



Commonwealth Edison

One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

DMB

November 7, 1984

Mr. James G. Keppler
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Quad Cities Station Unit 2
Presentation Material -
Enforcement Conference on
October 25, 1984 Event
NRC Docket No. 50-265

Dear Mr. Keppler:

Enclosed is a copy of the material presented by Commonwealth Edison during the Enforcement Conference held to discuss the subject matter on November 5, 1984.

Should you have any additional questions regarding this matter, please contact this office.

Very truly yours,

B. Rybak

Nuclear Licensing Administrator

lm

Enclosure

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PDR ADOCK 05000265
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CONFIRMATORY ACTION LETTER
UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

RECEIVED

OCT 29 '84

OCT 2 8 1984

Docket No. 50-254
Docket No. 50-265

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Vice President
Post Office Box 767
Chicago, IL 60690

ROUTE:

_____	A (Asst. Supt.)
_____	B (Operations)
_____	C (Maintenance)
_____	D Admin. & Tech.
_____	E Personnel

Initial _____	

Gentlemen:

This letter confirms the telephone conversation on October 25, 1984, between Mr. C. Norelius and others of this office and Mr. N. Kalivianakis of your staff regarding the events surrounding the trip and failure of a control rod to scram at Quad Cities, Unit 2, on October 25, 1984. With regard to the matters discussed, we understand that you have or intend to do the following:

1. Conduct tests on the affected Control Rod Drive (CRD) (38-51) for operability, e.g., Friction, Timing, Scram, and Stall Flow Tests prior to CRD removal.
2. Remove and replace control rod drive (38-51) and conduct tests as appropriate.
3. Examine the internals of the removed CRD (38-51) for excessive wear or damage to seals and bushings on the stop and drive pistons, the index tubes, and the spring washers on the stop piston.
4. Walkdown and verify the position of all manual valves in the CRD systems of Units 1 and 2.
5. Investigate to determine the root cause of the manual valve 112 being shut on CRD hydraulic control unit 38-51 and take appropriate corrective action.
6. Identify any instances where operations personnel may not have performed within the scope of their responsibilities during the event and provide assurance that appropriate corrective actions will be taken.

Regarding Items 1, 2, 4, 5, and 6, we understand these items will be completed by you with RIII concurrence prior to unit restart.

Also, we understand you will provide a written summary related to all of the items with your licensee event report(s).

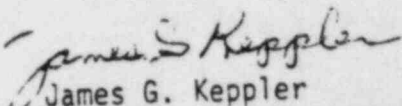
CONFIRMATORY ACTION LETTER

~~2410300103~~

OCT 26 1984

Please let us know immediately if your understanding differs from that set forth above.

Sincerely,


James G. Keppler
Regional Administrator

cc: D. L. Farrar, Director
of Nuclear Licensing
N. Kalivianakis, Plant
Superintendent
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
Phyllis Dunton, Attorney
General's Office, Environmental
Control Division
W. Schultz, RIII
R. Bevin, NRR
C. Rossi, IE

CONFIRMATORY ACTION LETTER

SHORT TERM CORRECTIVE ACTIONS

PRIOR TO UNIT 2 STARTUP, ALL REQUIREMENTS OF THE CONFIRMATORY ACTION LETTER WERE COMPLETED EXCEPT NUMBER 3. THE EXAMINATION OF THE CONTROL ROD DRIVE THAT WAS REPLACED. IN ADDITION THE FOLLOWING SHORT TERM COMMITMENTS WERE COMPLETED IN RESPONSE TO CAL ITEMS 5 AND 6.

1. CAL-5 REVIEW WITH EQUIPMENT ATTENDENTS AND EQUIPMENT OPERATORS THE CLOSED CONDITION OF THE SCRAM DISCHARGE RISER VALVE ON ROD K-13 AND ITS EFFECT ON THE SCRAM FUNCTION.
2. CAL-5 INSTRUCT SHIFT FOREMEN TO PERFORM A DAILY SURVEILLANCE OF THE HYDRAULIC CONTROL UNIT VALVE POSITIONS.
3. CAL-6 REVIEW WITH THE OPERATORS THE IMPORTANCE OF REMAINING "AT THE CONTROLS" DURING UNIT OPERATIONS
4. CAL-6 REVIEW WITH OPERATING PERSONNEL THAT SHIFT TURNOVER MUST NOT OCCUR DURING PLANT TRANSIENTS
5. CAL-6 REVIEW WITH OPERATING PERSONNEL THAT IT IS POSSIBLE FOR CONTROL RODS TO EXPERIENCE UNSUCCESSFUL SCRAMS.

