISTRATIVE CONTROLS	3	3
LICENSING	2	2
TRAINING AND QUALIFICATION EFFECTIVENESS	NR	2

*NR - NOT RATED

CURRENT SALP ASSESSMENT PERIOD: 3/1/87 - 5/31/88

PALISDADES

VERIFICATION OF HIGH PRIORITY ITEMS

ISSUE NO.	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIF. DATE	REMARKS
*1. RTS RELIAB.	08/85C	08/85C	12/87C	NO TRIP BREAKERS CONTACTORS MAINTAINED PER VENDOR GUIDANCE
*2. EVENT V	04/81C	04/81C	09/87C	CLOSED W/O PROBLEMS
*4. NAT. CIRC.	12/83C	12/83C	04/87C	REVISED PROCEDURES ALL OK
*5. RG 1.97	05/88	06/90	09/88	STAFF POSITION ON 5 INSTRUMENTS REQUIRES MODS
*8. APP R	05/83C	12/85C	OPEN	REINSPECT - 4 OPEN ITEMS, 2 UNRESOLVED
*9. EQ	01/85C	06/90	OPEN	INSPECTION DUE 9/88
*10. ESF RESET	03/84C	03/84C	01/89	SER SENT TO I&E NEVER ISSUED
*11. LTOP	09/79C	09/79C	09/87C	TECH SPECS NOW OUT-OF-DATE
*12. ATWS	07/88	08/90	OPEN	SUBMITTAL IN SINCE 5/87 SCHEDULED SER 6/88

* SE USED IN INSPECTION PROCESS

P

MPAs ON EMERGENCY RESPONSE FACILITIES
THE MAN/MACHINE INTERFACE
PALISADES

ISSUE	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIFY COMPLETE
1.DCRDR	10/84C	N/A	N/A
2. TSC	*	11/84C	*
3.OSC	*	06/84C	*
4.EOF	*	11/83C	*
5. DCRDR (FOLLOWUP)	1/89	07/90	OPEN

*INSPECTION TO BE SCHEDULED WHICH WILL COMPLETE
IMPOSITION AND VERIFICATION

PALISADES PLANT
DOCKET NO. 50-255

KEY LICENSEE PERSONNEL - CPCo

WILLIAM McCORMICK - CHAIRMAN AND CEO

JOPSEPH PAQUETTE - PRESIDENT

FRED BUCKMAN - SENIOR VICE PRESIDENT, ENERGY SUPPLY

KEN BERRY - DIRECTOR OF LICENSING

JIM KUEMIN - PALISADES LICENSING ENGINEER

DAVE HOFFMAN - PLANT MANAGER

BOB RICE - OPERATIONS MANAGER

CHARLIE KOZUP - LICENSING ENGINEER

OPERATING CREW

- 5 operating shifts
- Last licensing exam
 - 5 SRO applicants - 5 pass
 - 4 RO applicants - 4 pass

PALISADES PLANT
DOCKET NO. 50-255

INSPECTION FINDINGS

- LACK OF TIMELY CORRECTIVE MEASURES
 - THREE PRECURSORS TO S/D COOLING VALVE MISTAKE
- SPECIAL INSPECTIONS:
 - 1 COMPLETED SEPT. 21-25 PRIOR TO MAINT. OUTAGE
 - 1 COMPLETED 10/30/87 DURING MAINT. OUTAGE

ALLEGATIONS AND PETITIONS

- NO SIGNIFICANT ALLEGATIONS
- NO PETITIONS

PALISADES PERFORMANCE INDICATORS




INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				0	1	1	0	0	0	0	1	
SAFETY SYSTEM ACTUATION				2	5	0	4	0	0	0	2	
SIGNIFICANT EVENTS				0	2	1	1	0	0	0	1	
SAFETY SYSTEM FAILURES				0	0	0	3	0	4	1	0	
FORCED OUTAGE RATE (%)				7	66	50	100	100	100	15	22	
EQUIPMENT FORCED OUTAGES				0	3.1	1.7	0	0	0	1.6	2.8	
HOURS CRITICAL				1363	327	1163	0	0	0	1937	1762	

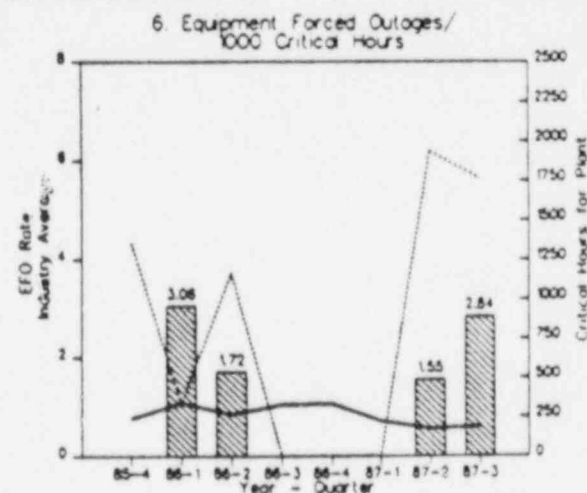
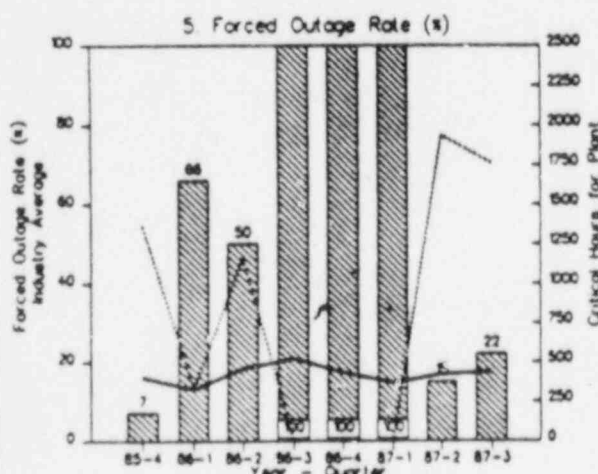
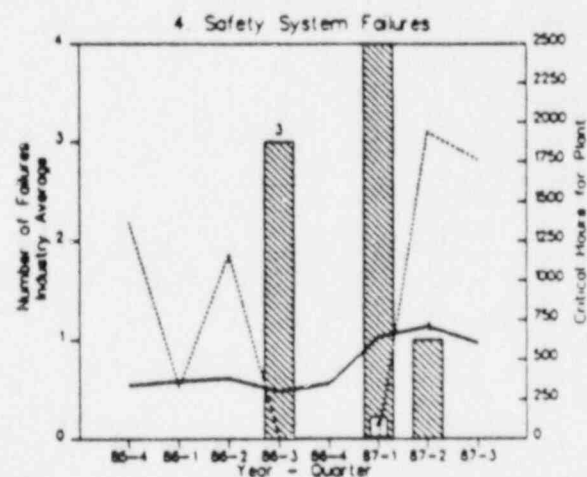
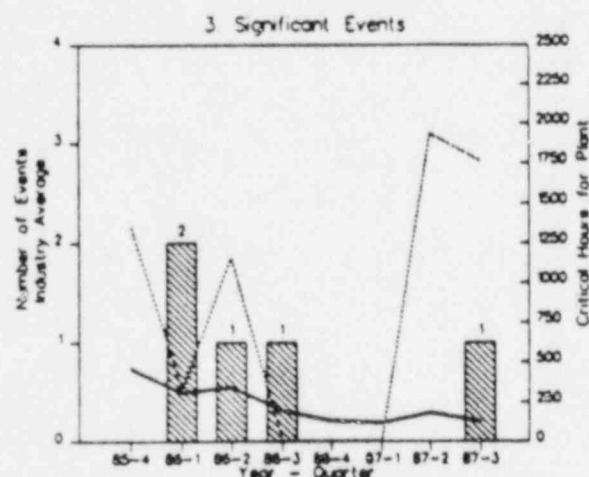
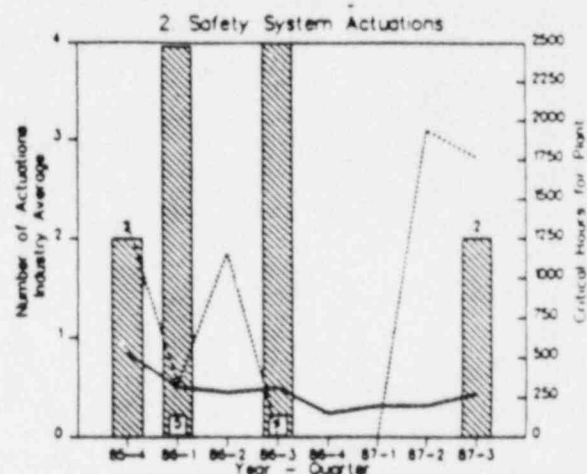
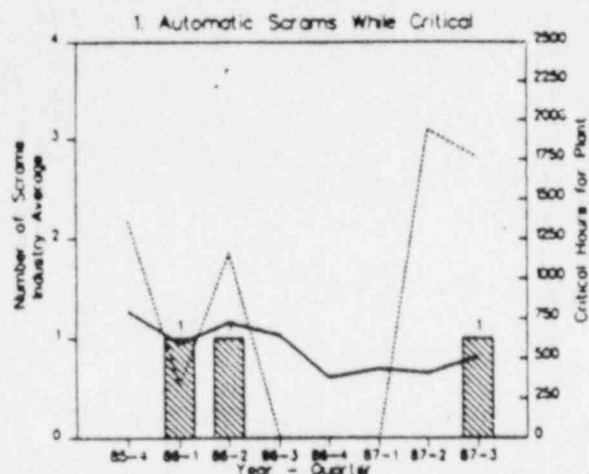
FIGURE 4.63

PREDECISIONAL**PALISADES**

85-4 to 87-3

Legend:

-  Indicator
-  Older Plant Average
-  Critical Hours



PALISADES LICENSING ACTION STATUS

	FY 86		FY 87		FY 88	
	TOTAL	L1EX	TOTAL	L1EX	TOTAL	L1EX
ACTIONS AT BEGINNING	54	52	45	43	42	37
ACTIONS ADDED	14	14	17	13	2	0
ACTIONS COMPLETED	23	23	20	19	5	3
ACTIONS REMAINING	45	43	42	37	39	34

TOTAL = DOCKET-SPECIFIC IAC COUNT

L1EX = INPUT TO LEVEL 1 EXECUTIVE

TEAM COUNT

BIG ROCK POINT PLANT

DOCKET NO. 50-155

- **PROJECT MANAGER: WAYNE SCOTT, JR. BACKUP: TOM WAMBACH**

- **REGION III:**

BRANCH CHIEF: WILLIAM GULDEMOND

SECTION CHIEF: NICK JACKIW

SENIOR RESIDENT: STEVEN GUTHRIE

- **SUMMARY**

LICENSEE: CONSUMERS POWER COMPANY

**LOCATION (SITE): 4 MILES NE OF CHARLEVOIX, MICHIGAN,
ON LAKE MICHIGAN**

LOCATION (GEN. OFFICES): JACKSON, MICHIGAN

POPULATION: 10 MILES = 9,732 50 MILES = 170,315

REACTOR TYPE: GE BWR-1

AE: BECHTEL CORP.

