

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

INSPECTION REPORT

No. 50-255/96006(DRS)

FACILITY

Palisades Nuclear Generating Plant

LICENSEE

Palisade Nuclear Generating Plant
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

DATE

June 21, 1996

INSPECTORS

E. Cobey, Reactor Inspector

APPROVED BY

Ronald N. Gardner

R. N. Gardner, Chief
Engineering Branch 2

6/26/96

Date

Meeting Summary

Enforcement Conference on June 21, 1996 (Report No. 50-255/96006(DRS))

Areas Discussed: Apparent violations identified during the inspection were discussed, along with corrective actions taken or planned by the licensee. The apparent violations involved (1) the failure to provide an operable alternative or dedicated shutdown capability where systems required for hot shutdown were not protected, and (2) the failure to promptly identify and take effective corrective actions for several significant fire protection conditions adverse to quality.

DETAILS

I. Persons Present at Conference

Consumers Power Company

D. Joos, Chief Operating Officer, Electric
R. Fenech, Vice President, Nuclear
K. Powers, Nuclear Services Manager
T. Palmisano, Plant Manager
D. Smedley, Licensing Manager
H. Linsinbigler, Design Engineering Manager
D. Fadel, System Engineering Manager
K. Toner, Acting Manager Nuclear Performance Assessment Department
D. Crabtree, Safety and Design Review Supervisor
R. Brzezinski, Electrical Design Engineering Supervisor
B. VanWagner, System Engineering, Balance of Plant Supervisor
S. Wawro, Planning, Scheduling, and Construction Manager
R. Vincent, Licensing Supervisor
G. Sleeper, Operations Support Coordinator
S. Oakley, Operations Support Coordinator
R. Philips, System Engineering
D. Crane, System Engineering
G. Jarka, Nuclear Fuels
D. Leone, Sargent & Lundy Project Director
J. Tilton, Electrical/I&C Engineering Supervisor (Big Rock Point)

U. S. Nuclear Regulatory Commission

A. Beach, Deputy Regional Administrator, RIII
G. Grant, Director, Division of Reactor Safety, RIII
B. Burgess, Enforcement Officer, RIII
R. Gardner, Chief, Engineering Branch 2, RIII
E. Cobey, Regional Inspector, RIII
P. Pelke, Enforcement Specialist, RIII
P. Madden, Senior Fire Protection Engineer, NRR
T. Polich, Acting Chief, Reactor Projects Branch 3, RIII
M. Parker, Palisades Senior Resident Inspector
R. Lerch, Regional Inspector, RIII
C. Osterholtz, Operator Licensing, RIII
F. Reinhart, Acting Project Directorate III-1, NRR
B. Schaaf, Project Manager, NRR
J. Beall, Office of Enforcement
M. Rafky, Office of General Counsel

II. Enforcement Conference

An enforcement conference was held in the NRC Region III office on June 21, 1996. This conference was conducted as a result of the findings of an inspection conducted from March 18 through April 29, 1996, in which apparent violations of NRC regulations were identified. Inspection findings were documented in Inspection Report No. 50-255/96004(DRS) transmitted to the licensee by letter dated May 20, 1996.

The purpose of this conference was to discuss the violations, root causes, contributing factors, and the licensee's corrective actions.

During the enforcement conference, the licensee acknowledged the violations. The licensee's presentation included some new information, a synopsis of the issues, investigation results, safety significance, and corrective actions. A copy of the licensee's handout is attached to this report.

Attachment: As stated

PALISADES



NUCLEAR PLANT

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

June 21, 1996



PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****AGENDA**

INTRODUCTION AND OVERVIEW OF PRESENTATION	RA FENECH
FIRE PROTECTION ENHANCEMENT PROGRAM	TJ PALMISANO
DISCUSSION OF VIOLATIONS	DP FADEL
VIOLATION 1 - TWO EXAMPLES	
VIOLATION 2 - FIVE EXAMPLES	
GENERIC MANAGEMENT IMPLICATIONS FOR OTHER PROGRAMS	KP POWERS
ENFORCEMENT POLICY IMPLICATIONS	RW SMEDLEY
CLOSING COMMENTS	RA FENECH

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

MANAGEMENT PERSPECTIVES

- HISTORICAL CONTEXT — PREVIOUS FIRE PROTECTION INITIATIVES NOT FULLY EFFECTIVE

- CURRENT PALISADES FIRE PROTECTION ENHANCEMENT PROGRAM
 - IDENTIFIED ISSUES
 - DID NOT CLOSE ISSUES AS QUICKLY AS WE COULD HAVE
 - IMPACTED BY FIRE TOUR MIND SET
 - CORRECTIVE ACTIONS
 - ORGANIZATIONAL CHANGES

- QUESTIONS REGARDING RESOURCES
 - COMMITTED TO ASSURE RESOURCES AVAILABLE TO SAFELY OPERATE PALISADES

- QA ACTIONS

- LESSONS LEARNED INTEGRATED INTO OTHER PROJECTS

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****FIRE PROTECTION ENHANCEMENT PROGRAM****OVERVIEW OF VIOLATIONS IDENTIFIED IN REVIEW OF PROGRAM**

- NRC IDENTIFIED TWO VIOLATIONS FOR ESCALATED ENFORCEMENT CONSIDERATION
 - VIOLATION 1:

FAILURE TO PROVIDE AN OPERABLE ALTERNATE OR DEDICATED SHUTDOWN CAPABILITY WHERE SYSTEMS REQUIRED FOR HOT SHUTDOWN WERE NOT PROTECTED
 - ALTERNATE SHUTDOWN PANEL INOPERABLE
 - INADEQUATE DIESEL GENERATOR CIRCUIT FUSE COORDINATION
 - VIOLATION 2:

FAILURE TO PROMPTLY IDENTIFY AND TAKE EFFECTIVE CORRECTIVE ACTIONS FOR SEVERAL SIGNIFICANT FIRE PROTECTION CONDITIONS ADVERSE TO QUALITY
 - FIVE EXAMPLES
- CPCO ADMITS BOTH VIOLATIONS — HOWEVER, ADDITIONAL INFORMATION TO BE PROVIDED
- UNDERLYING ISSUES IN MOST EXAMPLES OF VIOLATIONS 1 AND 2 ARE OLD EMBEDDED DESIGN ISSUES WITH A COMMON CAUSE:
 - INADEQUATE ORIGINAL APPENDIX R ANALYSES (1980s)
- UNDERLYING CONDITIONS WERE IDENTIFIED DURING CPCO'S FIRE PROTECTION ENHANCEMENT PROGRAM

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****FIRE PROTECTION ENHANCEMENT PROGRAM****BACKGROUND**

- STARTED IN JUNE 1994 IN RESPONSE TO CPCO AUDIT AND DET
- SCOPE: APPENDIX R (SAFE SHUTDOWN ISSUES)
- REVIEWS BEGAN IN LATE SUMMER 1994
- PREEMPTIVE FIRE TOURS INSTITUTED AT THAT TIME
- SCHEDULE PROVIDED TO NRC IN DEC. 1994 AND NOV. 1995:
 - SCHEDULE
 - REVIEWS TO BE COMPLETED BY JUNE 1996
 - MODIFICATIONS TO BE COMPLETED BY 8/97 (1997 REFUELING OUTAGE NOW RESCHEDULED TO 1998)
 - CURRENT STATUS
 - REVIEWS TO BE COMPLETED IN JUNE 1996 (USE OF NEW METHODOLOGY BEGINS SUMMER 1996)
 - ANTICIPATE COMPLETION OF MODIFICATIONS DURING 1996 REFUELING OUTAGE IF PRACTICAL, 1998 REFUELING OUTAGE AT LATEST
- KEPT STAFF INFORMED OF SCOPE, PROGRESS AND FINDINGS
- FIRST IN A SERIES OF REVIEWS TO UPGRADE PROGRAMS AT PALISADES