INVESTIGATION

When I arrived at work on Thursday morning, October 25, 1984, I was met by the NRC Resident Inspector, Al Madison. He informed me of a sequence of events that occurred on Unit 2 earlier in the morning.

1. The reactor scrammed from high pressure.
2. One of the control rods remained at position 48 following the scram.
3. The position of the rod and its failure to scram was not discovered for 30 minutes after the scram.
4. He had learned from an NSD arriving in the control room at 6:45am that at that time it appeared Unit 1 was unattended.

The next person that contacted me was the Assistant Superintendent for Operations. He had been in the control room since 7:30am and gave me essentially the same information that I already had from the Resident Inspector. He also informed me that the red phone call had been made, a deviation report had been initiated and a potentially significant event investigation was in progress per the Nuclear Station Directives NSDD-A07, Potentially Significant Events and NSDD-A08, Plant Startup after Trip.

During the 8:15am morning call to the Corporate Office, our bosses were informed of the facts as we had them and we worked together ever since.

The operating supervisors and I continued the investigation into the event. The personnel involved from the night shift were unavailable so we decided to meet with those individuals the following morning in order to complete the sequence of events.

During the investigation we verified that the rod failed to scram and 28 minutes elapsed before it was discovered. We were able to determine very early in the investigation that the scram discharge riser valve (EP. 305-112) was closed preventing the drive from venting properly at the elevated pressure of the original scram. (When the second attempt was made to scram the rod, the reactor pressure had decreased to less than 800 psig allowing the drive to vent through its seals into the reactor vessel.)

We immediately attempted to determine the cause of the 112 valve being closed by reviewing the following documents:

1. Work requests subsequent to the refuel outage.
2. Out of service requests subsequent to the refuel outage.
3. The September 18th hot scram surveillance tests.

4. Accumulator alarms logged in the unit operator's log book subsequent to the September hot scram surveillance tests.
5. Similar work performed on modules in the vicinity of K-13 or on the other unit.

During the investigation, the question of the unattended unit was also addressed. The original information that we were able to obtain indicated to us that during the time period in question, 6:45am to 7:00am, the day shift unit operator was present at the controls of Unit 1 from the time he arrived in the control room (6:45am.) and received his shift turnover. However, the interviews that we had the following morning with the operators that were present in the control room when the event was occurring indicated to us that there was another period of time that the Unit 1 operator was not present at the controls of Unit 1 because he was helping on the Unit 2 transient. This occurred between 6:30am. and 6:45am. However, during this time the Unit 1 operator returned to his unit on three different occasions.

During our discussions with the night shift we became aware of some additional concerns that we felt compelled to address:

1. Controlling pressure in a subcritical reactor by inserting additional control rods.
2. The capability of the SCRE to perform as a leader in the control room during a system transient.

Such as:

- a. The SCRE performing a shift turnover during a period when a unit was not in a stable condition.
- b. The failure of the SCRE to recognize that there was a control rod that had not scrambled.
- c. The failure of the SCRE to recognize that the stable unit was not attended for a period of time.

We have already held a meeting with the Shift Engineers and the SCREs to discuss openly and plainly the concerns that we have as a result of this event. We view this event as an example of operating that was disappointing and at least in one instance not acceptable. The individuals that were involved in this meeting contributed freely in this discussion and provided valuable insight on their views of this event.

Such as:

1. The SCREs as a group expressed anxiety due to their lack of experience during transients and abnormal evolutions in the control room to perform as a leader eventhough they feel very comfortable during normal operations and as an STA during abnormal plant conditions.
2. The vagueness of the procedure that defines the operator's responsibilities for being at the controls of his unit.
3. The communications between the SCREs in the control room and the Shift Engineer's office were hampered because the Shift Engineer's telephone was busy.
4. The lack of detail in the procedure for placing the reactor in hot standby.
5. The RWM difficulties created by both the procedure and the equipment that distracted the operators and wasted valuable time.
6. The difficulties with the RCIC when the operators attempted to use it to control reactor pressure. (During this event the RCIC experienced an overspeed trip that had to be reset locally.)

During all last week we have been working side by side with representatives from the corporate office and ARD (a human factors consultant) in evaluating the event and determining the proper corrective actions. We also worked very closely with the Resident Inspector keeping him informed of the facts as they developed.