CONTAINMENT: STEEL SPHERE - 3/4" THICK, 130' DIAMETER

POWER: 240 Mwt, 75 Mwe

COOLING: LAKE MICHIGAN

OPERATING LICENSE DATE: 5/1/64

- **PLANT STATUS**

ROUTINE POWER OPERATION

- **PLANNED OUTAGES**

CYCLE 23 REFUELING - SCHEDULED APRIL - MAY 1988

P

BIG ROCK POINT PLANT

DOCKET NO. 50-155

STRENGTHS

- SMALL CAPABLE STAFF
- SOUND MATERIAL CONDITION
- INHERENTLY STABLE PLANT
- GOOD OPERATING HISTORY

WEAKNESSES

- UNIQUE PLANT DESIGN
- LIMITED RESOURCES AND RESISTANCE TO SPEND
- MANAGEMENT'S LACK OF AGGRESSIVENESS

BIG ROCK POINT PLANT

DOCKET NO. 50-155

SIGNIFICANT ISSUES

- LACK OF AGGRESSIVE PREVENTATIVE
MAINTENANCE PROGRAM
- PENDING EQ ESCALATED ENFORCEMENT
- POWER RANGE MONITORING INSTRUMENTATION
MODIFICATION

MILESTONES

- AUGUST 1987 - 25TH ANNIVERSARY OF OPERATION
- DECEMBER 1987 - FIRST CIVIL PENALTY ISSUED -
SECURITY

BIG ROCK POINT PLANT

SALP SUMMARY			
BEGINNING OF PERIOD	7/83	11/84	4/86
END OF PERIOD	10/84	3/86	8/87
PLANT OPERATIONS	1	2	1
RADIOLOGICAL CONTROLS	2	2	2
MAINTENANCE	2	2	2
SURVEILLANCE	1	2	1
FIRE PROTECTION	2	2	2
EMERGENCY PREPAREDNESS	1	1	2
SECURITY AND SAFEGUARDS	1	1	2
OUTAGES	1	3	2
QUALITY PROGRAMS AND			
ADMINISTRATIVE CONTROLS	2	2	2
LICENSING	2	1	1
TRAINING AND QUALIFICATION			
EFFECTIVENESS	NR	1	2

NR - NOT RATED

CURRENT SALP ASSESSMENT PERIOD: 9/1/87 - 2/28/89

BIG ROCK POINT

VERIFICATION OF HIGH PRIORITY ITEMS

ISSUE NO.	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIF. DATE	REMARKS
*5. RG 1.97	03/86C	8/87C	OPEN	INSPECTION DUE 03/88
8. PIPE CRACKS	07/85C	11/87C	OPEN	-NO EVIDENCE OF IGSCC -LICENSEE WANTS TO REDUCE # OF WELDS INSPECTED
*7. SDV	08/83C	04/82C	OPEN	INSPECTION DUE 03/88
*8. APP R	03/83C	07/85C	OPEN	REINSPECTION DUE 03/88
*9. EQ	11/85C	06/87C	OPEN	SIGNIFICANT OPEN ITEMS-REINSPECT
10. ESF RESET	03/82C	08/81C	08/81C	CLOSED
*12. ATWS	03/88	03/88	OPEN	INSPECTION DUE 08/88

• SE USED IN INSPECTION PROCESS

MPAs ON EMERGENCY RESPONSE FACILITIES

THE MAN/MACHINE INTERFACE

BIG ROCK POINT

ISSUE	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIFY COMPLETE
1.DCRDR	11/84C	N/AC	N/A
2. TSC	*10/88	03/86C	*10/88
3.OSC	*10/88	03/86C	*10/88
4.EOF	*10/88	03/86C	*10/88
5. DCRDR (FOLLOWUP)	10/88	09/89	OPEN

*INSPECTION SCHEDULED WHICH WILL COMPLETE
IMPOSITION AND VERIFICATION

BIG ROCK POINT PLANT

DOCKET NO. 50-155

KEY LICENSEE PERSONNEL - CPCo

WILLIAM T. MCCORMICK, JR. - CHAIRMAN AND CEO

JOSEPH F. PAQUETTE, JR. - PRESIDENT AND CHIEF OPERATING OFFICER

FREDERICK W. BUCKMAN - EXECUTIVE VICE PRESIDENT-ENERGY SUPPLY

KENNETH W. BERRY - DIRECTOR OF NUCLEAR LICENSING

THOMAS W. ELWARD - PLANT MANAGER

RALPH FRISCH - PRINCIPAL LICENSING CONTACT

OPERATIONS

- 5 OPERATING SHIFTS

- 100% PASS RATE ON MOST RECENT OPERATOR EXAMS

(4/14-16/87, 5/8-8/86)

BIG ROCK POINT PLANT

DOCKET NO. 50-155

INSPECTION FINDINGS

- \$25,000 SECURITY CIVIL PENALTY,
SEVERITY LEVEL III
- PENDING EEQ SEVERITY LEVEL III

BIG ROCK POINT PLANT
DOCKET NO. 50-155

ALLEGATIONS AND PETITIONS

- **THREE ALLEGATIONS**
 - **TWO SAFEGUARDS**
 - **ONE ONSITE HEALTH AND SAFETY**

- **NO PETITIONS**

BIG ROCK POINT PERFORMANCE INDICATORS

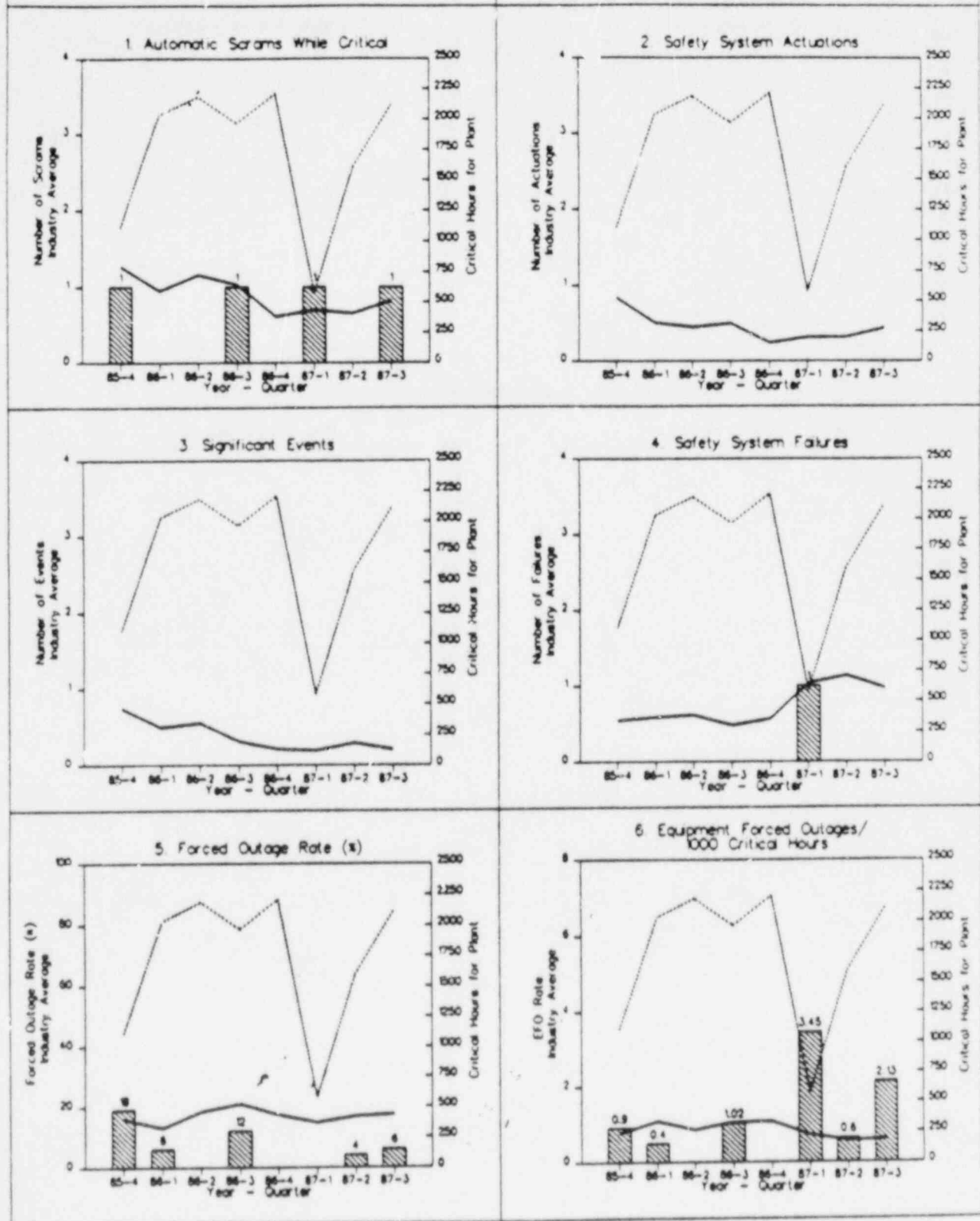
INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				1	0	0	1	0	1	0	1	
SAFETY SYSTEM ACTUATION				0	0	0	0	0	0	0	0	
SIGNIFICANT EVENTS				0	0	0	0	0	0	0	0	
SAFETY SYSTEM FAILURES				0	0	0	0	0	1	0	0	
FORCED OUTAGE RATE (%)				19	6	0	12	0	0	4	6	
EQUIPMENT FORCED OUTAGES				0.9	0.4	0	1	0	3.5	0.6	2.1	
HOURS CRITICAL				1103	2032	2183	1963	2209	529	1597	2117	

BIG ROCK POINT

85-4 to 87-3

Legend:

- Indicator
 Older Plant Average
 Critical Hours



BIG ROCK POINT LICENSING ACTION STATUS

	FY 86		FY 87		FY 88	
	TOTAL	L1EX	TOTAL	L1EX	TOTAL	L1EX
ACTIONS AT BEGINNING	61	58	32	32	26	25
ACTIONS ADDED	30	27	25	22	4	2
ACTIONS COMPLETED	59	53	31	29	0	0
ACTIONS REMAINING	32	32	26	25	30	27

TOTAL = DOCKET-SPECIFIC TAC COUNT
L1EX = INPUT TO LEVEL 1 EXECUTIVE TEAM COUNT

DONALD C. COOK NUCLEAR PLANT

DOCKET NOS. 50-315 AND 50-316

- PROJECT MANAGER: JOHN STANG BACKUP: WAYNE SCOTT
- REGION III:
 - BRANCH CHIEF: WILLIAM GULDEMOND
 - SECTION CHIEF: BRUCE BURGESS
 - SENIOR RESIDENT: BRUCE JORGENSEN
- SUMMARY
 - LICENSEE: INDIANA MICHIGAN POWER COMPANY (IMPC)
 - LOCATION (SITE): LAKE MICHIGAN DIRECTLY ACROSS FROM CHICAGO
 - LOCATION (GEN. OFFICES): COLUMBUS, OHIO
 - POPULATION: 10 MILES = 59,500 50 MILES = 1,225,800
 - REACTOR TYPE: WESTINGHOUSE - 4 LOOP
 - AE: AMERICAN ELECTRIC POWER COMPANY (AEP)
 - CONTAINMENT: ICE CONDENSER
 - POWER: 3250 Mwt, 1090 Mwe UNIT1 3411 Mwt, 1130 Mwe UNIT2
 - COOLING: ONCE THROUGH - LAKE MICHIGAN
 - OPERATING LICENSE DATE: UNIT 1 - OCT. 25, 1974 UNIT 2 - DEC. 29, 1977
- PLANT STATUS
 - UNIT 1 OPERATING IN CYCLE 10 UNIT 2 OPERATING IN CYCLE 8
- PLANNED OUTAGES
 - UNIT 1 REFUELING OUTAGE - 03/89
 - UNIT 2 REFUELING/SG REPLACEMENT OUTAGE 4/88

DONALD C. COOK NUCLEAR PLANT

UNITS NOS. 1 AND 2

STRENGTHS

- STRONG ATTITUDE TOWARDS SAFE OPERATION
 - SELF-INITIATED SSFIs
 - SELF-IMPOSED RESTRICTIONS
- ENGINEERING RESOURCES
- STRONG EMPHASIS EMPLOYEE MORALE -
APPAREL PROGRAM, EMPLOYEE CORRECTIVE ACTION PROGRAM