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****FIRE PROTECTION ENHANCEMENT PROGRAM****PROGRAM FINDINGS AND STATUS**

- ANALYZED ABOUT 2200 CIRCUITS AND 450 SAFE SHUTDOWN COMPONENTS

- PROBLEMS IDENTIFIED RESULTED IN 36 CORRECTIVE ACTIONS (SOME WITH MULTIPLE PARTS):
 - 25 COMPLETED
 - REMAINDER SCHEDULED TO BE COMPLETED IN 1996

- 9 LERs ISSUED (5 FOLLOWED UP 50.72 PHONE CALL REPORTS)

- TO VALIDATE PROGRAM, MID-COURSE AUDIT (OCT 1995) AND VERTICAL SLICE (MAY 1996) CONDUCTED:
 - INDEPENDENT EFFORTS — AUDIT (ANATEC); VERTICAL SLICE (S&L)
 - ASSESSED APPENDIX R AND "CLASSICAL" FIRE PROTECTION
 - FINDINGS VALIDATED ENHANCEMENT PROGRAM EFFORTS

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****FIRE PROTECTION ENHANCEMENT PROGRAM****PROGRAMMATIC CAUSES AND RELATED CORRECTIVE ACTIONS**

CAUSES FOR PROBLEMS IDENTIFIED IN ENHANCEMENT PROGRAM
GENERALLY CATEGORIZED AS FOLLOWS:

- PRIOR TO 1994, MANAGEMENT WEAKNESSES RESULTED IN:
 - INADEQUATE APPENDIX R COMPLIANCE EFFORTS
 - INADEQUATE APPENDIX R SELF-ASSESSMENTS
 - INADEQUATE MAINTENANCE OF THE APPENDIX R PROGRAM

CORRECTIVE ACTIONS: REASON FOR THE PROGRAMMATIC REVIEW —
FIRE PROTECTION ENHANCEMENT PROGRAM

- PREEMPTIVE FIRE TOUR STRATEGY LED TO "MIND SET" THAT MINIMIZED
CONSIDERATION OF ADDED COMPENSATORY MEASURES OR
ACCELERATION OF CORRECTIVE ACTIONS
 - RELIANCE ON FIRE TOURS BASED ON INDUSTRY EXPERIENCE
 - "MIND SET" NOT QUESTIONED — LIKELY DUE TO "GROUP THINK"

CORRECTIVE ACTIONS: REVIEWED ALL OPEN CONDITION REPORTS FOR
ADEQUACY — TOOK SOME ADDITIONAL COMPENSATORY MEASURES
AND ACCELERATED SOME CORRECTIVE ACTIONS. "GROUP THINK"
TRAINING TO BE GIVEN TO MANAGERS

- LACK OF SECOND TECHNICAL REVIEW OF SOME CORRECTIVE ACTIONS
CAUSED SOME INCONSISTENCY IN QUALITY

CORRECTIVE ACTIONS: REVIEWED ALL CORRECTIVE ACTIONS FOR
ADEQUACY AND TO ASSURE APPROPRIATE REVIEW — ADDITIONAL
ACTIONS INSTITUTED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****FIRE PROTECTION ENHANCEMENT PROGRAM****PROGRAMMATIC CAUSES AND RELATED CORRECTIVE ACTIONS**

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CORRECTIVE ACTIONS: REVIEWED ALL OPEN CONDITION REPORTS FOR ADEQUACY — TOOK SOME ADDITIONAL COMPENSATORY MEASURES AND ACCELERATED SOME CORRECTIVE ACTIONS. "GROUP THINK" TRAINING TO BE GIVEN TO MANAGERS

- LACK OF SECOND TECHNICAL REVIEW OF SOME CORRECTIVE ACTIONS CAUSED SOME INCONSISTENCY IN QUALITY

CORRECTIVE ACTIONS: REVIEWED ALL CORRECTIVE ACTIONS FOR ADEQUACY AND TO ASSURE APPROPRIATE REVIEW — ADDITIONAL ACTIONS INSTITUTED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****FIRE PROTECTION ENHANCEMENT PROGRAM****IMPLICATIONS OF FINDINGS FOR OTHER FIRE PROTECTION ISSUES**

- "CLASSICAL" FIRE PROTECTION ISSUES AUDITED MANY TIMES BY CPCO AND NRC — FAVORABLE RESULTS (LIMITED NUMBER OF DEFICIENCIES IDENTIFIED)

- ACCORDINGLY, APPENDIX R ENHANCEMENT PROGRAM DID NOT ADDRESS "CLASSICAL" FIRE PROTECTION ISSUES

- UNDER PROGRAM AND IN VERTICAL SLICE, IDENTIFIED SEVERAL PROBLEMS ASSOCIATED WITH "CLASSICAL" FIRE PROTECTION ISSUES, E.G. QUESTIONS REGARDING FIRE AREA BOUNDARIES AND DAMPERS

- IN RESPONSE, CPCO PLANNING FURTHER REVIEW OF THIS AREA — WILL KEEP NRC INFORMED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 1: ALTERNATE SHUTDOWN PANEL (C-150)**

- EXPLANATION OF "NORMAL" SHUTDOWN USING ALTERNATE SHUTDOWN PANEL AND DESCRIPTION OF CONFIGURATION (SEE OUTLINE OF ACTIONS AND DIAGRAM ON FOLLOWING THREE PAGES)
- INOPERABLE INVERTER DISCOVERED IN SEPTEMBER 1995 DURING SURVEILLANCE TEST
- CAUSED BY FAILED ALARM BOARD
 - REPLACED WITHIN 7-DAY LCO PERIOD
 - REPLACEMENT LOW VOLTAGE CUT-OFF SET TO MINIMUM
- DID NOT RECOGNIZE FIRE PROTECTION SIGNIFICANCE OF FAILURE FOR PAST OPERABILITY OF THE INVERTER. CPCO DISCARDED FAILED BOARD AFTER TAKING SEVERAL READINGS (DISCUSSED LATER)
- IN JANUARY 1996, CPCO UNCOVERED "OPERABILITY" ISSUE DURING SYSTEMATIC REVIEW
- REPORTED CONDITION IN LER 96-003. LER NOTED THAT:
 - INVESTIGATION CONTINUING
 - LOW VOLTAGE SET POINT MAY HAVE BEEN INCORRECTLY SET, POTENTIALLY CAUSING LOSS OF ALTERNATE SHUTDOWN PANEL DURING CERTAIN FIRES

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 1: EXPLANATION OF "NORMAL" SHUTDOWN USING THE ALTERNATE SHUTDOWN PANEL (C-150)**

- **CONDITION: FIRE IN CABLE SPREADING ROOM INCLUDING AN ASSUMED LOSS OF OFFSITE POWER**
- **SHORT TERM CONSIDERATIONS:**
 - **INITIAL CONCERN IS TO SHUT DOWN REACTOR**
 - **MANUALLY TRIP IF AUTOMATIC TRIP DID NOT OCCUR**
 - **ACTIONS FOR DECAY HEAT REMOVAL**
 - **STEAM DRIVEN AFW PUMP STARTS AUTOMATICALLY ON LOSS OF DC; OR, IF NO AUTO START, PUMP WOULD BE STARTED FROM C-150 ALTERNATE SHUTDOWN PANEL**
 - **C-150 ENERGIZED. AUX FEED ESTABLISHED AND CONTROLLED FROM C-150**
 - **DECAY HEAT REMOVED THEREAFTER BY AFW PUMP STEAM SUPPLY IN COMBINATION WITH THE HOGGING AIR EJECTOR AND/OR SECONDARY SAFETY VALVES**
 - **TO RESTORE AC POWER, DIESEL GENERATOR 1-1 IS STARTED AND TENDED LOCALLY, AND BREAKERS ARE CLOSED LOCALLY**
 - **ACTIONS FOR PCS TEMPERATURE AND PRESSURE CONTROL**
 - **CHARGING PUMP STARTED LOCALLY FOR PCS INVENTORY CONTROL**
 - **PCS BORON INJECTION NOT NEEDED FOR >20 HOURS**