UNIT 2 SEQUENCE OF EVENTS

October 24, 1984

- 1900 SHIFT FOREMAN FOUND EHC OIL LEAK ON NO. 4 STOP VALVE
- 2130, STARTED REDUCING LOAD TO ENTER HOT STANDBY

October 25, 1984

- 0235 TRANSFERED AUX POWER
- 0326 GENERATOR OFF LINE
- 0445 REACTOR MODE SWITCH TO STARTUP/HOT STANDBY
- 0546 OUTBOARD MSIVs CLOSED (IN HOT STANDBY).
- 0550 EHC PUMP OFF
- 0600 DUE TO REACTOR PRESSURE INCREASING, NIGHT SHIFT SHIFT ENGINEER INSTRUCTED NIGHT SHIFT UNIT 1 OPERATOR TO INSERT ADDITIONAL CONTROL RODS. SHIFT ENGINEER LEFT CONTROL ROOM TO PERFORM SHIFT TURNOVER.
- 0625 NIGHT SHIFT SCRE COMPLETED SHIFT TURNOVER. DAY SHIFT SCRE TOOK CONTROL OF CONTROL ROOM.
- 0630 EXPERIENCING PROBLEMS WITH RWM. SCRE INITIATED RWM BYPASS PROCEDURE.
NIGHT SHIFT SHIFT ENGINEER COMPLETED SHIFT TURNOVER
- 0635 DAY SHIFT SCRE NOTIFIED SHIFT FOREMAN BY TELEPHONE (SHIFT ENGINEER'S TELEPHONE WAS BUSY) THAT PRESSURE WAS INCREASING AND THEY WOULD START RCIC TO CONTROL PRESSURE

CENTER DESK NIGHT SHIFT OPERATOR ATTEMPTED TO START RCIC BUT IT TRIPPED ON OVERSPEED.
- 0641 REACTOR SCRAM FROM HIGH PRESSURE (1044 PSIG). NIGHT SHIFT UNIT 1 OPERATOR MANUALLY STARTED HPCI.
- 0645 NIGHT SHIFT UNIT 1 OPERATOR COMPLETED SHIFT TURNOVER, RETURNED TO HELP ON UNIT 2.
- 0650 NIGHT SHIFT SCRE DETERMINED THAT THERE WAS SATISFACTORY COVERAGE ON UNIT 2 SO HE LEFT SITE.

REACTOR WATER LEVEL UNDER CONTROL WITH FEEDWATER SYSTEM
- 0654 DAY SHIFT UNIT 2 OPERATOR REQUESTED FULL CORE SCAN (00-7)

DAY SHIFT UNIT 2 OPERATOR ATTEMPTED TO INSERT RODS AT POSITION '02' BUT RWM STILL INJECTING AN INSERT ERROR.
- 0700 DAY SHIFT SCRE NOTIFIED RESIDENT INSPECTOR, AL MADISON
- 0709 NUCLEAR ENGINEER REQUESTED FULL CORE SCAN AND IDENTIFIED A ROD (K-13) AT POSITION '48'.

0710 REACTOR PRESSURE UNDER CONTROL USING HPCI

0712 ROD K-13 SCRAMMED SUCCESSFULLY FROM THE PROTECTION SYSTEM PANEL.

0713 DAY SHIFT UNIT 2 OPERATOR REQUESTED FULL CORE SCAN TO CONFIRM ALL RODS AT POSITION 100%.

0745 DAY SHIFT SCRAM NOTIFIED STEVE LONG OF NRC OPERATIONS CENTER
REMAINED IN A HOT SHUTDOWN CONDITION USING RCIC AND HPCI FOR PRESSURE
CONTROL UNTIL THE EHC SYSTEM WAS RETURNED TO SERVICE.

PRESENTATION OUTLINE

- | | |
|---------------------------------------|----------------------|
| I. INTRO | DIV. V.P. & GM |
| II. OVERVIEW | STATION SUPT. QC |
| III. SEQUENCE OF EVENTS | ASST. SUPT. OPER. QC |
| IV. INVESTIGATION | STATION SUPT. QC |
| V. AREAS OF CONCERN/CORR. ACT. | DIV. V.P. & GM |
| 1) 112 VALVE MISPOSITIONED | |
| 2) ONE ROD FULL OUT FOLLOWING SCRAM | |
| 3) TURNOVER ACTIVITIES | |
| 4) OPERATOR LEAVING RX CONSOLE | |
| 5) SCRE PERFORMANCE | |
| 6) SUSCEPTABILITY AT OTHER CECO SITES | |
| VI. CONFIRMATORY ACTION LETTER | ASST. SUPT. OPER. QC |
| ITEMS/CORRECTIVE ACTION | |