WEAKNESSES

- SUPPORT STAFF IN COLUMBUS, OHIO; NOT AT THE SITE
- RADIATION PROTECTION
- SECURITY

DONALD C. COOK NUCLEAR PLANT
DOCKET NOS. 50-315 AND 50-316

SIGNIFICANT ISSUES

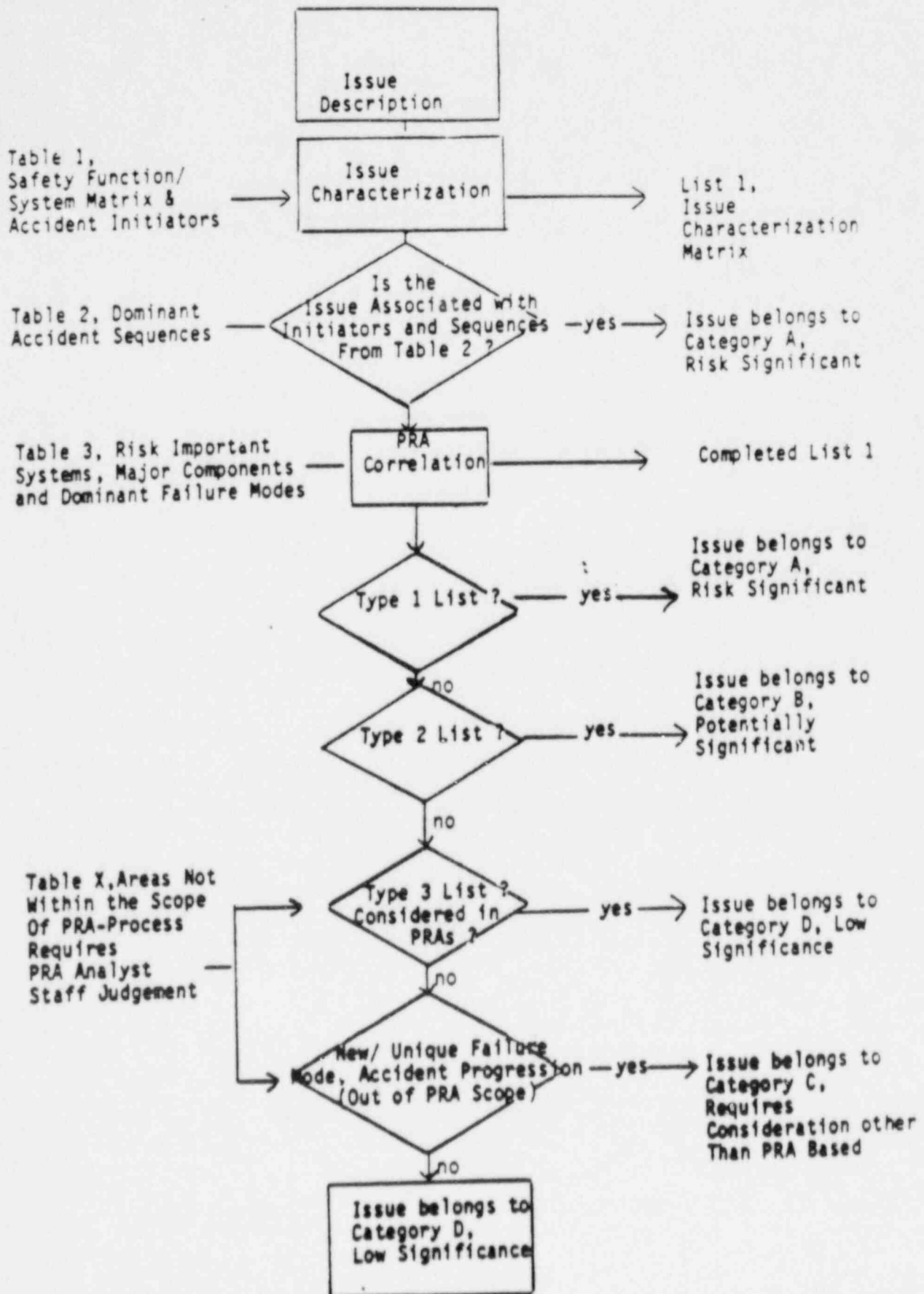
- REACTOR TRIPS
 - DESIGN CHANGES
 - LICENSEE MEMBER OF WESTINGHOUSE TRIP REDUCTION ASSESSMENT GROUP
- DESIGN BASIS DOCUMENTATION
 - PROGRAM BEING DEVELOPED FOR BETTER DOCUMENTATION OF ORIGINAL BASELINE OF THE PLANT
 - SYSTEMS BEING WALKED DOWN AND DRAWINGS BEING UPDATED
- HIGH FAILURE RATE ON RECENT OPERATOR REQUALIFICATION EXAMS
 - CONFIRMATORY ACTION LETTER ISSUED BY RII
 - UTILITY RESPONDED TO LETTER, ACTION CLOSED
- FIRST STANDARD TECH SPEC PLANT; 5 REVISIONS
- PRIORITIZATION OF HQ ACTIVITIES USING RISK INSIGHTS STUDY

MILESTONES

- STEAM GENERATORS REPLACEMENT ON UNIT 2 SPRING 1988
- NEW TRAINING BUILDING (6/87) AND SIMULATOR (8/88)
- REGULATORY PERFORMANCE IMPROVEMENT PROGRAM

METHODOLOGY FOR PRIORITIZATION OF HQ ACTIVITIES

USING RISK INSIGHTS STUDY



DONALD C. COOK NUCLEAR PLANT

SALP SUMMARY		
BEGINNING OF PERIOD	3/84	9/85
END OF PERIOD	9/85	9/86
PLANT OPERATIONS	2	2
RADIOLOGICAL CONTROLS	2	2
MAINTENANCE	2	2
SURVEILLANCE	3	2
FIRE PROTECTION	2	2
EMERGENCY PREPAREDNESS	2	2
SECURITY AND SAFEGUARDS	3	2
OUTAGES	2	1
QUALITY PROGRAMS AND ADMINISTRATIVE CONTROLS	3	2
LICENSING	1	2
TRAINING AND QUALIFICATION EFFECTIVENESS	NR	2

*NR - NOT RATED

CURRENT SALP ASSESSMENT PERIOD: 10/1/86 - 2/29/88

D. C. COOK UNITS 1 & 2

VERIFICATION OF HIGH PRIORITY ITEMS

ISSUE NO.	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIF. DATE	REMARKS
*1. RTS RELIAB.	06/85C	08/85C	03/88	INSPECTION DUE 03/88
*2. EVENT V	04/81C	00/81C	06/87C	CLOSED W/O PROBLEMS
*4. NAT. CIRC.	11/83C	00/81C	12/87C	CLOSED W/O PROBLEMS
*5. RG 1.97	05/88	1- 03/89 2-07/90	10/88	INSPECTION DUE
*8. APP R	07/84C	09/88C	06/88	OPEN ITEMS- REINSPECT 6/88
*9. BQ	01/85C	10/85C	05/88	OPEN ITEMS- REINSPECT
*10. ESF RESET	09/82C	00/82C	11/81C	CLOSED W/O PROBLEMS
*11. LTOP	09/82C	12/82C	11/86C	CLOSED W/O PROBLEMS
*12. ATWS	06/88	8/88	OPEN	INSPECTION DUE

* SE USED IN INSPECTION PROCESS

MPAs ON EMERGENCY RESPONSE FACILITIES

THE MAN/MACHINE INTERFACE

D.C. COOK 1&2

ISSUE	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIFY COMPLETE
1.DCRDR	02/85C & 12/84C	N/A	N/A
2. TSC	*	09/86C	*
3.OSC	*	09/86C	*
4.EOF	*	09/86C	*
5. DCRDR (FOLLOWUP)	06/87C	12/88	OPEN

*** INSPECTION TO BE SCHEDULED WHICH WILL COMPLETE
IMPOSITION AND VERIFICATION**

DONALD C. COOK NUCLEAR PLANT

UNITS NOS. 1 AND 2

DOCKET NOS. 50-315/316

KEY LICENSEE PERSONNEL - AMERICAN ELECTRIC POWER SERVICE CORPORATION

W.S. WHITE, JR., - CHAIRMAN OF THE BOARD, AEP/CEO, AEPSC

W.A. BLACK, PRESIDENT, DMPC

D.B. WILLIAMS, SENIOR EXECUTIVE VICE PRESIDENT ENGINEERING AND
CONSTRUCTION, AEPSC; VICE PRESIDENT DMPC

MILTON ALEXICH, VICE PRESIDENT NUCLEAR OPERATIONS, AEPSC;
VICE PRESIDENT, DMPC

R.F. KROEGER, MANAGER OF QUALITY ASSURANCE, AEPSC

F.V. SWEENEY, ASSISTANT VICE PRESIDENT, CONSTRUCTION, AEPSC

PAUL BARRETT, MANAGER NUCLEAR SAFETY AND LICENSING, AEPSC

NUCLEAR STATION

W.G. (BO) SMITH, PLANT MANAGER

J. RUTKOWSKI, ASSISTANT PLANT MANAGER - PRODUCTION

L. GIBSON, ASSISTANT PLANT MANAGER - TECHNICAL SUPPORT

A. BLIND, ASSISTANT PLANT MANAGER - ORGANIZATION AND ADMINISTRATION

OPERATIONS:

- 5 OPERATING SHIFTS
- 47% PASS RATE ON MOST RECENT OP. EXAM

DONALD C. COOK NUCLEAR PLANT

UNITS 1 AND 2

INSPECTION FINDINGS

- **QUALITY VERIFICATION INSPECTION (10/19-30/87)**

- FOCUSED ON THE ABILITY OF THE QUALITY VERIFICATION ORGANIZATION TO IDENTIFY, SOLVE AND PREVENT SAFETY-SIGNIFICANT DEFICIENCIES
- FINDINGS SHOWED QA DEPARTMENT EVOLVING INTO EFFECTIVE PERFORMANCE ORIENTED ORGANIZATION
- BENEFIT TO NRC BY PROVIDING TRAINING OF INSPECTORS TOWARDS RESULT-ORIENTED INSPECTIONS