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10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1 - EXAMPLE 1: EXPLANATION OF "NORMAL" SHUTDOWN USING THE ALTERNATE SHUTDOWN PANEL (CONT'D)

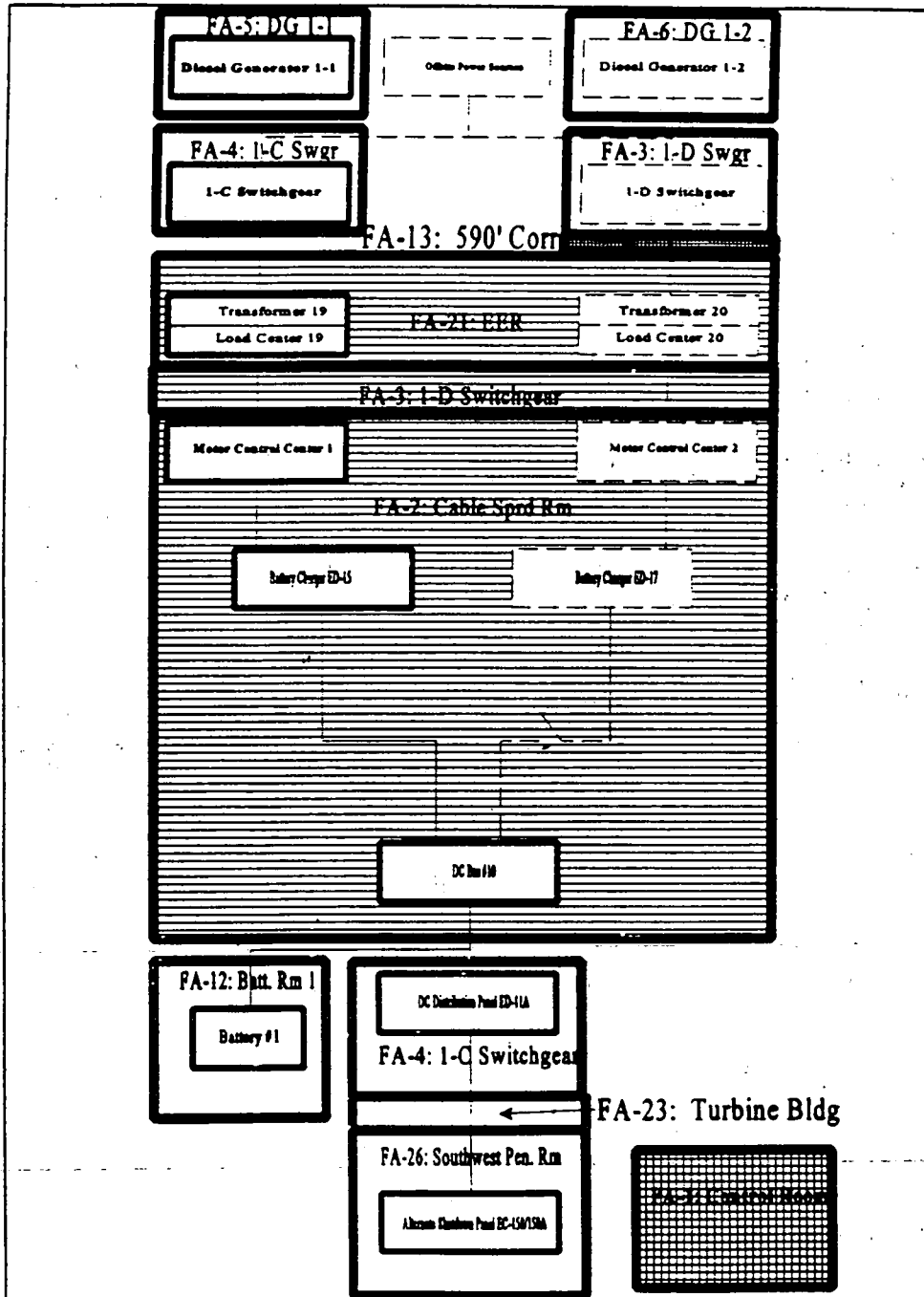
- FOLLOW UP ACTIONS
 - USE C-150 CONTROL AND INDICATION TO THROTTLE AFW FLOW TO MAINTAIN S/G LEVELS (MATCH DECAY HEAT)
 - CONTINUE REMOVING DECAY HEAT, FEEDING S/Gs, AND MAKING UP TO THE PCS INDEFINITELY UNTIL COLD SHUTDOWN REPAIRS COMPLETED. THEN INITIATE COOLDOWN

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1 - EXAMPLE 1: DIAGRAM OF IMPACTED FIRE AREAS



PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 1: SUBSEQUENT INVESTIGATION****WHAT VALUE WAS THE LOW VOLTAGE CUT-OFF SET TO?**

- ACCORDING TO C-150 PANEL INVERTER SUPPLIER, "THE LOW VOLTAGE CUT-OFF SET POINT ADJUSTMENT WOULD HAVE BEEN FACTORY PRESET AND TESTED TO THE VALUE SPECIFIED IN THE [VENDOR] MANUAL, 105 VDC, PRIOR TO SHIPMENT."
- C-150 PANEL FABRICATOR RECEIVED AND INSTALLED THE INVERTER WITHOUT TESTING OR ADJUSTMENT
- PALISADES INSTALLED THE COMPLETED C-150 PANEL WITHOUT TESTING OR ADJUSTING THE SET POINT
- AFTER INSTALLATION, NO RECORD OF EVER CHANGING OR ADJUSTING THE SETTING, OR OF ANY PREVIOUS DAMAGE OR FAILURE OF THE INVERTER
- REASONABLE CONCLUSION — C-150 PANEL LOW VOLTAGE CUT-OFF SET POINT WAS CORRECTLY SET BY SUPPLIER IN ACCORDANCE WITH MANUAL AND REMAINED AT CORRECT 105 VDC SETTING.

DO READINGS FROM FAILED BOARD REFLECT LOW VOLTAGE CUT-OFF?

- CAUSE OF C-150 PANEL FAILURE WAS DEFECTIVE INVERTER ALARM LOGIC BOARD. BOARD WAS REPLACED AS A UNIT
- INPUT VERSUS OUTPUT READINGS WERE TAKEN ON THE FAILED INVERTER AND SEEMED TO INDICATE A LOW VOLTAGE CUT-OFF AT 120 VDC (SEE DIAGRAM ON PAGE 13)

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 1: SUBSEQUENT INVESTIGATION (CONT'D)**

- HOWEVER, INVERTER VENDOR STATED "A DETERMINATION OF THE ORIGINAL LOW VOLTAGE CUT-OFF SET POINT CANNOT RELIABLY BE MADE, WHILE ADJUSTING THE INPUT VOLTAGE TO THE INVERTER AND MEASURING THE INPUT VOLTAGE LEVEL AT WHICH THE INVERTER SHUTS DOWN, IF THE ALARM LOGIC BOARD INSTALLED IN THE INVERTER IS DEFECTIVE."
- THEREFORE, THE MEASURED INVERTER CUT-OFF VOLTAGE DOES NOT PROVIDE RELIABLE INDICATION OF THE TRUE LOW VOLTAGE CUT-OFF SET POINT

HOW LONG WAS THE INVERTER INOPERABLE?