- **QUALITY ASSESSMENT**

- OTHER ROUTINE QA INSPECTIONS HAVE IDENTIFIED SOME PROCUREMENT PROBLEMS

- **SAFEGUARDS**

- 3 VIOLATIONS IN THIS AREA
- GUARDS FOUND INATTENTIVE

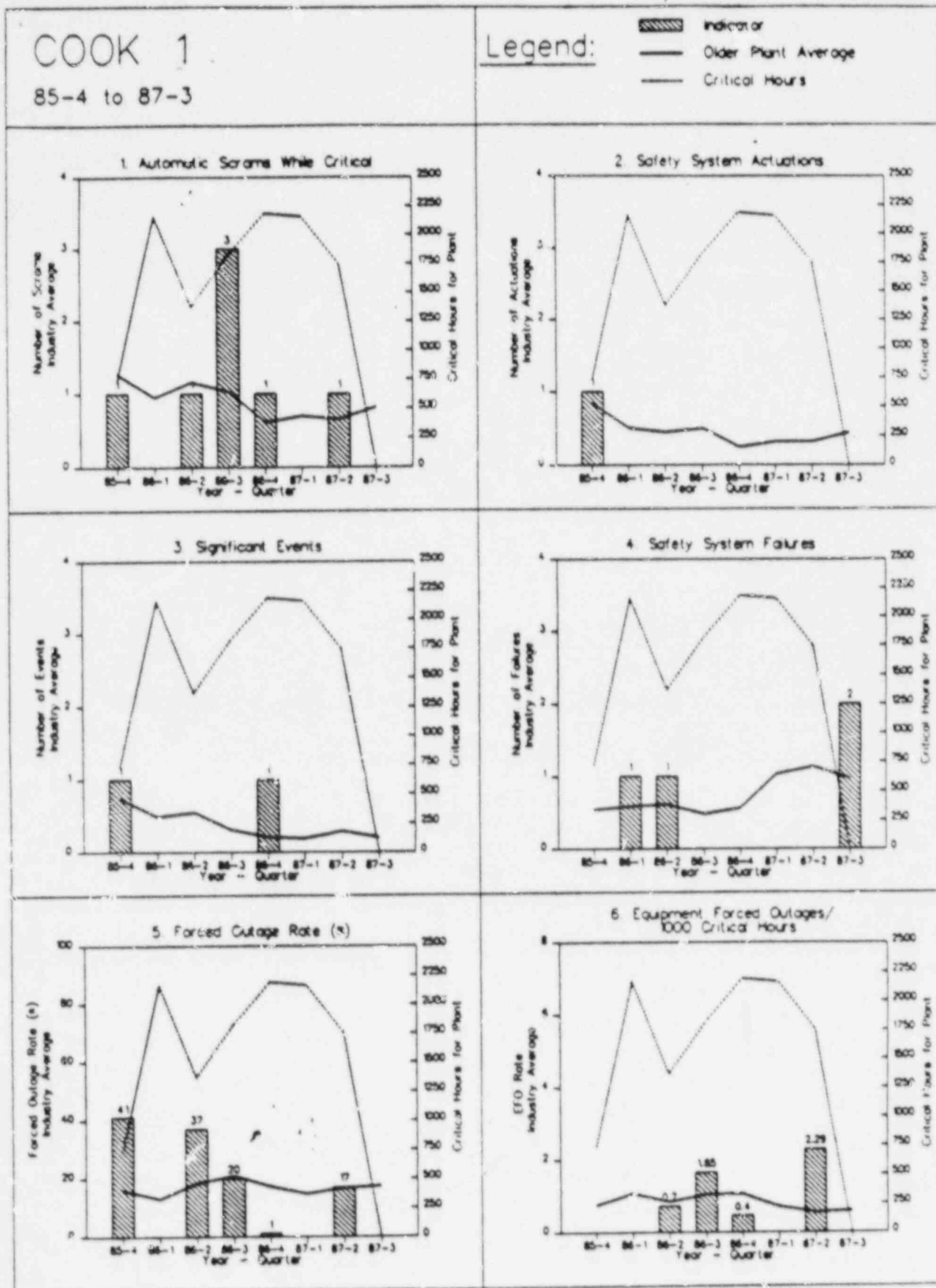
- **RADIATION PROTECTION**

- REINFORCED FINDINGS FROM INPO
- MANAGEMENT OVERSIGHT WEAK
- COMMUNICATIONS WITHIN THE ORGANIZATION WEAK

COOK UNIT 1 PERFORMANCE INDICATORS

INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				1	0	1	3	1	0	1	0	
SAFETY SYSTEM ACTUATION				1	0	0	0	0	0	0	0	
SIGNIFICANT EVENTS				1	0	0	0	1	0	0	0	
SAFETY SYSTEM FAILURES				0	1	1	0	0	0	0	2	
FORCED OUTAGE RATE (%)				41	0	37	20	1	0	17	0	
EQUIPMENT FORCED OUTAGES				0	0	0.7	1.7	0.4	0	2.3	0	
HOURS CRITICAL				728	2160	1367	1822	2187	2160	1749	0	

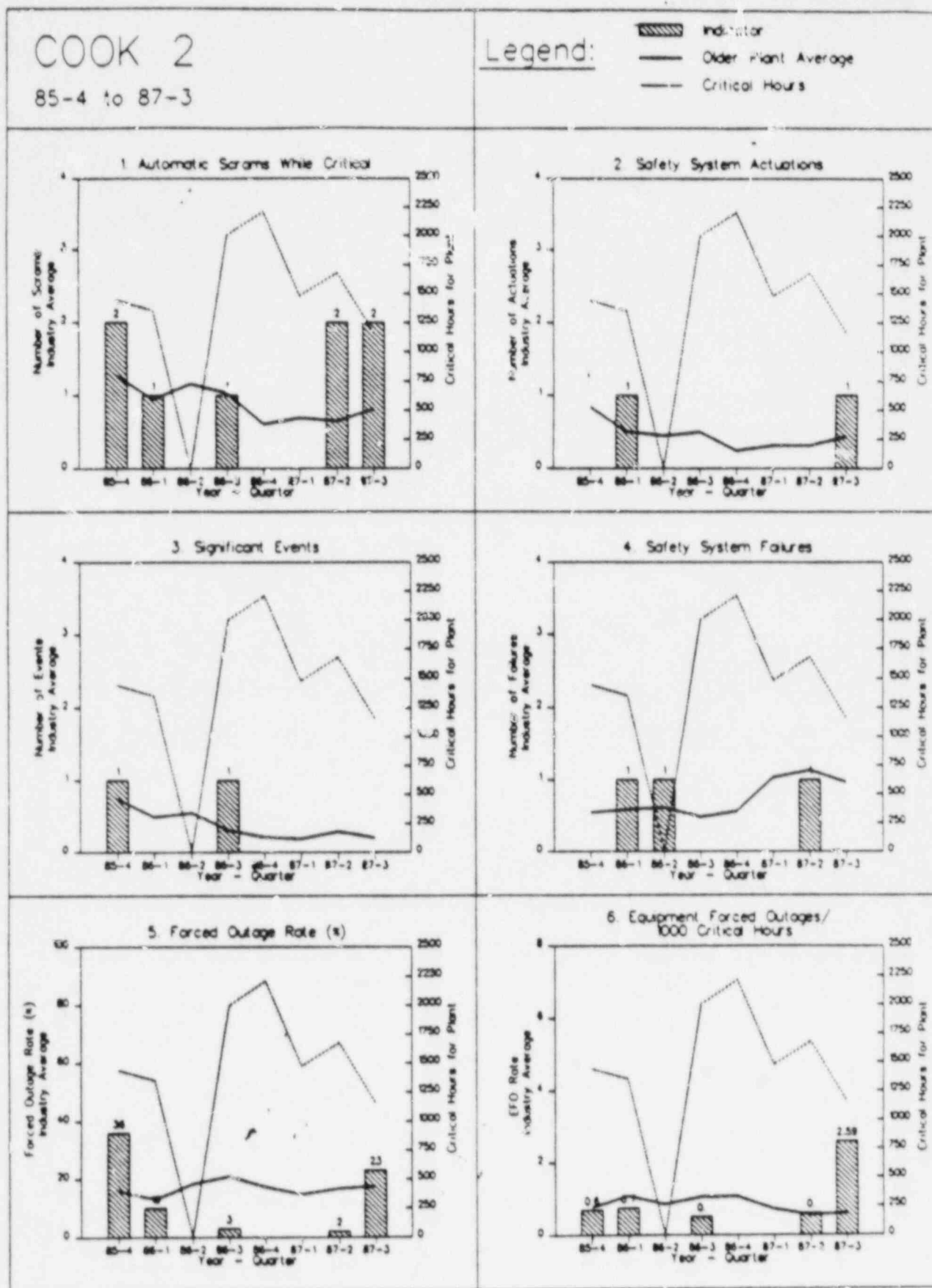
FIGURE 4.20



COOK UNIT 2 PERFORMANCE INDICATORS

INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				2	1	0	1	0	0	2	2	
SAFETY SYSTEM ACTUATION				0	1	0	0	0	0	0	1	
SIGNIFICANT EVENTS				1	0	0	1	0	0	0	0	
SAFETY SYSTEM FAILURES				0	1	1	0	0	0	1	0	
FORCED OUTAGE RATE (%)				36	10	0	3	0	0	2	23	
EQUIPMENT FORCED OUTAGES				0.7	0.7	0	0.5	0	0	0.6	2.6	
HOURS CRITICAL				1441	1353	0	1999	2209	1479	1679	1158	

FIGURE 4 21



D.C. COOK LICENSING ACTION STATUS (UNIT 1/2)

	FY 86		FY 87		FY 88	
	TOTAL	L1EX	TOTAL	L1EX	TOTAL	L1EX
ACTIONS AT BEGINNING	32/33	32/32	47/44	42/42	38/40	37/39
ACTIONS ADDED	30/32	27/31	29/24	28/23	6/7	5/6
ACTIONS COMPLETED	15/21	17/21	38/28	33/26	6/8	2/2
ACTIONS REMAINING	47/44	42/42	38/40	37/39	38/39	40/43

TOTAL = DOCKET-SPECIFIC TAC COUNT

L1EX = INPUT TO LEVEL 1 EXECUTIVE
TEAM COUNT

FERMI-2 NUCLEAR PLANT

DOCKET NO. 50-341

• PROJECT MANAGER: TED QUAY BACKUP: JOHN STEFANO

• REGION III:

BRANCH CHIEF: RICHARD KNOP

SECTION CHIEF: RICHARD COOPER

SENIOR RESIDENT: WALTER ROGERS

• SUMMARY

LICENSEE: DETROIT EDISON

LOCATION (SITE): 30 MILES SOUTHWEST OF DETROIT;

25 MILES NORTHEAST OF TOLEDO, OHIO

LOCATION (GEN. OFFICES): DETROIT, MICHIGAN

POPULATION: 10 MILES = 86,000 50 MILES = 5,500,000

REACTOR TYPE: GE BWR-4

AE: DETROIT EDISON/STONE & WEBSTER/SARGENT-LUNDY

CONTAINMENT: MARK I

POWER: 3430 Mwt, 1093 Mwe

COOLING: NATURAL CONVECTION COOLING TOWERS, MAKEUP - LAKE ERIE

OPERATING LICENSE DATE: 07/15/85 (FULL POWER)

• PLANT STATUS

STARTUP TESTS IN FINAL STAGES

TC-6 ESTIMATED COMPLETION 4/88

• PLANNED OUTAGES

LLRT 3/88; FIRST REFUELING 9/88

FERMI-2 NUCLEAR PLANT

STRENGTHS

- ALL NUCLEAR PERSONNEL ON SITE
- RECENT ORGANIZATIONAL CHANGES PROVIDING BETTER MANAGEMENT

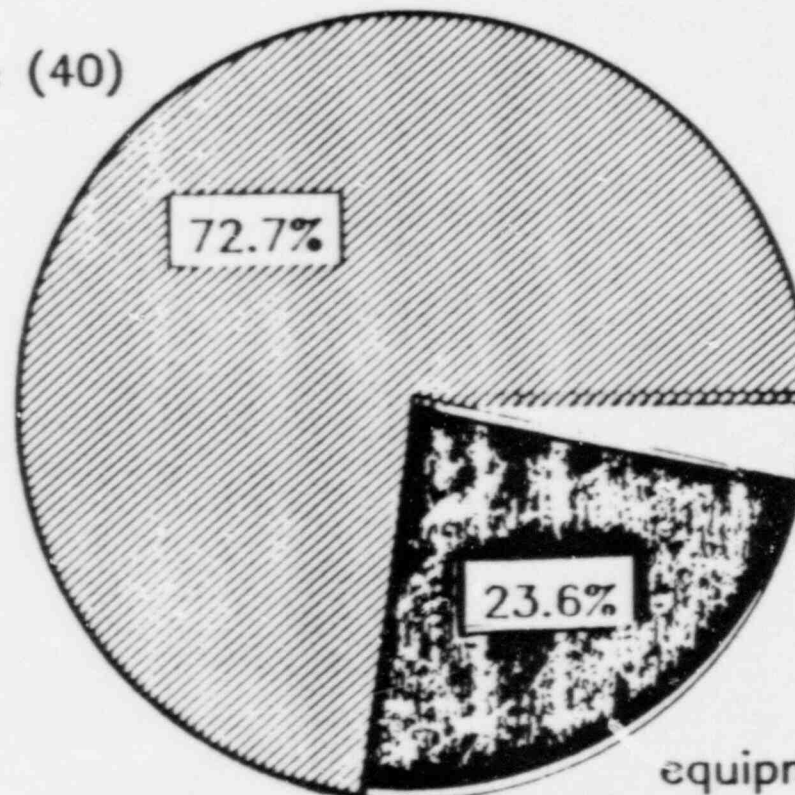
WEAKNESSES

- REGULATORY PERFORMANCE POOR
- PLANT PERFORMANCE
 - PERSONNEL
 - PROCEDURES
 - MATERIAL CONDITION OF PLANT
- INEFFECTIVE IMPLEMENTATION OF LICENSEE IMPROVEMENT PLANS - 1987

FERMI-2 1987 EVENTS

LER's and Special Reports

personnel/procedure (40)