- INVERTER LAST NOTED AS BEING OPERABLE DURING AUGUST 10, 1995 SURVEILLANCE
- INVERTER NOT POWERED AGAIN UNTIL SEPTEMBER 27, 1995 SURVEILLANCE WHEN FAILURE DETECTED
- CONCLUSION — BOARD LIKELY FAILED WHEN POWERED FOR SURVEILLANCE OF SEPTEMBER 27, 1995
- BOARD WAS DECLARED OPERABLE AFTER REPAIR ON OCTOBER 2, 1995, WITHIN THE 7-DAY LCO PERIOD. ACCORDINGLY, BOARD AND INVERTER LIKELY OUT OF SERVICE FOR <5 DAYS

OVERALL CONCLUSION

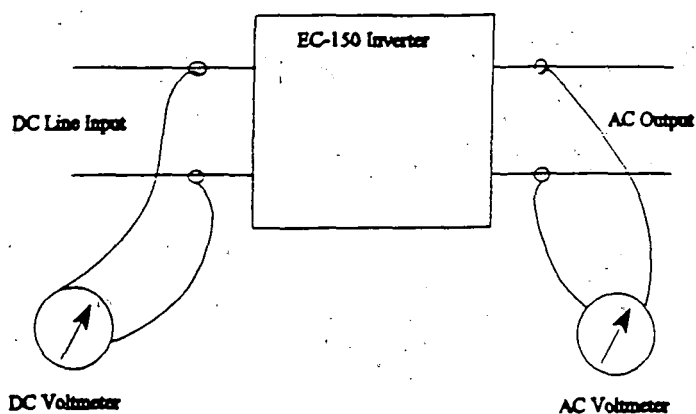
- THE C-150 PANEL WOULD HAVE PERFORMED AS INTENDED UPON LOSS OF THE BATTERY CHARGERS EXCEPT DURING "SHORT" PERIOD OF FAILED BOARD

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1 - EXAMPLE 1: FAILED INVERTER "READINGS"



DC Voltmeter Reading	AC Voltmeter Reading
128.54 VDC	120.84 VAC
127.60 VDC	121.31 VAC
126.62 VDC	121.34 VAC
124.80 VDC	121.21 VAC
123.81 VDC	120.95 VAC
122.88 VDC	120.34 VAC
121.82 VDC	119.65 VAC
121.29 VDC	119.42 VAC
Approx 120 VDC	0 VAC

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10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1 - EXAMPLE 1: SIGNIFICANT CAUSES

DURING INITIAL INSTALLATION OF ALTERNATE SHUTDOWN PANEL IN EARLY 1980s, DID NOT VERIFY OR TEST OPERABILITY OF PANEL WHEN POWERED FROM BATTERIES ALONE, OR ESTABLISH PERIODIC SURVEILLANCE FOR THIS CONDITION

- CORRECTIVE ACTIONS AND SCHEDULE:

- CONFIRMED ACCEPTABLE LOW VOLTAGE CUT-OFF VALUE
- ESTABLISHED PERIODIC SURVEILLANCE

E
D

FAILURE TO IDENTIFY THIS ISSUE AS A RESULT OF GE SERVICE INFORMATION LETTER IN JUNE 1985

- CORRECTIVE ACTIONS AND SCHEDULE:

- IN RESPONSE TO 1995 CHP TRIP ISSUE, INDUSTRY EXPERIENCE INFORMATION NOW RECEIVES SYSTEM ENGINEERING REVIEW
- REVIEW OF PAST INDUSTRY INFORMATION IS BEING FACTORED INTO OTHER PROGRAM REVIEWS

FAILURE TO RECOGNIZE THE SIGNIFICANCE OF LOW VOLTAGE CUT-OFF SET POINT FOR PAST OPERABILITY OF PANEL IN SEPTEMBER 1995. SET POINT WAS RESET ON REPLACEMENT BOARD TO MINIMUM WITHOUT EVALUATION.

- CORRECTIVE ACTIONS AND SCHEDULE:

- SET POINT HAS BEEN RESET
- LESSONS LEARNED TRAINING PRIOR TO NOVEMBER 1996 OUTAGE

F

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1 - EXAMPLE 2: EDG FUSE COORDINATION

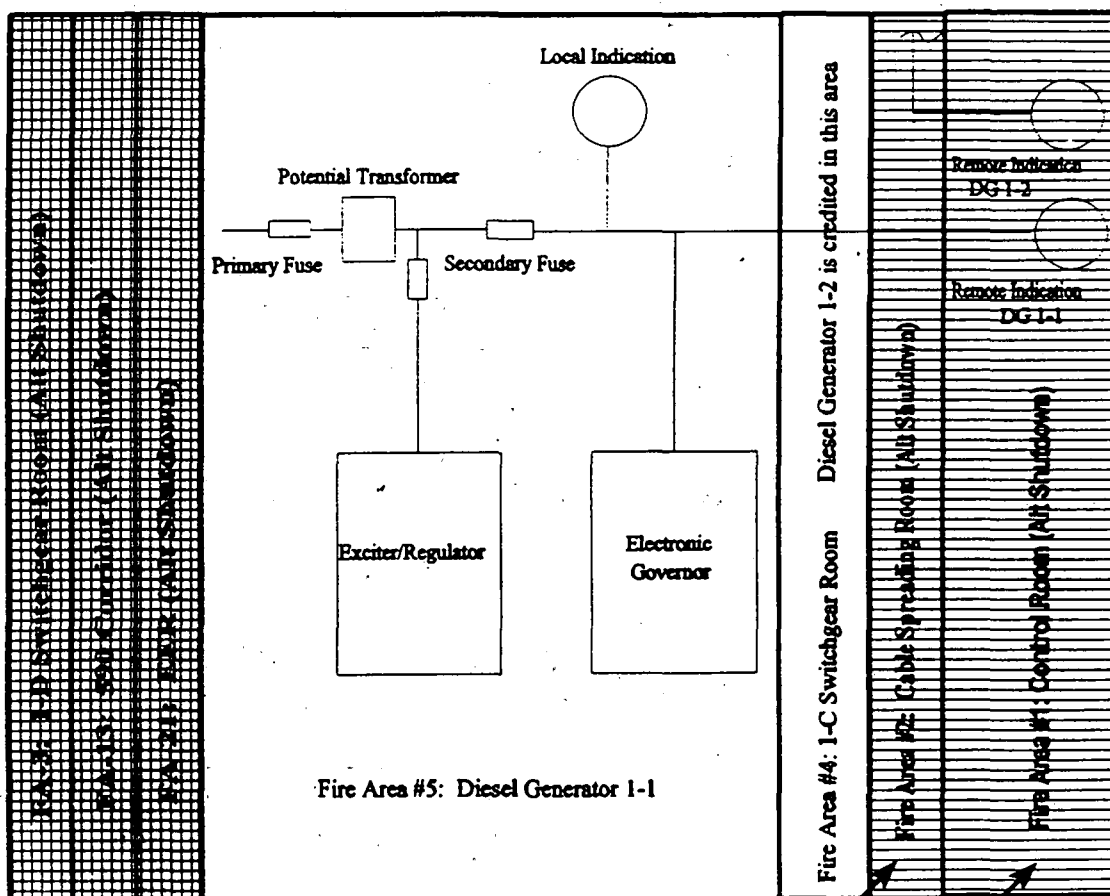
- DESCRIPTION OF CONFIGURATION (SEE DIAGRAM ON FOLLOWING PAGE)
- PROBLEM WAS IDENTIFIED IN NOVEMBER 1995 BY CPCO DURING REVIEW OF ASSOCIATED CIRCUIT ANALYSES
- REAFFIRMED PRESENCE OF COMPENSATORY MEASURES
- ALERTED OPERATORS TO CONDITION
- REPORTED CONDITION TO THE NRC IN LER 96-013

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1 - EXAMPLE 2: DIAGRAM OF EDG CONFIGURATION



A fire occurring in either of these two rooms could cause a loss of both DG1-1 and DG 1-2

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 2: SIGNIFICANT CAUSES**

- INITIAL APPENDIX R COMPLIANCE ISSUE — ORIGINAL APPENDIX R ANALYSIS DID NOT RIGOROUSLY VERIFY FULL COORDINATION
 - CORRECTIVE ACTION AND SCHEDULE:
 - NEW CALCULATION PERFORMED

- WHILE TRAINING WAS PROVIDED TO OPERATORS, MORE PERMANENT MEASURES (E.G., PROCEDURE CHANGE) NOT TAKEN WHILE MOD WAS PENDING — IMPACTED BY FIRE TOUR "MIND SET"
 - CORRECTIVE ACTIONS AND SCHEDULE:
 - REINFORCED TO OPERATORS THE GUIDANCE PREVIOUSLY GIVEN
 - ACCELERATED MODIFICATION COMPLETION
 - REVIEWED ALL OUTSTANDING CONDITION REPORTS TO ASSURE ADEQUATE COMPENSATORY MEASURES

- FAILURE TO ACCELERATE FUSE REPLACEMENT IN VIEW OF THE POTENTIAL SAFETY SIGNIFICANCE — IMPACTED BY FIRE TOUR "MIND SET"
 - CORRECTIVE ACTION AND SCHEDULE:
 - FUSE REPLACED ON JUNE 3, 1996 (ACCELERATED FROM JULY 1996)
 - REVIEWED ALL OUTSTANDING CORRECTIVE ACTIONS FOR ACCELERATION POTENTIAL (3 ACCELERATED)

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 2: SIGNIFICANCE OF ISSUE**

- ACTUAL SAFETY SIGNIFICANCE — LOW
 - OF THE NUMEROUS FIRE AREAS WHERE CREDIT IS GIVEN FOR USE OF EDG 1-1, ONLY 2 AREAS (2 ROOMS) IMPACTED BY PROBLEM
 - PROBABILITY OF DAMAGING FIRE IS LOW:
 - LOW TO MODERATE FIRE LOAD
 - DETECTION AND AUTOMATIC SUPPRESSION (EXCEPT NO AUTOMATIC SUPPRESSION IN CONTROL ROOM — CONTINUOUSLY MANNED)
 - FIRE TOURS (SINCE LATE SUMMER 1994)
 - REQUIRES MULTIPLE AND SELECTIVE FAILURES
 - EVEN IF DAMAGING FIRE AND LOSS OF EDGs:
 - IF LOW VOLTAGE CUT-OFF FOR THE ALTERNATE SHUTDOWN PANEL WERE CORRECTLY SET (AS IS PROBABLE), BATTERIES WOULD HAVE PROVIDED DC POWER FOR OVER 72 HOURS. REVIEW CONCLUDES AC POWER COULD BE RECOVERED IN 3-5 HOURS
 - IF LOW VOLTAGE CUT-OFF WERE INCORRECTLY SET, OPERATORS WOULD HAVE MAINTAINED LOCAL CONTROL OF AFW. WITH AFW, PLANT COULD ACHIEVE AND MAINTAIN SAFE SHUTDOWN:
 - FOR ~8 HOURS WITHOUT OPERATOR ACTION (AFW STARTING VERIFIED)
 - FOR OVER 20 HOURS WITH MINIMAL ACTIONS
 - POWER RESTORATION — 3 - 5 HOURS
 - DISCUSSION OF ACTIONS ON NEXT TWO PAGES

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 2: DISCUSSION OF SHUTDOWN ACTIONS**

- **CONDITION: FIRE IN CABLE SPREADING ROOM (BOUNDING CASE) WHICH CAUSES LOSS OF OFFSITE POWER AND BOTH DIESEL GENERATORS, COUPLED WITH ASSUMED FAILURE OF C-150 ALTERNATE SHUTDOWN PANEL**

- **SHORT TERM CONSIDERATIONS:**
 - **INITIAL CONCERN IS TO SHUT DOWN REACTOR**
 - **MANUALLY TRIP IF AUTOMATIC TRIP DID NOT OCCUR**

 - **ACTIONS FOR DECAY HEAT REMOVAL:**
 - **STEAM DRIVEN AFW PUMP STARTS AUTOMATICALLY ON LOSS OF DC; OR, IF NO AUTO START, PUMP WOULD BE STARTED LOCALLY**

 - **FULL AFW FLOWS TO S/Gs WITHOUT OPERATOR ACTION**

 - **DECAY HEAT REMOVED, THEREAFTER, WITHOUT OPERATOR ACTION BY AFW PUMP STEAM SUPPLY IN COMBINATION WITH SECONDARY SAFETY VALVES**

 - **HOGGING AIR EJECTOR MAY ALSO BE USED TO RELEASE STEAM WITH OPERATOR ACTION BUT NOT REQUIRED**

 - **ACTIONS FOR PCS TEMPERATURE AND PRESSURE CONTROL**
 - **PCS INVENTORY INITIALLY STABLE (PCS TEMPERATURE CONTROLLED BY S/G SATURATION TEMPERATURE) WITHOUT OPERATOR ACTION**

 - **PCS MAKEUP FOR INVENTORY OR REACTIVITY CONTROL NOT NEEDED FOR >20 HOURS**

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 1 - EXAMPLE 2: DISCUSSION OF SHUTDOWN ACTIONS (CONT'D)**

- WITH NO ADDITIONAL OPERATOR ACTION, CAN REMAIN IN THIS CONDITION FOR ~3 HOURS UNTIL S/Gs OVERFILL — THEN ANOTHER ~5 HOURS WITH AFW PUMP ASSUMED UNAVAILABLE UNTIL S/G INVENTORY DEPLETED
- IF ADDITIONAL MEANS ARE PROVIDED TO MONITOR S/G LEVEL, AND AFW FLOW IS THROTTLED TO MATCH DECAY HEAT (USING EXISTING MECHANICAL FLOW INDICATION), TIME CAN BE EXTENDED TO >20 HOURS BEFORE ADDITIONAL OPERATOR ACTION NEEDED
- FOLLOW UP ACTIONS:
 - C-150 REPAIRS REASONABLY EXPECTED WITHIN 3-5 HOURS OR ALTERNATE PCS AND S/G INDICATION COULD REASONABLY BE PROVIDED
 - RESTORATION OF DIESEL GENERATOR (OR OFFSITE) AC POWER REASONABLY EXPECTED WITHIN 3-5 HOURS TO PERMIT VITAL EQUIPMENT RECOVERY
 - CONTINUE REMOVING DECAY HEAT, FEEDING S/Gs AND MAKING UP TO THE PCS INDEFINITELY — UNTIL COLD SHUTDOWN REPAIRS COMPLETED. THEN PROCEED TO COLD SHUTDOWN IN NORMAL MANNER

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 1: SUMMARY

- CPCO ADMITS THE VIOLATION
- SELF-IDENTIFIED
- LOW SAFETY SIGNIFICANCE
- CPCO UNDERSTANDS THE REGULATORY SIGNIFICANCE
- ALL CORRECTIVE ACTIONS COMPLETED EXCEPT LESSONS LEARNED TRAINING — COMPLETION BY NOVEMBER 1996 REFUELING OUTAGE