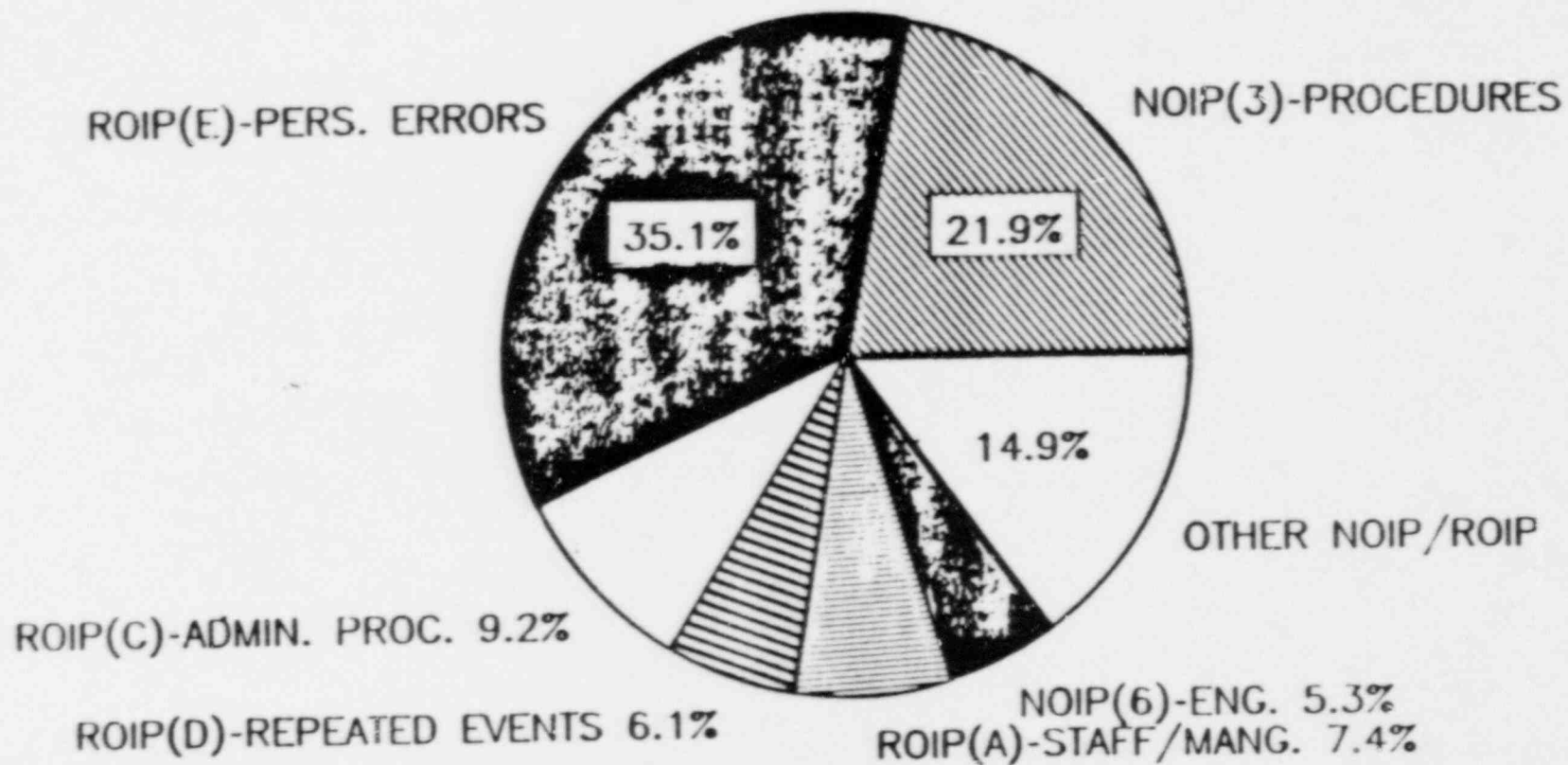
other (2) 3.6%

equipment (13)

EVENT CAUSE DISTRIBUTION FOR 55 REPORTED EVENTS

EVENT CAUSES RELATION TO FERMI IMPROVEMENT PLANS

NOIP-NUCLEAR OPERATIONS IMPROVEMENT PLAN
ROIP-REACTOR OPERATIONS IMPROVEMENT PLAN



38 OF 40 PERSONNEL/PROCEDURE EVENTS RELATE TO PLANS

FERMI-2 NUCLEAR PLANT

SIGNIFICANT ISSUES

- EQUIPMENT PROBLEMS
 - SYSTEM AND COMPONENT VIBRATIONS
 - FW PUMP (SUCTION PRESSURE DESIGN)
 - FW SPEED CONTROLLER
- DESIGN DEFICIENCIES
 - LPCI SWINGBUS
 - MSTV LOGIC
 - SPDS
- LICENSEE INITIATED DESIGN ANALYSIS AND MODS WHERE NECESSARY
- CONTROL ROOM OPERATORS
- LICENSEE INITIATED CONTROL ROOM EVALUATION EVALUATION PROGRAM
- REACTOR WATER CHEMISTRY (S04)
- LOOP CALCULATIONS
- MAINTENANCE BACKLOG (CORRECTIVE AND PREVENTATIVE)
- ADMINISTRATIVE CONTROL DEFICIENCIES
 - TECHNICAL SPECIFICATIONS AND PLANT PROCEDURES
- CANADA - 2.206 PETITION

MILESTONES

JULY 27 - AUG 7, 1987 --- OPERATIONAL SAFETY TEAM INSPECTION
OCT 9, 1987 -- AUTH TO RESTART
DEC 5, 1987 -- AUTH TO OPERATE UP TO 75% POWER
JAN 15, 1988 -- AUTH TO OPERATE UP TO 100% POWER
JAN 23, 1988 -- COMMERCIAL OPERATION
MARCH, 1988 -- LLRT
APRIL, 1988 -- PROJECTED COMPLETION OF STARTUP TESTS

FERMI-2 NUCLEAR PLANT

MAJOR OPERATING EVENTS

- **UNPLANNED MODE CHANGE - JUNE 26, 1987**
 - REACTOR TEMP EXCEEDED 200F (COLD TO HOT S/D) WITHOUT REQUIRED CONTROL ROOM CHECKS/SURVEILLANCES
 - LACK OF CONTROL ROOM SUPERVISION OF TRAINEE ASSIGNED TO MONITOR TEMP
 - OSTI SCHEDULED AS A RESULT OF THIS EVENT
 - \$75,000 CIVIL PENALTY ISSUED

- **LEVEL 3 SCRAM ON LOSS OF SHUTDOWN COOLING - AUG 2, 1987**
 - IMPROPER VALVE ALIGNMENT IN ATTEMPT TO DIVERT REACTOR COOLANT FROM DIV II RHR THRU DIV I RHR PUMP SUCTION VALVE TO TORUS
 - PERSONNEL ERROR - PROCEDURE NOT PROPERLY FOLLOWED

- **LPCI SWINGBUS DESIGN ERROR - SEPT 9, 1987**
 - LOSS OF DIV I POWER TO SWING BUS RENDERED DIV I AND DIV II LPCI VALVES AND DIV I CORE SPRAY INOPERABLE
 - FAILURE OF DESIGN CONTROL PROGRAM DURING CONSTRUCTION
 - REDESIGN INSTALLED/SATISFACTORILY TESTED IN OCT 1987
 - \$25,000 CIVIL PENALTY ISSUED

- **FEED PUMP SPEED CONTROL FAILURE SCRAM - JAN 10, 1988**
 - HPCI INJECTION ON LOW REACTOR WATER LEVEL
 - RWCU ISOLATED AS A RESULT OF EVENT; IN RETURNING SYSTEM TO SERVICE, DEC₀ EXCEEDED T.S. ACTION STATEMENT

FERMI-2 NUCLEAR PLANT

SALP SUMMARY			
BEGINNING OF PERIOD	10/84	7/85	4/86
END OF PERIOD	6/85	3/86	3/87
PLANT OPERATIONS	2	*	3
RADIOLOGICAL CONTROLS	2	*	2
MAINTENANCE	2	*	2
SURVEILLANCE	2	*	3
FIRE PROTECTION	3	*	NR
EMERGENCY PREPAREDNESS	1	*	1
SECURITY AND SAFEGUARDS	2	*	2
OUTAGES	1	*	2
QUALITY PROGRAMS AND			
ADMINISTRATIVE CONTROLS	2	*	2
LICENSING	2	*	2
TRAINING AND QUALIFICATION			
EFFECTIVENESS	NR	*	3
STARTUP TESTING	NR	*	1

NR - NOT RATED

- NO SALP REPORT FOR PERIOD SINCE PLANT WAS IN EXTENDED
MAINTENANCE OUTAGE TO CORRECT EQUIP PROBLEMS
AND TO RESPOND TO 50.54f LETTER
CURRENT SALP ASSESSMENT PERIOD: 4/1/87 - 3/31/88

7

FERMI-2 NUCLEAR PLANT

VERIFICATION OF HIGH PRIORITY ITEMS

ISSUE NO.	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIF. DATE	REMARKS
3. MARK I	03/80C	3/87C	09/87C	CLOSED W/O PROBLEMS
5. RG 1.97	6/88	10/87C	OPEN	INSPECTION DUE 10/88
6. PIPE CRACKS	4/84C11	7/84C	09/87C	CLOSED AS TO CRITERIA OPEN RE OUTAGE RELATED ISI
7. SDV	9/84C	7/85C	OPEN	INSPECTION DUE 3/88
*8. APP R	7/85C	7/85C**	6/83,8/84, 2/85,12/87C	OPEN ITEMS
*9. BQ	3/85C	11/85C	12/87C	OPEN ITEMS
10. BSP RESET	7/81C 80-06	05/83C	05/83C	CLOSED W/O PROBLEMS
*12. ATWS	5/88	7/89	OPEN	INSPECTION DUE 12/89

* SE USED IN INSPECTION PROCESS

** ALTERNATE SHUTDOWN PANEL EXTENDED BEYOND THIS DATE; FINAL
LICENSING VERIFICATION OF ALT. S/D PANEL SCHEDULED 3/88

P

MPAs ON EMERGENCY RESPONSE FACILITIES

THE MAN/MACHINE INTERFACE

FERMI-2

ISSUE	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIFY COMPLETE
1.DCRDR	7/85C*	N/A	N/A
2. TSC	1/83**	6/84C	***
3.OSC	1/83C**	6/84C	***
4.EOF	1/83C**	6/84C	***
5. DCRDR (FOLLOWUP)	7/85C*		OPEN

* LICENSE CONDITION #17, THEREFORE CLOSED OUT FOR NTOL

** SER SUPPLEMENT 3

***INSPECTION TO BE SCHEDULED WHICH WILL COMPLETE
IMPOSITION AND VERIFICATION

FERMI-2 NUCLEAR PLANT INSPECTION FINDINGS

- OPERATIONAL SAFETY TEAM INSPECTION (JULY 27-AUG 7, 1987)
 - PROBLEMS ENCOMPASS BROAD RANGE OF PLANT ACTIVITIES - NO SINGLE ROOT CAUSE
 - OPERATING PRACTICES
 - ADMINISTRATIVE CONTROLS
 - SURVEILLANCES
 - TRAINING
 - CONDUCT OF CORRECTIVE ACTIONS
 - CONFIRMING EQUIPMENT PROBLEMS/PERSONNEL ERRORS OBSERVED DURING INSPECTION PERIOD
 - SAFETY EVALUATIONS

- REGULATORY ASSESSMENT TO EXCEED 50% POWER (NOV 30-DEC 2, 1987)
 - CONFIRMED ACCEPTABILITY OF LICENSEE'S ACTIONS FOR PLANT RESTART AND OPERATION UP TO 75% POWER
 - CONTROL ROOM EVOLUTION EVALUATION PROGRAM
 - IMPROVEMENTS IN MAINTENANCE BACKLOGS
 - BEGINNING TO CORRECT DEFICIENCIES IN TECH SPECS

- REGULATORY ASSESSMENT TO EXCEED 75% POWER (JAN 5-6, 1988)
 - TEST CONDITIONS 3/5 SATISFACTORILY COMPLETED
 - MAJOR EQUIPMENT PROBLEMS RESOLVED
 - CONTINUED CR EVOLUTION EVALUATION PROGRAM

FERMI-2 NUCLEAR PLANT

DOCKET NO. 50-341

KEY LICENSEE PERSONNEL - DETROIT EDISON

- *W. McCARTHY, JR. - CHAIRMAN OF THE BOARD
- *C. HEIDEL - PRESIDENT (WILL RETIRE 4/88)
- B. RALPH SYLVIA - GROUP VICE PRESIDENT, NUCLEAR
- S. G. CATOLA - CHAIRMAN, NUCLEAR SAFETY REVIEW GROUP AS WELL AS
ACTING VP FOR NUCLEAR ENGINEERING & SERVICES
- W. S. ORSER - VICE PRESIDENT, NUCLEAR OPERATIONS
- R. STAFFORD - ACTING DIRECTOR, NUCLEAR QA
- D. P. GIBSON - PLANT MANAGER, NUCLEAR PRODUCTION
- G. R. OVERBECK - DIRECTOR, NUCLEAR TRAINING
- * NOT ON SITE

OPERATIONS

- 8 OPERATOR SHIFTS
- 67% PASS RATE ON MOST RECENT OPERATOR EXAMS
- 5 RO's - 4 passed ; 1 SRO - 0 passed

FERMI-2 NUCLEAR PLANT ALLEGATIONS AND PETITIONS

- **ONE OUTSTANDING PETITION**
 - **2,206 FROM MEMBERS OF CANADIAN PARLIAMENT**
- **ALLEGATIONS**
 - **14 OPEN; 7 INVOLVE OI INVESTIGATIONS**
 - **NO ISSUES FOUND TO DATE WHICH WOULD
IMPACT CONTINUED PLANT OPERATIONS**




FERMI-2 PERFORMANCE INDICATORS

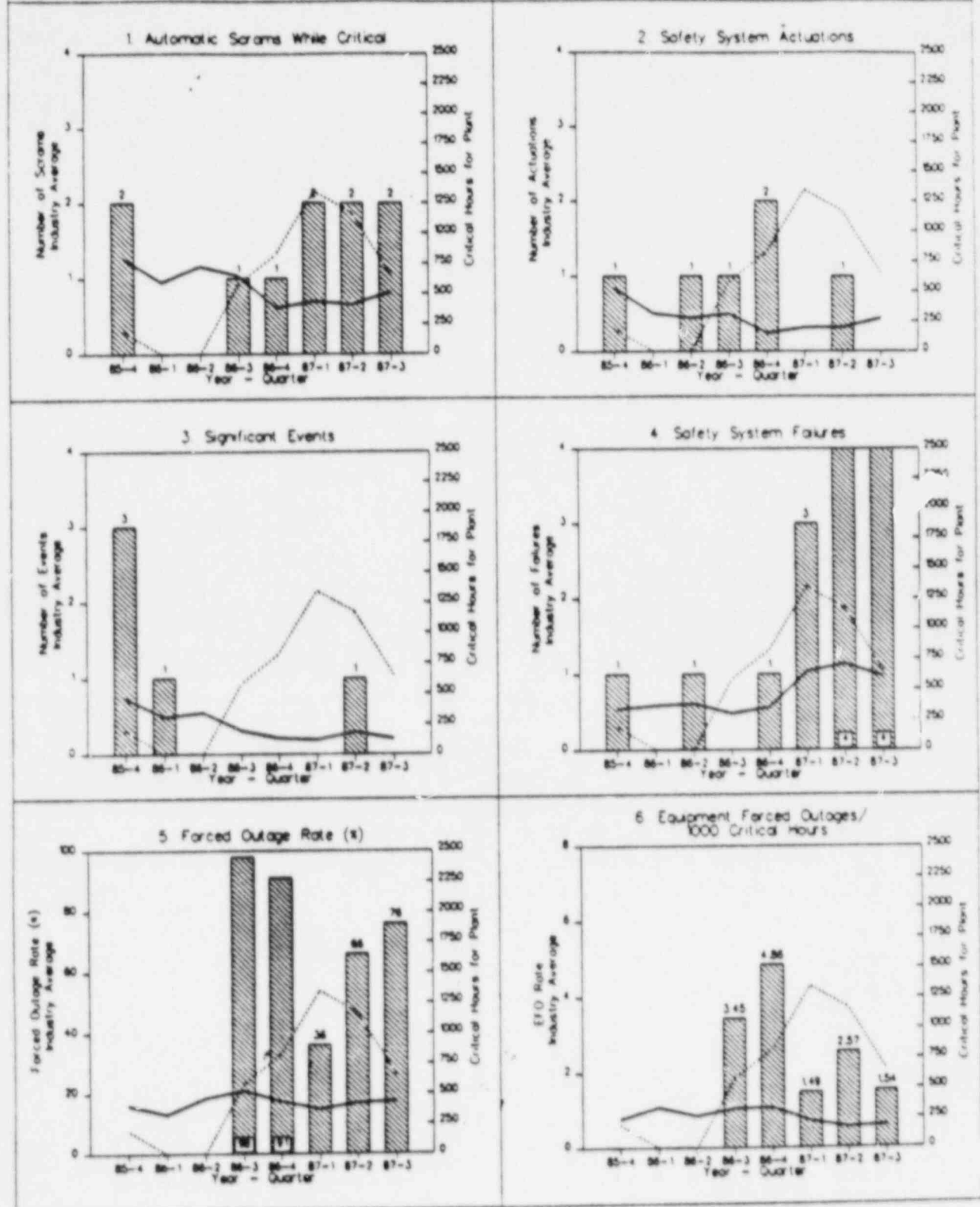
INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				2	0	0	1	1	2	2	2	
SAFETY SYSTEM ACTUATION				1	0	1	1	2	0	1	0	
SIGNIFICANT EVENTS				3	1	0	0	0	0	1	0	
SAFETY SYSTEM FAILURES				1	0	1	0	1	3	4	4	
FORCED OUTAGE RATE (%)							98	91	36	66	76	
EQUIPMENT FORCED OUTAGES							3.5	4.9	1.5	2.6	1.5	
HOURS CRITICAL				192	0	0	500	823	1345	1168	649	

FERMI 2

85-4 to 87-3

Legend:

-  Indicator
 Older Plant Average
 Critical Hours



FERMI-2 LICENSING ACTION STATUS

	FY 86		FY 87		FY 88	
	TOTAL	L1EX	TOTAL	L1EX	TOTAL	L1EX
ACTIONS AT BEGINNING	28	29	33	36	45	39
ACTIONS ADDED	16	17	39	27	6	4
ACTIONS COMPLETED	11	10	27	24	19	5
ACTIONS REMAINING	33	10	45	24	32	38

TOTAL = DOCKET-SPECIFIC TAC COUNT

L1EX = INPUT TO LEVEL 1 EXECUTIVE

TEAM COUNT

MONTICELLO NUCLEAR GENERATING CENTER

DOCKET NO. 50-263

- PROJECT MANAGER: JOHN STEFANO BACKUP: DOM DILANNI
- REGION III:
 - BRANCH CHIEF: WILLIAM GULDEMOND
 - SECTION CHIEF: NICK JACKIW
 - SENIOR RESIDENT INSPECTOR: PAUL HARTMANN
- SUMMARY
 - LICENSEE: NORTHERN STATES POWER COMPANY
 - LOCATION (SITE): MISSISSIPPI RIVER 30 MILES NW OF MINNEAPOLIS,
MINNESOTA
 - LOCATION (GEN. OFFICES): MINNEAPOLIS, MINNESOTA
 - POPULATION: 10 MILES = 23,735 50 MILES = 2,121,495
 - REACTOR TYPE: GE BWR-3
 - AE: BECHTEL CORP.
 - CONTAINMENT: MARK I
 - POWER: 545 MWe
 - COOLING: ONCE THROUGH - MISSISSIPPI RIVER, MECHANICAL DRAFT
COOLING TOWERS DURING LOW FLOW
 - OPERATING LICENSE DATE: 1/19/71
- PLANT STATUS
 - OPERATING IN CYCLE 13
- PLANNED OUTAGES
 - REFUELING OUTAGE SCHEDULED 5/89

MONTICELLO NUCLEAR GENERATING PLANT

STRENGTHS

- CORPORATE MANAGEMENT RESPONSIVENESS/OVERSIGHT
- LICENSING SUPPORT STAFF HAS GOOD KNOWLEDGE OF REGULATORY AND TECHNICAL ISSUES
- STABLE PLANT STAFF
- DEGREE PROGRAM FOR SHIFT SUPERVISORS
- CONFIGURATION CONTROL PROGRAM
- ACTIVE WITH OWNER'S GROUPS

WEAKNESSES

- INCREASING TREND IN PERSONNEL ERRORS (SALP-7)
- INCREASED NUMBER OF SCRAMS DURING SALP-7
- OVERALL PERFORMANCE DECLINE
 - ATTENTION TO DETAIL
- COMMITMENT FOLLOW-THROUGH

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

SIGNIFICANT ISSUES

- DECREASE IN PERFORMANCE TO THAT COMPARABLE TO OTHER OLDER PLANTS
 - OPERATIONS
 - SECURITY
 - EMERGENCY PREPAREDNESS
 - ENGINEERING / TECH SUPPORT
- REMOVED FROM REDUCED INSPECTION PROGRAM
- ORDER IMPOSING CIVIL PENALTY FOR DEFICIENCIES IN ELECTRICAL COORDINATION/SLCS INOPERABILITY
- NUCLEAR GENERATION THRUST FOR 1988- REGAIN INPO CAT I RATING / SALP UPPER QUARTILE

MILESTONES

- SPENT FUEL SHIPPED TO GE'S MORRIS FACILITY (4/87)
- PILOT BWR FROM EPRI/DOE LIFE EXTENSION PROGRAM (BEYOND 40 YEARS) PHASE I REPORT (5/87)
- LICENSE EXTENDED FOR 40 YEAR OPERATING PERIOD (12/87)
- BEGAN CYCLE 13 OPERATION (12/87)

MONTICELLO NUCLEAR GENERATING PLANT

SALP SUMMARY			
BEGINNING OF PERIOD	7/83	12/84	6/86
END OF PERIOD	11/84	5/86	11/87
PLANT OPERATIONS	1	1	2
RADIOLOGICAL CONTROLS	2	1	1
MAINTENANCE	1	1	1
SURVEILLANCE	2	2	1
FIRE PROTECTION	2	1	1
EMERGENCY PREPAREDNESS	1	1	1
SECURITY AND SAFEGUARDS	1	1	2
OUTAGES	1	1	1
QUALITY PROGRAMS AND ADMINISTRATIVE CONTROLS	2	2	2
LICENSING	1	1	1
TRAINING AND QUALITY EFFECTIVENESS	NR	2	2
ENGINEERING/TECH SUPPORT	NR	NR	2

*NR - NOT RATED

CURRENT ASSESSMENT PERIOD: 12/1/87 - 5/31/89

MONTICELLO

VERIFICATION OF HIGH PRIORITY ITEMS

ISSUE NO.	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIF. DATE	REMARKS
*3. MARK I	09/85C	12/84C	06/87C	CLOSED W/O PROBLEMS
*5. RG 1.07	11/85C	11/87C	2/88C	CLOSED W/O PROBLEMS
*6. PD-E CRACKS	01/85C	06/86C	06/87C	CLOSED W/O PROBLEMS
*7. SDV	05/84C	11/82C	OPEN	INSPECTION DUE 3/88
*8. APP R	07/86C	06/86C	12/86C	CLOSED W/O PROBLEMS
*9. EQ	12/84C	11/85C	02/88C	OPEN ITEMS - REINSPECT
*10. ESF RESET	12/82C	04/81C	04/84C	CLOSED W/O PROBLEMS
*12. ATWS	12/87C	12/87C	OPEN	INSPECTION DUE 12/88

* SE USED IN INSPECTION PROCESS

P

MPAs ON EMERGENCY RESPONSE FACILITIES
THE MAN/MACHINE INTERFACE
MONTICELLO

ISSUE	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIFY COMPLETE
1.DCRDR	G7/84C*	N/A	N/A
2. TSC	1/89	01/87C	1/89
3.OSC	1/89	01/87C	1/89
4.EOF	1/89	01/87C	1/89
5. DCRDR (FOLLOWUP)	**OPEN	OPEN	OPEN