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2: OVERVIEW**

- FAILURE TO PROMPTLY IDENTIFY AND TAKE EFFECTIVE CORRECTIVE ACTIONS FOR SEVERAL SIGNIFICANT FIRE PROTECTION CONDITIONS ADVERSE TO QUALITY (FIVE EXAMPLES)
 - EXAMPLE 1: PROCEDURES AND PARTS FOR LPSI PUMP REPAIR NOT IN PLACE
 - EXAMPLE 2: MOV CIRCUITS COULD BE DAMAGED BY HOT SHORTS AND FAIL IN UNDESIRE POSITION. MANUAL REPOSITIONING MAY BE IMPACTED
 - EXAMPLE 3: RATING OF FIRE BARRIER BETWEEN EDG 1-2 POWER AND CONTROL CIRCUITS AND EDG 1-1
 - EXAMPLE 4: MAIN POWER FUSES FOR 2 DC PANELS DO NOT COORDINATE WITH THE PANEL BRANCH CIRCUIT BREAKERS
 - EXAMPLE 5: INADEQUATE EMERGENCY LIGHTING
- CPCO ADMITS VIOLATION, BUT HAS ADDITIONAL INFORMATION REGARDING SOME EXAMPLES
- ALL EXAMPLES OF VIOLATION 2 HAVE A COMMON UNDERLYING INITIATOR:
 - INADEQUATE ORIGINAL APPENDIX R ANALYSES AND REVIEW EFFORTS

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATION****VIOLATION 2 - EXAMPLE 1: LPSI PUMP COLD SHUTDOWN REPAIR**

- DESCRIPTION OF CONDITION: PROCEDURES AND PARTS FOR LPSI PUMP COLD SHUTDOWN REPAIR NOT IN PLACE

- IDENTIFICATION:
 - CPCO IDENTIFIED UNDERLYING DEFICIENCY AND FILED LER 95-009
 - NRC IDENTIFIED INADEQUATE PROCEDURAL GUIDANCE TO OPERATORS

- SIGNIFICANT CAUSES:
 - NO INDEPENDENT TECHNICAL REVIEW OF CORRECTIVE ACTION
 - CORRECTIVE ACTIONS AND SCHEDULE:
 - VERIFIED HOURLY FIRE TOURS
 - PROVIDED AUGMENTED PROCEDURAL GUIDANCE TO OPERATORS
 - PLACED SPARE FUSES IN STOCK TO SUPPORT PROCEDURE
 - REVIEWED CORRECTIVE ACTION PROCESS AND MADE PROCEDURAL CHANGES TO ENHANCE PROCESS

- ACTUAL SAFETY SIGNIFICANCE IS LOW: LPSI ONLY NEEDED TO TRANSITION TO COLD SHUTDOWN. AMPLE TIME AVAILABLE TO TROUBLESHOOT AND REPLACE FUSES, WHICH IS WITHIN OPERATOR TRAINING

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2 - EXAMPLE 2: ALTERNATE SHUTDOWN MOVs**

- DESCRIPTION OF CONDITION: IN 92-18 NOTED THAT MOV CIRCUITS COULD BE DAMAGED BY HOT SHORTS AND FAIL IN UNDESIRE POSITION. MANUAL REPOSITIONING COULD BE IMPACTED. CPCO DID NOT PROMPTLY ADDRESS THIS ISSUE

- IDENTIFICATION: CPCO IDENTIFIED VALVES IMPACTED — LER 95-015

- SIGNIFICANT CAUSES:
 - PRIOR TO 1994, DELAY WAS PRIMARILY RESULT OF PERCEPTION THAT ISSUE WAS NOT SIGNIFICANT (NUMARC POSITION WAS CONSISTENT)
 - AFTER 1994, ITERATIVE ANALYSIS WITH EVOLVING INFORMATION HAS DELAYED ULTIMATE RESOLUTION. DIFFICULT ISSUE AS EVIDENCED BY INTERACTION WITH OTHER UTILITIES AND LERs FILED
 - CORRECTIVE ACTIONS AND SCHEDULE:
 - 1994 PREEMPTIVE FIRE TOURS VERIFIED AS IN PLACE
 - INTERIM GUIDANCE ISSUED TO OPERATORS — NOTE: FIRE TOUR "MIND SET" RESULTED IN DELAY IN ISSUING THIS GUIDANCE
 - 4 VALVE MODIFICATIONS SCHEDULED IN 1996
 - 15 VALVE MODIFICATIONS WILL BE DONE IN 1996 REFUELING OUTAGE IF PRACTICAL, OR, AT THE LATEST, 1998 REFUELING OUTAGE

- ACTUAL SAFETY SIGNIFICANCE IS LOW: IN THE EVENT OF FIRE, MANUAL OPERATOR ACTIONS WILL ALLOW SAFE SHUTDOWN TO BE ACHIEVED AND MAINTAINED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2 - EXAMPLE 3: DIESEL GENERATOR CIRCUITS**

- DESCRIPTION OF CONDITION: EDG 1-2 POWER AND CONTROL CIRCUITS ROUTED IN AIR PLENUM OF EDG 1-1 AND NOT SEPARATED BY RATED FIRE BARRIER. CPCO'S ANALYSIS OF THE BARRIER HAS BEEN QUESTIONED.

- IDENTIFICATION:
 - CPCO IDENTIFIED UNRATED BARRIER — LER 95-004
 - NRC CONCERNED THAT CURRENT CPCO BARRIER ANALYSIS IS NOT RIGOROUS ENOUGH

- SIGNIFICANT CAUSES:
 - UNDERLYING ISSUE — AN EARLY 1980s MODIFICATION DESIGNED TO PROVIDE APPENDIX R CIRCUIT SEPARATION WAS INADEQUATELY EVALUATED

- CORRECTIVE ACTIONS AND SCHEDULE:
 - SPECIFIC ANALYSIS REVISED
 - PLANT MODIFICATION PROCESS REVISED TO STRENGTHEN FIRE PROTECTION/APPENDIX R REVIEW CRITERIA, E.G., DETAILED CHECKLIST CREATED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2 - EXAMPLE 3: DIESEL GENERATOR CIRCUITS (CONT'D)**

- STAFF CONCERN THAT CURRENT ANALYSIS NOT BOUNDING AND LACKED CONSERVATIVE ASSUMPTIONS
 - CPCO DISAGREES WITH CERTAIN ASPECTS OF THE NRC'S POSITION, BUT AGREES THAT ANALYSIS SHOULD BE MORE RIGOROUS
 - CORRECTIVE ACTIONS AND SCHEDULE:
 - FIRE TOURS VERIFIED AS IN PLACE
 - CPCO WILL ADDRESS TECHNICAL ISSUES WITH NRC FIRE PROTECTION PERSONNEL TO DETERMINE APPROPRIATE METHODOLOGIES TO BE USED IN EVALUATIONS
- ACTUAL SAFETY SIGNIFICANCE IS LOW:
 - NON-FIRE RATED BARRIER IS OF SUBSTANTIAL CONSTRUCTION AND CAN WITHSTAND A FIRE LASTING OVER ONE HOUR
 - AREA HAS AUTOMATIC SUPPRESSION WITH WATER FLOW ALARMS
 - HOURLY FIRE TOURS (SINCE LATE SUMMER 1994)
 - TIME IS AVAILABLE FOR FIRE BRIGADE RESPONSE, IF NEEDED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2 - EXAMPLE 4: LACK OF PANEL BREAKER/FUSE COORDINATION**

- DESCRIPTION OF CONDITION: MAIN POWER FUSES FOR 2 DC PANELS DID NOT COORDINATE WITH THE PANEL BRANCH CIRCUIT BREAKERS. A FIRE INDUCED FAULT MAY HAVE RESULTED IN LOSS OF THE MAIN POWER SUPPLY TO TWO 125 VDC PANELS.
- IDENTIFICATION: CPCO IDENTIFIED CONDITION AND FILED LER 96-005
- SIGNIFICANT CAUSES:
 - 1986 MODIFICATION DESIGN INADEQUATELY ADDRESSED APPENDIX R FUSE COORDINATION REQUIREMENTS
 - CORRECTIVE ACTIONS AND SCHEDULE:
 - VERIFIED HOURLY FIRE TOURS IN PLACE
 - INSTITUTED MODIFICATION PROCESS TO CHANGE FUSES TO COORDINATE (SCHEDULED FOR 1996 REFUELING OUTAGE)
 - EVALUATED OTHER POSSIBLE 125 VDC COORDINATION ISSUES
 - CONFIRMED ADEQUACY OF AC COORDINATION DESIGN
 - COMPLETED PROCEDURAL UPGRADES TO THE MODIFICATION CONTROL PROCESS
- ACTUAL SAFETY SIGNIFICANCE IS LOW: PLANT CAN BE SAFELY SHUT DOWN AFTER LOSS OF THESE PANELS