* NRC IN PROGRESS AUDIT REPORT OF DCRDR PROGRAM PLAN

** DCRDR SUMMARY REPORT SUBMITTED TO NRC -
SUPPLEMENTAL REPORT SUBMITTED 10/87

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

KEY LICENSEE PERSONNEL - NORTHERN STATES POWER

JIM HOWARD - PRESIDENT AND CEO

ROLAND J. JENSEN - SENIOR VICE PRESIDENT POWER SUPPLY

CHUCK LARSON - VICE PRESIDENT NUCLEAR GENERATION

LEON ELIASON - GENERAL MANAGER NUCLEAR PLANTS

GERRY NEILS - GENERAL MANAGER HQ NUCLEAR GROUP

DAVE MUSOLF - MANAGER NUCLEAR SUPPORT SERVICES

***W. A. SHAMLA - PLANT MANAGER**

***M. H. CLARITY - ASSISTANT TO PLANT MANAGER**

***T. PARKER - LICENSING ENGINEER**

***AT PLANT SITE**

OPERATIONS

- 6 Operating Shifts

- Most recent operator exams: 5 of 6 RO's pass

1 of 1 SRO passed

MONTICELLO NUCLEAR GENERATING CENTER
INSPECTION FINDINGS - 6/1/86 - 1/1/88

- LOSS OF CAPABILITY TO INITIATE SAFETY INJECTION OF BOTH TRAINS
OF STAND-BY LIQUID CONTROL SYSTEM FROM CONTROL ROOM
 - SEVERITY III VIOLATION, NO CIVIL PENALTY
- DEFICIENCIES IN PLANT ELECTRICAL COORDINATION STUDIES
 - TWO LEVEL III VIOLATIONS, ONE \$50,000 PENALTY
- SPECIAL INSPECTIONS:
 - SSFI TO ASSESS OPERATIONAL READINESS OF CORE SPRAY
SYSTEM - 7/87
 - TEAM INSPECTION TO REVIEW ENVIRONMENTAL QUALIFICATIONS
(10CFR50.49) OF PLANT EQUIPMENT - 10/87
- 20 SEVERITY LEVEL IV VIOLATIONS IDENTIFIED BY RESIDENT
 - 8 WERE RESULT OF CS SSFI

MONTICELLO PERFORMANCE INDICATORS

INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				0	0	0	0	2	2	1	1	
SAFETY SYSTEM ACTUATION				0	0	1	0	1	0	1	0	
SIGNIFICANT EVENTS				0	0	3	0	0	0	1	0	
SAFETY SYSTEM FAILURES				0	2	1	1	0	0	2	0	
FORCED OUTAGE RATE (%)				0	0	0	0	3	4	1	1	
EQUIPMENT FORCED OUTAGES				0	0	0	0	0.4	1	0	0.4	
HOURS CRITICAL				2190	2160	710	1949	2166	1997	2123	2198	

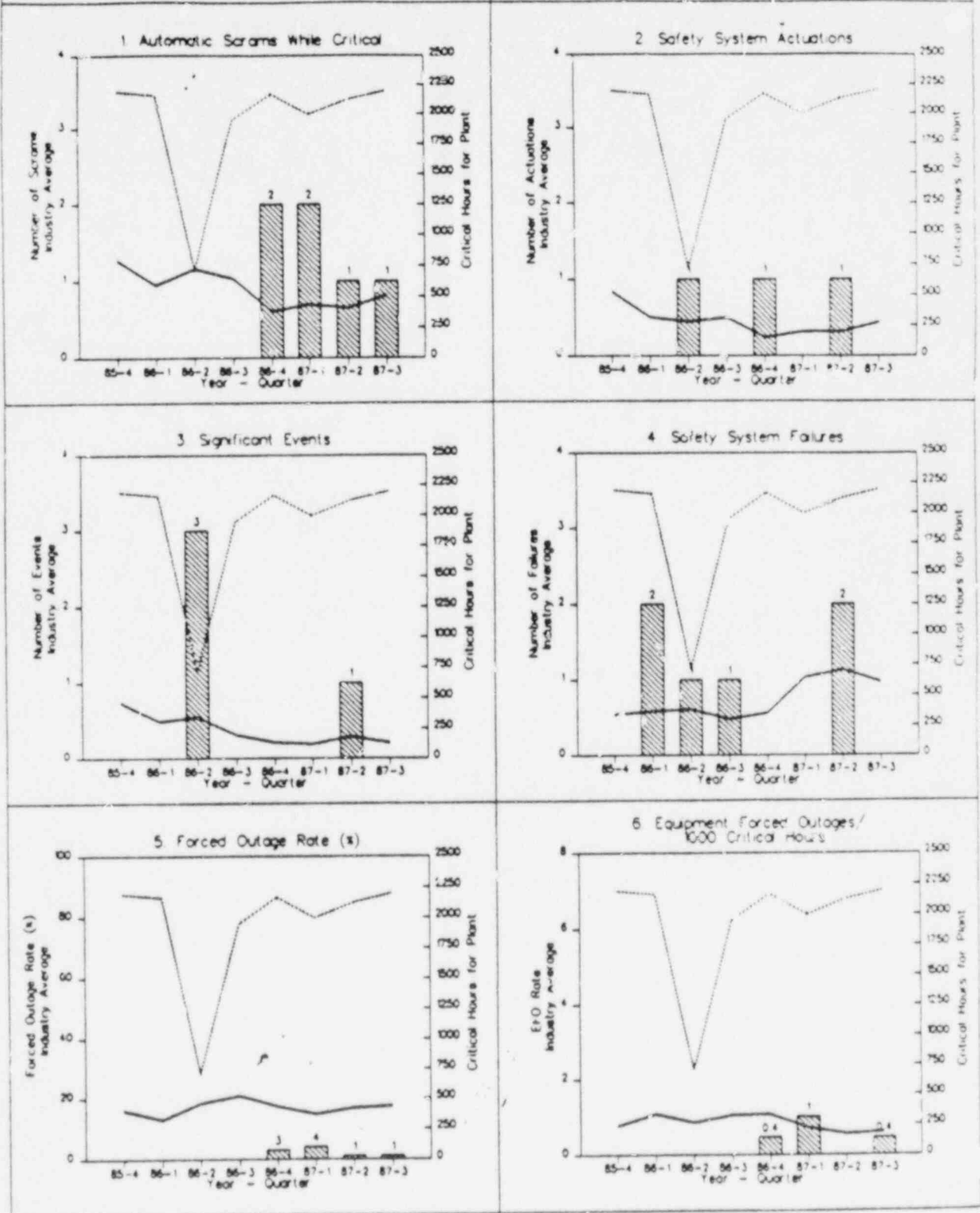
FIGURE 4.54

PREDECISIONAL**MONTICELLO**

85-4 to 87-3

Legend:

- Indicator
 Older Plant Average
 Critical Hours



MONTICELLO LICENSING ACTION STATUS

	FY 86		FY 87		FY 88	
	TOTAL	L1EX	TOTAL	L1EX	TOTAL	L1EX
ACTIONS AT BEGINNING	52	50	22	23	27	26
ACTIONS ADDED	16	1	14	12	0	0
ACTIONS COMPLETED	46	42	9	9	7	0
ACTIONS REMAINING	22	23	27	26	20	26

TOTAL = DOCKET-SPECIFIC TAC COUNT

L1EX = INPUT TO LEVEL 1 EXECUTIVE
TEAM COUNT

PRAIRIE ISLAND NUCLEAR GENERATING CENTER

DOCKET NO. 50-282 AND 50-306

- PROJECT MANAGER: DOMINIC DIANNI BACKUP: TED QUAY
- REGION III:
 - BRANCH CHIEF: WILLIAM GULDEMOND
 - SECTION CHIEF: BRUCE BURGESS
 - SENIOR RESIDENT INSPECTOR: JIM HARD
- SUMMARY
 - LICENSEE: NORTHERN STATES POWER COMPANY
 - LOCATION (SITE): REDWING MINNESOTA; 35 MILES SOUTH OF MINNEAPOLIS
 - LOCATION (GEN. OFFICES): MINNEAPOLIS, MINNESOTA
 - POPULATION: 26 MILES = 21,235 50 MILES = 2,113,533
 - REACTOR TYPE: WESTINGHOUSE - 2 LOOP
 - AE: FLUOR PIONEER, FORMERLY PIONEER SERVICES AND ENGINEERING CO.
 - CONTAINMENT: LARGE - DRY
 - POWER: 530 MWe each
 - COOLING: ONCE THROUGH - MISSISSIPPI RIVER
 - OPERATING LICENSE DATE: UNIT 1: 8/9/73 UNIT 2: 10/29/74
- PLANT STATUS
 - BOTH UNITS OPERATING IN CYCLE 12
- PLANNED OUTAGES
 - UNIT 1 REFUELING OUTAGE SCHEDULED 8/88
 - UNIT 2 REFUELING OUTAGE SCHEDULED 3/89

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
UNITS 1 AND 2

STRENGTHS

- RESPONSES TO NRC INITIATIVES ARE TECHNICALLY SOUND AND COMPLETE
- LICENSING STAFF IS KNOWLEDGEABLE IN NRC REGULATIONS AND THE
ENGINEERING ASPECTS OF THE PLANT DESIGN
- STABLE STAFF
- DEGREE PROGRAM FOR SHIFT SUPERVISORS
- CONFIGURATION CONTROL PROGRAM

WEAKNESSES

- DESIGN WEAKNESSES
 - ONLY 2 SAFETY GRADE DIESEL GENERATORS FOR BOTH UNITS -
 - *PLANS TO ADD ADDITIONAL 2 SAFETY GRADE DIESEL
GENERATORS IN 1990/91

P

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
UNITS 1 AND 2

SIGNIFICANT ISSUES

- UPGRADING OF THE TECHNICAL SPECIFICATIONS - NRR ACTION

MILESTONES

- FW PIPE REPLACEMENT IN RESPONSE TO NRC BULLETIN
- AUXILIARY FEEDWATER RELIABILITY ANALYSIS (11/'86)
- SPENT FUEL ROD CONSOLIDATION DEMONSTRATION
COMPLETED (11/13/87)
- IAEA INSPECTION (2/88) - CHOSEN AS ONE OF EIGHT WORLD
BEST OPERATING REACTORS DUE TO ON-LINE RECORD

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

SALP SUMMARY			
BEGINNING OF PERIOD	7/83	12/84	6/86
END OF PERIOD	11/84	5/86	11/87
PLANT OPERATIONS	2	2	2
RADIOLOGICAL CONTROLS	1	1	1
MAINTENANCE	1	1	1
SURVEILLANCE	2	2	1
FIRE PROTECTION	1	2	2
EMERGENCY PREPAREDNESS	1	1	1
SECURITY AND SAFEGUARDS	1	1	1
OUTAGES	1	1	1
QUALITY PROGRAMS AND			
ADMINISTRATIVE CONTROLS	2	2	2
LICENSING	1	1	1
TRAINING AND QUALIFICATION			
EFFECTIVENESS	NR	2	2

*NR - NOT RATED

CURRENT ASSESSMENT PERIOD: 12/1/87 - 5/31/89

PRAIRIE ISLAND UNITS 1 & 2

VERIFICATION OF HIGH PRIORITY ITEMS

ISSUE NO.	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIF. DATE	REMARKS
*1. RTS RELIAB.	05/85C	01/84C	10/87C	CLOSED W/O PROBLEMS
*2. EVENT V	04/81C	04/81C	OPEN	INSPECTION DUE 03/88
*4. NAT. CIRC.	07/83C	07/83C	OPEN	INSPECTION DUE 04/88
*5. RG 1.97	10/85C	06/87C	OPEN	INSPECTION DUE 07/88
*8. APP R	05/83C	05/85C	OPEN	SEVERAL OPEN ITEMS REINSPECT 7/88
*9. EQ	03/85C	08/85C	OPEN	PREVIOUS RPT - 12/86 SEVERAL OPEN ITEMS
10. ESF RESET	09/82C	03/81C	06/81C	CLOSED W/O PROBLEMS
*11. LTOP	08/79C	08/79C	OPEN	INSPECTION WILL BE COMPLETED BY 6/88
*12. ATWS	06/88	1-11/89 2-03/89	OPEN	INSPECTION SCHEDULE BEING REVIEWED

* SE USED IN INSPECTION PROCESS

P

MPAs ON EMERGENCY RESPONSE FACILITIES
THE MAN/MACHINE INTERFACE
PRAIRIE ISLAND

ISSUE	IMPOS. COMPLETE	IMPLEM. COMPLETE	VERIFY COMPLETE
1.DCRDR	10/84C	N/A	N/A
2. TSC	*	04/86C	*
3.OSC	*	04/86C	*
4.EOF	*	04/86C	*
5. DCRDR (FOLLOWUP)	**11/86C	12/90	OPEN