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2 - EXAMPLE 5: INADEQUATE EMERGENCY LIGHTING**

- DESCRIPTION OF CONDITION:
 - LACK OF ADEQUATE EMERGENCY LIGHTING FOR POST-FIRE SAFE SHUTDOWN ACTIONS IN CERTAIN AREAS OF THE PLANT.
 - CONDITION HAS NOT BEEN FULLY RESOLVED FOR A NUMBER OF YEARS.
 - CONDITION INVOLVES AREAS OF REDUCED EMERGENCY LIGHTING, NOT "BLACK" CONDITIONS
- IDENTIFICATION:
 - PRIOR TO 1994, LIGHTING PROBLEMS IDENTIFIED BY BOTH CPCO AND NRC AND REPAIRED ON SEVERAL OCCASIONS
 - SINCE 1994, CPCO IDENTIFIED THE PROBLEM AND FILED LER 96-007
- SIGNIFICANT CAUSES:
 - INEFFECTIVE INITIAL APPENDIX R LIGHTING EVALUATIONS AND PREVIOUS CORRECTIVE ACTIONS
 - CORRECTIVE ACTIONS AND SCHEDULE:
 - VERIFIED OPERATORS HAD HAND-HELD LIGHTING AS COMPENSATORY MEASURE
 - ALERTED OPERATORS TO POSSIBLE CONDITIONS
 - COMPLETED SCHEDULED STATION LIGHTING BLACKOUT TEST TO FURTHER CONFIRM THE ADEQUACY OF PROJECTED CORRECTIVE ACTIONS (GENERALLY, CONFIRMED CONSERVATIVE POSITIONS)
 - RESULTING MODIFICATIONS TO BE COMPLETED SEPTEMBER 1996

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****DISCUSSION OF VIOLATIONS****VIOLATION 2 - EXAMPLE 5: INADEQUATE EMERGENCY LIGHTING (CONT'D)**

- INSPECTORS CONSIDERED COMPENSATORY MEASURE OF USING HAND-HELD EMERGENCY LIGHTING INADEQUATE.
 - CPCO DISAGREES: NRC STAFF ACCEPTED USE OF SAME MODEL/TYPE HAND-HELD LIGHTING AT PALISADES IN PAST REVIEWS, E.G., IN A FEBRUARY 28, 1989 LETTER.

- ACTUAL SAFETY SIGNIFICANCE IS LOW:
 - HAND-HELD LIGHTING AVAILABLE. EXISTING PLANT PROCEDURES INFORM OPERATOR TO USE THEM, AS NECESSARY.
 - EMERGENCY LIGHTING PROBLEM IDENTIFIED IS A REDUCED LIGHTING ISSUE AND NOT A "BLACK-OUT" ISSUE

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

DISCUSSION OF VIOLATIONS

VIOLATION 2: SUMMARY

- CPCO ADMITS THE VIOLATION

- CPCO IDENTIFIED THE UNDERLYING CONCERN FOR MOST EXAMPLES
- LOW SAFETY SIGNIFICANCE
- MOST OF THE 5 ISSUES HAVE COMMON CAUSES:
 - HISTORICAL FAILURES OF INITIAL APPENDIX R RELATED EVALUATIONS
 - FIRE TOUR "MIND SET"
- ALL CORRECTIVE ACTIONS COMPLETED BY END OF 1996 REFUELING OUTAGE EXCEPT SOME MOV CIRCUIT MODS (COMPLETION ANTICIPATED DURING 1996 REFUELING OUTAGE, IF PRACTICAL; OR IN 1998 REFUELING OUTAGE AT THE LATEST)

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

GENERIC MANAGEMENT IMPLICATIONS FOR OTHER PROGRAMS

LESSONS LEARNED

- STAY INVOLVED/ENGAGED, ESPECIALLY AS ISSUES EVOLVE AND DISCREPANCIES ARE UNCOVERED
- CONSIDER CUMULATIVE EFFECTS OF DEFICIENCIES
- THOROUGHLY CONSIDER IMMEDIATE/COMPENSATORY CORRECTIVE ACTIONS WHILE WORKING ON LONGER TERM, MORE COMPREHENSIVE ACTIONS
- KEEP LOOKING/DIGGING FOR ISSUES WHILE BALANCING PRIORITIES AND RESOURCES COMMENSURATE WITH SAFETY SIGNIFICANCE

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****GENERIC MANAGEMENT IMPLICATIONS****FOR OTHER TECHNICAL PROGRAMS**

- LESSONS MAY BE APPLICABLE TO CPCO's EFFORTS TO UPGRADE OTHER PROGRAMS, INCLUDING:
 - PRESSURIZED THERMAL SHOCK (PTS)
 - DRY FUEL STORAGE
 - POWER UPRATE
 - SAFETY ANALYSIS REPORT
 - DESIGN BASIS DOCUMENTS
 - ALLOY 600
 - FLOW ACCELERATED CORROSION
 - MAINTENANCE RULE
 - SAFETY RELATED PIPING REVERIFICATION
 - MOTOR OPERATED VALVES
 - AIR OPERATED VALVES
 - ECCS FLOW MARGIN
 - SMALL PIPE ANALYSIS
 - INSTRUMENT SET POINTS
 - VENDOR MANUALS
 - PRA/IPE/IPEEE
 - EQUIPMENT QUALIFICATION
- WILL INCREASE EFFORTS TO AVOID SIMILAR PROBLEMS IN THESE PROGRAMS
- WILL CONTINUE PERIODIC BRIEFINGS TO KEEP NRC STAFF ADVISED OF PROGRESS AND FINDINGS FROM THESE PROGRAMS

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

**GENERIC MANAGEMENT IMPLICATIONS
FOR OTHER PROGRAMS**

ACTIONS TO ENSURE WE LEARN THESE LESSONS

- CONDUCT WORKSHOPS WITH ALL MANAGEMENT, SUPERVISORY, AND TECHNICAL STAFF
- IMPLEMENT PROGRAM HEALTH REPORT PROCESS SIMILAR TO SYSTEM HEALTH REPORTS BY COMPLETION OF THE 1996 REFUELING OUTAGE
- ENSURE OUR ACTIONS REINFORCE OUR COMMUNICATIONS WITH EMPLOYEES SO THAT A CONSISTENT MESSAGE IS SENT.

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

ENFORCEMENT POLICY FACTORS

INTRODUCTION

IN ACCORDANCE WITH ENFORCEMENT POLICY AND NRC's MAY 20, 1996 LETTER, CPCO PROVIDES PERSPECTIVE ON THE FOLLOWING ENFORCEMENT POLICY FACTORS:

- SAFETY AND REGULATORY SIGNIFICANCE

- MITIGATION FACTORS

- FACTORS IMPACTING NRC DISCRETION

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****ENFORCEMENT POLICY FACTORS****VIOLATION 1: SIGNIFICANCE**

FAILURE TO PROVIDE AN OPERABLE ALTERNATE OR DEDICATED SHUTDOWN CAPABILITY WHERE SYSTEMS REQUIRED FOR HOT SHUTDOWN WERE NOT PROTECTED (TWO EXAMPLES)

- CPCO UNDERSTANDS THE REGULATORY SIGNIFICANCE OF ISSUE
- ACTUAL SAFETY SIGNIFICANCE IS LOW:
 - FOR EXAMPLE 1 (ALTERNATE SHUTDOWN PANEL) FURTHER INVESTIGATION CONCLUDED:
 - LOW VOLTAGE CUT-OFF WAS CORRECTLY SET
 - ALTERNATE SHUTDOWN PANEL WAS INOPERABLE ONLY FOR <5 DAYS (PERIOD OF ALARM BOARD REPLACEMENT) OF THE LCO PERIOD
 - FOR BOTH EXAMPLES 1 AND 2:
 - THE TWO COMPONENTS OF CONCERN (EDGs AND THE ALTERNATE SHUTDOWN PANEL) ARE DESIGNED TO ACCOMMODATE FIRES IN A NUMBER OF FIRE AREAS. THIS VIOLATION IMPACTS ONLY A LIMITED NUMBER OF THOSE FIRE AREAS
 - LIKELIHOOD OF A DAMAGING FIRE IS VERY LOW — LOW TO MODERATE FIRE LOADING, FIRE TOURS (SINCE LATE SUMMER 1994), EXISTING PLANT FEATURES, AND NEED FOR MULTIPLE FAILURES
 - EVEN IF A DAMAGING FIRE, SAFE PLANT SHUTDOWN CAN BE ACHIEVED AND MAINTAINED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****ENFORCEMENT POLICY FACTORS****VIOLATION 1: MITIGATING FACTORS**

- IDENTIFICATION:
 - BOTH EXAMPLES WERE LICENSEE-IDENTIFIED DURING SELF-INITIATED ENHANCEMENT PROJECT

- CORRECTIVE ACTIONS:
 - PREEMPTIVE COMPENSATORY FIRE TOURS WERE CONSERVATIVE
 - BOTH DEFICIENCIES HAVE BEEN CORRECTED — FUSE REPLACED AND TESTING/SURVEILLANCE SCHEDULE ESTABLISHED ON INVERTER
 - BROAD CORRECTIVE ACTIONS TAKEN TO ASSESS IMPLICATIONS FOR APPENDIX R AND OTHER PROGRAMS, E.G., REVIEWED ALL 125 VDC CIRCUITS FOR FUSE COORDINATION AND ARE IMPLEMENTING PROGRAM HEALTH REPORTS
 - THIS WAS FIRST OF A NUMBER OF SELF-INITIATED, BROAD SCOPE REVIEWS TO UNCOVER POSSIBLE LONG TERM EMBEDDED ISSUES — SHOULD BE GIVEN CREDIT FOR PROACTIVE ACTIONS

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

ENFORCEMENT POLICY FACTORS

VIOLATION 1: FACTORS SUPPORTING DISCRETION

- VIOLATION STEMMED FROM OLD DESIGN DEFICIENCIES
- BOTH EXAMPLES IDENTIFIED BY CPCO'S VOLUNTARY INITIATIVE
- EMBEDDED ISSUE NOT LIKELY TO HAVE BEEN IDENTIFIED EARLIER DURING PERIOD OF CURRENT PERFORMANCE
- BOTH EXAMPLES CORRECTED IN A REASONABLE TIME AFTER IDENTIFICATION — BROAD CORRECTIVE ACTIONS TAKEN FOR GENERIC IMPLICATIONS AND RECURRENCE CONTROL
- DISCRETION IS WARRANTED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****ENFORCEMENT POLICY FACTORS****VIOLATION 2: SIGNIFICANCE**

FAILURE TO PROMPTLY IDENTIFY AND TAKE EFFECTIVE CORRECTIVE ACTIONS FOR SEVERAL SIGNIFICANT FIRE PROTECTION CONDITIONS ADVERSE TO QUALITY (5 EXAMPLES)

- ACTUAL SAFETY SIGNIFICANCE IS LOW:
 - LIKELIHOOD OF A DAMAGING FIRE IS REMOTE BECAUSE OF:
 - EXISTING PLANT FEATURES
 - FIRE TOURS (SINCE LATE SUMMER 1994)
 - NEED FOR MULTIPLE FAILURES BEFORE PROBLEM OCCURS
 - EVEN IF DAMAGING FIRE, PLANT COULD STILL ACHIEVE AND MAINTAIN SAFE SHUTDOWN

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****ENFORCEMENT POLICY FACTORS****VIOLATION 2: MITIGATING FACTORS**

- IDENTIFICATION:
 - UNDERLYING CONDITIONS WERE LICENSEE-IDENTIFIED AND REPORTED TO NRC DURING SELF-INITIATED ENHANCEMENT PROJECT. (FLAW IN LPSI CORRECTIVE ACTION IDENTIFIED BY NRC)

- CORRECTIVE ACTIONS:
 - PREEMPTIVE COMPENSATORY FIRE TOURS WERE CONSERVATIVE
 - MOST CORRECTIVE ACTIONS COMPLETED — REMAINING ARE PRIORITIZED TO BE COMPLETED IN REASONABLE TIME
 - ADDITIONAL ACTIONS TAKEN TO ASSESS IMPLICATIONS FOR OTHER PROGRAMS
 - WHERE NRC QUESTIONS PROMPTNESS OF RECENT ACTIONS — IN HINDSIGHT CPCO DECISIONS RESULTED FROM FIRE TOUR "MIND SET"

PREDECISIONAL ENFORCEMENT CONFERENCE

10 CFR 50 APPENDIX R COMPLIANCE

ENFORCEMENT POLICY FACTORS

VIOLATION 2: FACTORS SUPPORTING DISCRETION

- HISTORICAL ASPECTS OF EXAMPLES OF VIOLATION 2 WARRANT DISCRETION (E.G., EXAMPLE 4 — COORDINATION OF FUSES FOR DC PANELS):
 - STEMMED FROM OLD DESIGN DEFICIENCIES
 - IDENTIFIED BY CPCO'S VOLUNTARY INITIATIVE
 - EMBEDDED ISSUES NOT LIKELY TO HAVE BEEN IDENTIFIED EARLIER DURING PERIOD OF CURRENT PERFORMANCE
 - PREEMPTIVE COMPENSATORY ACTIONS WERE CONSERVATIVE; CORRECTIONS WERE MADE IN A REASONABLE TIME AFTER IDENTIFICATION; GENERIC IMPLICATIONS WERE BROADLY REVIEWED
 - DISCRETION IS WARRANTED

PREDECISIONAL ENFORCEMENT CONFERENCE**10 CFR 50 APPENDIX R COMPLIANCE****CONCLUDING REMARKS**

- **SUMMARY**
 - CONCUR WITH THE VIOLATIONS — ADDITIONAL INFORMATION PROVIDED
 - VIRTUALLY ALL UNDERLYING COMPLIANCE ISSUES SELF-IDENTIFIED
 - VIOLATION 1 AND ALL BUT ONE EXAMPLE OF VIOLATION 2 GROUNDED IN HISTORICAL ISSUES
 - ANY DELAY IN ACTION WAS IMPACTED BY FIRE TOUR "MIND SET", WHICH BEGAN AS A PROACTIVE, PREEMPTIVE COMPENSATORY MEASURE
 - WE UNDERSTAND THE REGULATORY SIGNIFICANCE; ACTUAL SAFETY SIGNIFICANCE LOW
- **IMPORTANT MANAGEMENT QUESTIONS**
 - DO WE UNDERSTAND THE MESSAGE?
 - DID OUR ACTIONS CONCERNING THE FIRE PROTECTION ENHANCEMENT PROGRAM REFLECT AN IMPROVING PLANT CONDITION AND ORGANIZATION?
 - IS CPCO COMMITTED TO APPLYING ADEQUATE RESOURCES TO ASSURE TIMELY COMPLETION OF THE OUTSTANDING CORRECTIVE ACTIONS AND CONTINUED SAFE OPERATION OF THE PLANT?