* INSPECTION TO BE SCHEDULED WHICH WILL COMPLETE
IMPOSITION AND VERIFICATION

** SAFETY EVALUATION BASED ON FINAL AUDIT

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

DOCKET NOS. 50-282 AND 50-308

KEY LICENSEE PERSONNEL - NORTHERN STATES POWER

JIM HOWARD - PRESIDENT AND CEO

ROLAND J. JENSEN - SENIOR VICE PRESIDENT POWER SUPPLY

CHUCK LARSON - VICE PRESIDENT NUCLEAR GENERATION

LEON ELIASON - GENERAL MANAGER NUCLEAR PLANTS

GERRY NEILS - GENERAL MANAGER HQ NUCLEAR GROUP

DAVE MUSOLF - MANAGER NUCLEAR SUPPORT SERVICES

EDWARD WATZL - PLANT MANAGER

**DAVE MANDEL - GENERAL SUPERINTENDENT OF ENGINEERING
AND RADIATION PROTECTION**

MIKE SELLMAN - GENERAL SUPERINTENDENT OF OPERATIONS

OPERATIONS

- 6 Operating Shifts per unit
- 82% pass rate on most recent operator exams
(9 of 11 SRO's passed, 11/2-12/87)

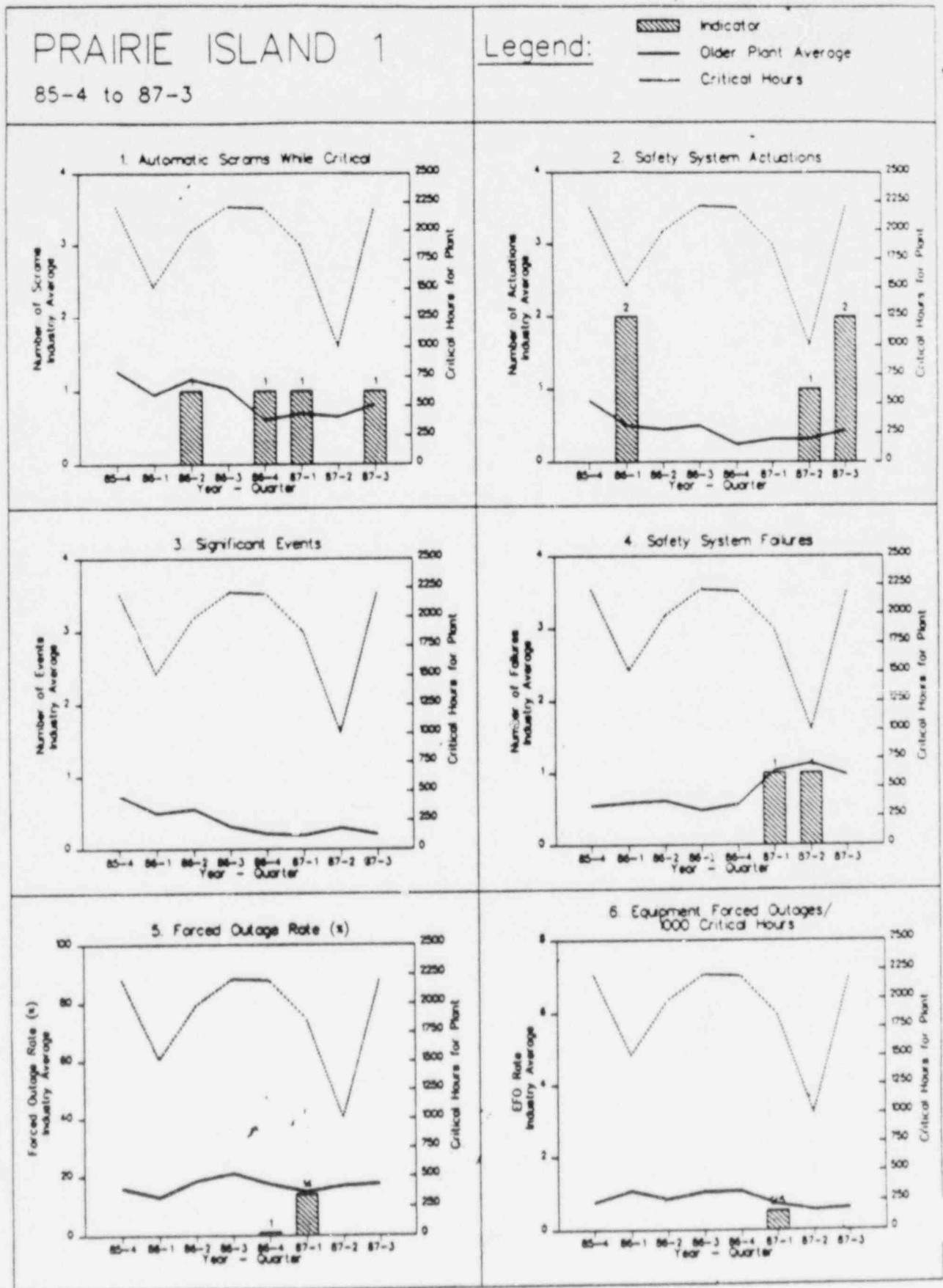
PRAIRIE ISLAND NUCLEAR GENERATING PLANT UNITS 1 & 2
INSPECTION FINDINGS - 6/1/86 - 1/1/88

- REDUCED INSPECTION PROGRAM SINCE 3/86
- FAILURE OF A SAFETY INJECTION PUMP TO START DURING TESTING (5/87):
 - CAUSED BY CIRCUIT BREAKER INCORRECTLY RACKED IN
 - A TEST PROCEDURE/TRAINING PROBLEM
 - CONDITION EXISTED FOR APPROX. 27 DAYS
 - SEVERITY III VIOLATION, CIVIL PENALTY MITIGATED 50% TO \$25,000
- FIRE PROTECTION SPECIAL INSPECTION ON APPENDIX R
IDENTIFIED 2 VIOLATIONS (3/87):
 - CIRCUIT BREAKER COORDINATION DEFICIENCIES COULD HAVE PREVENTED
OPERATION OF SAFE S/D EQUIPMENT IN THE EVENT OF A FIRE
 - EIGHT HOUR EMERGENCY LIGHTING NOT ADEQUATE FOR ALL AREAS
- RELIABILITY OF AUXILIARY FW SYSTEMS (GENERIC ISSUE 124)
 - 10/86 INSPECTION RAISED 9 NRC STAFF CONCERNS
 - CONCERNS SUBSEQUENTLY CORRECTED
- 9 SEVERITY LEVEL IV VIOLATIONS IDENTIFIED BY RESIDENT

PRAIRIE ISLAND UNIT 1 PERFORMANCE INDICATORS

INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				0	0	1	0	1	1	0	1	
SAFETY SYSTEM ACTUATION				0	2	0	0	0	0	1	2	
SIGNIFICANT EVENTS				0	0	0	0	0	0	0	0	
SAFETY SYSTEM FAILURES				0	0	0	0	0	1	1	0	
FORCED OUTAGE RATE (%)				0	0	0	0	1	14	0	0	
EQUIPMENT FORCED OUTAGES				0	0	0	0	0	0.5	0	0	
HOURS CRITICAL				2209	1512	1984	2208	2195	1874	1002	2202	

FIGURE 4.73






PRAIRIE ISLAND UNIT 2 PERFORMANCE INDICATORS

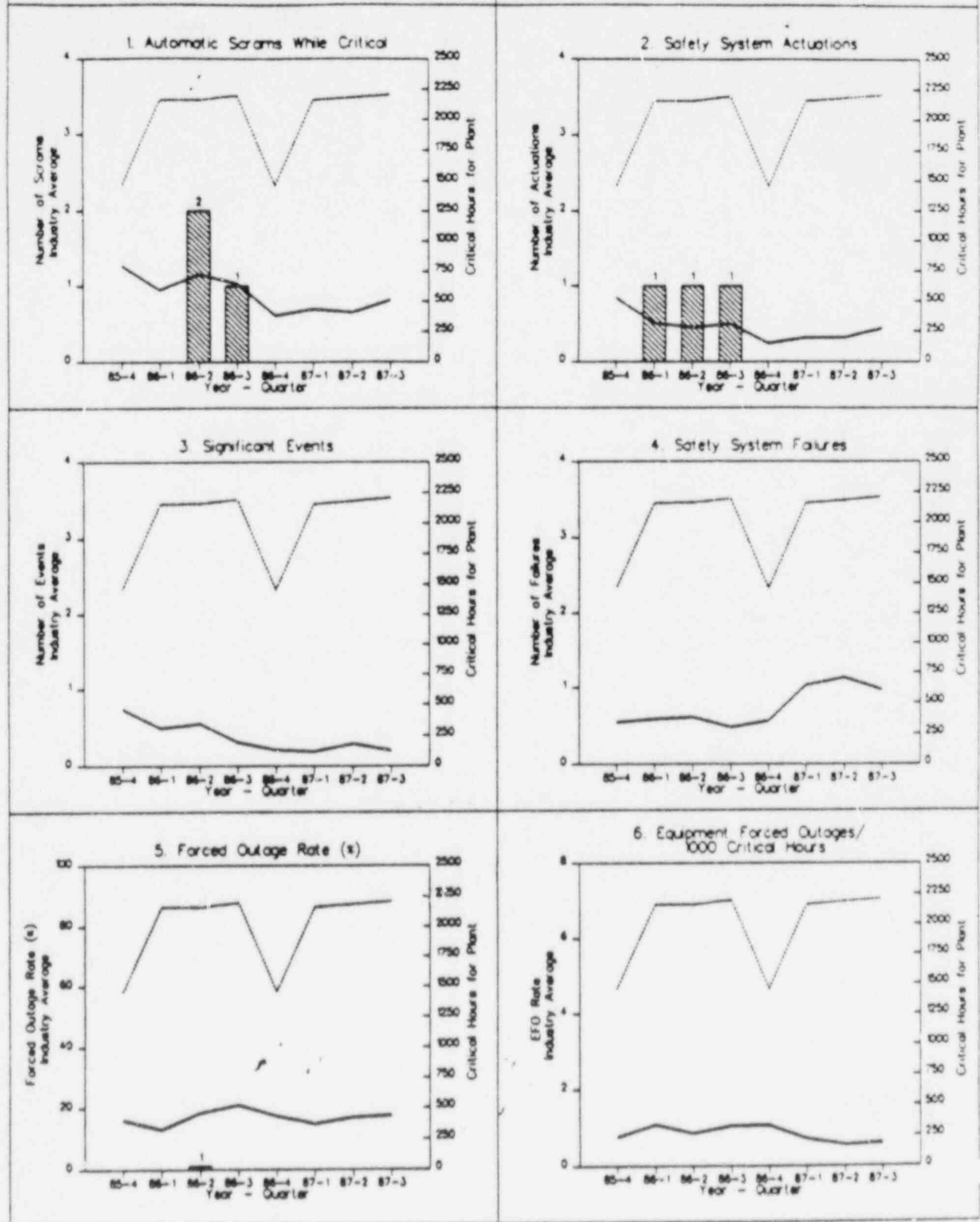
INDICATOR	19 85				19 86				19 87			
	1	2	3	4	1	2	3	4	1	2	3	4
TOTAL TRIPS				0	0	2	1	0	0	0	0	
SAFETY SYSTEM ACTUATION				0	1	1	1	0	0	0	0	
SIGNIFICANT EVENTS				0	0	0	0	0	0	0	0	
SAFETY SYSTEM FAILURES				0	0	0	0	0	0	0	0	
FORCED OUTAGE RATE (%)				0	0	1	0	0	0	0	0	
EQUIPMENT FORCED OUTAGES				0	0	0	0	0	0.5	0	0	
HOURS CRITICAL				1457	2160	2161	2196	1455	2160	2183	1360	

PRAIRIE ISLAND 2

85-4 to 87-3

Legend:

-  Indicator
 Older Plant Average
 Critical Hours



PRAIRIE ISLAND LICENSING ACTION STATUS (UNIT 1/2)

	FY 86		FY 87		FY 88	
	TOTAL	L1EX	TOTAL	L1EX	TOTAL	L1EX
ACTIONS AT BEGINNING	21/26	11/25	13/15	13/14	10/11	9/9
ACTIONS ADDED	10/9	10/9	8/8	7/7	2/2	0/0
ACTIONS COMPLETED	18/20	18/20	11/12	11/12	2/2	2/2
ACTIONS REMAINING	13/15	13/14	10/11	9/9	10/11	7/7

TOTAL = DOCKET-SPECIFIC TAC COUNT

L1EX = INPUT TO LEVEL 1 EXECUTIVE

TEAM COUNT