AREAS OF CONCERN - OVERVIEW

- SIX AREAS OF CONCERN IDENTIFIED TO D. FARRAR
 - 1) 112 VALVE ON CRD HCU MISPOSITIONED (CLOSED)
 - 2) CR K-13 STUCK FULL OUT (POS. 48) FOR 31 MINUTES FOLLOWING SCRAM
 - 3) TURNOVER ACTIVITIES DURING TRANSIENT
 - 4) OPERATING LEAVING U1 RX CONSOLE TO HELP ON U2
 - 5) SCRE PERFORMANCE (TURNOVER DURING EVENT & "NOT-IN-CHARGE")
 - 6) OCCURRENCE OF SIMILAR EVENTS AT OTHER CECO STATIONS
- WILL COVER EACH
 - o FORMAT
 - x CONCERNS (ISSUE)
 - x FACTS
 - x CONCLUSIONS
 - x CORRECTIVE ACTIONS
 - o OVERLAP. BEST TO COMPLETE ALL SIX BEFORE QUESTIONS ON DETAILS
- CORPORATE OFFICE INVOLVED THROUTHOUT
 - o CORP. OFFICE NOTIFIED THURSDAY. 10/25/84 IN A.M. PSE INITIATED
 - o WAGNER (PWR OPERATIONS MGR.) AT STATION FRIDAY 10/26/84
 - o WORDEN (BWR OPERATIONS MGR.) AT STATION WEDNESDAY, 10/31/84
 - o TURBAK (BWR OPERATIONS STAFF ENGR.) AT STATION WEDNESDAY & THURSDAY 10/31 AND 11/1
 - o GALLE INVOLVED TELECON 10/25 AND 10/31
 - o MEETING WITH STATION & G.O. ON 11/2

ISSUE:

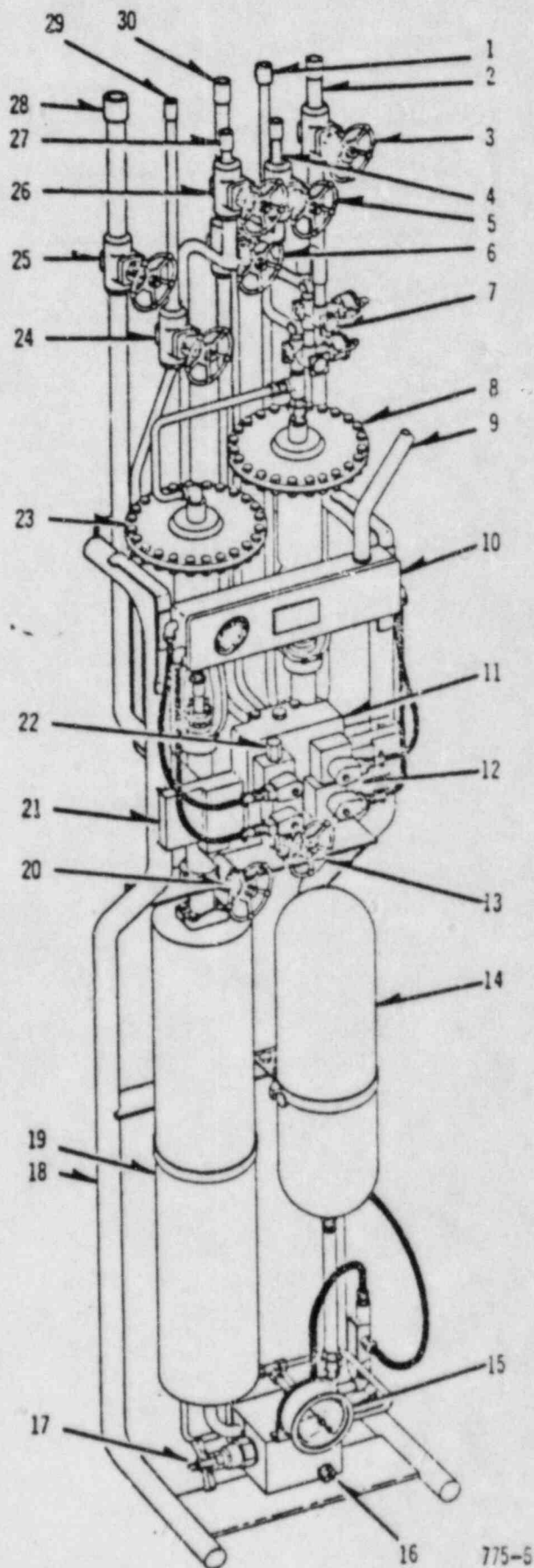
VALVE 2-305-112 CLOSED ON HCU FOR DRIVE K-13
(WRONG POSITION)

FACTS:

- HOT SCRAMMED TESTED K-13 ON 9/18/84 OK (112 VALVE OPEN)
- CONDUCTED THOROUGH INVESTIGATION TO DETERMINE HOW VALVE WAS MISPOSITIONED
 - x ALL WR'S REVIEWED SUBSEQUENT TO REFUELING OUTAGE
 - x ALL OOS'REQUESTS REVIEWED SUBSEQUENT TO REFUELING OUTAGE
 - x REVIEWED LOGS FOR HCU ACTIVITY (ACCUMULATOR ALARMS FOUND ON 9/28/84)
 - o DISCUSSED ALARM CLEARING WITH EA'S INVOLVED
- REVIEWED U1 CORRESPONDING (K-13) HCU MAINT.
- REVIEWED U2 HCU MAINT. IN AREA OF K-13
- CORP. SECURITY CONSULTED FOR ADVICE

CONCLUSIONS: UNABLE TO DETERMINE ANY ACTIVITY SINCE SCRAM TESTING (9/18) THAT WOULD EXPLAIN MISPOSITIONED 112 VALVE (MISCHIEF CANNOT BE RULED OUT)

1. ACCUMULATOR CHARGING WATER RISER
2. DRIVE - WITHDRAW RISER
3. ISOLATION VALVE — DRIVE-WITHDRAW RISER (EP 102)
4. DRIVE WATER RISER
5. ISOLATION VALVE — DRIVE WATER RISER (EP 103)
6. ISOLATION VALVE — SCRAM DISCHARGE RISER (EP112)
7. SCRAM PILOT VALVE ASSEMBLY (EP 117, 118)
8. OUTLET SCRAM VALVE AND ACTUATOR (EP 127)
9. TYPICAL ELECTRICAL CONNECTION
10. WIRING TROUGH ASSEMBLY
11. MANIFOLD (PART OF PIPING ASSEMBLY)
12. DIRECTIONAL CONTROL VALVES (4 EACH) (EP 120, 121, 122, 123)
13. ISOLATION VALVE — ACCUMULATOR CHARGING WATER RISER (EP113)
14. SCRAM ACCUMULATOR — NITROGEN CYLINDER (EP 128)
15. ACCUMULATOR GAS PRESSURE INDICATOR (EP 131)
16. ACCUMULATOR INSTRUMENTATION ASSEMBLY
17. NEEDLE VALVE — ACCUMULATOR GAS CHARGING (EP 111)
18. FRAME
19. SCRAM ACCUMULATOR — WATER CYLINDER (EP 125)
20. NEEDLE VALVE — ACCUMULATOR WATER CYLINDER DRAIN (EP 107)
21. COOLING CHECK VALVE (IN MANIFOLD)
22. SPEED CONTROL VALVES (2 EACH)
23. INLET SCRAM VALVE AND ACTUATOR (EP 126)
24. ISOLATION VALVE — COOLING WATER RISER (EP 104)
25. ISOLATION VALVE — DRIVE-INSERT RISER (EP 101)
26. ISOLATION VALVE — EXHAUST WATER RISER (EP 105)
27. EXHAUST WATER RISER
28. DRIVE-INSERT RISER
29. COOLING WATER RISER
30. SCRAM DISCHARGE RISER



775-5

Figure 20-11. Hydraulic Control Unit, Typical for Quad Cities 1

112 VALVE CLOSED - CONT'D

- CORR. ACT:
- IMMEDIATELY WALKED DOWN ALL HCU'S, BOTH UNITS, TO ENSURE VALVES POSITIONED CORRECTLY
 - REVIEWED EFFECTS OF SHUT 112 VALVE WITH EA'S/EO'S
 - WILL LOCKWIRE HCU UPPER VALVES AND PERFORM MONTHLY SURVEILLANCE FOR SIX MONTHS
 - INITIATED DAILY WALKDOWN OF ALL HCU'S UNTIL LOCKWIRED
 - WILL RELABEL VALVES ON ACCUM. CHARGING SYSTEM TO ELIMINATE POSSIBILITY FOR CONFUSION
 - WALKED DOWN D & LS HCU'S
 - CORP. OFFICE TO REVIEW LOCKWIRES ON D & QC ^{ESCS}

ISSUE:

UNIT 1 OPERATOR LEFT RX PANEL FOR 15 MINUTES

FACTS:

- UNIT 1 STEADY STATE AT APPROX. 800 MWE
- AMBIGUOUS CORPORATE & STATION PROCEDURES WRT "AT-THE-CONTROLS" DURING TRANSIENTS
- CHRONOLOGY

6:30 A.M. U1 N OPER. WENT TO U2 TO HELP
(START HPCI)

- x RESPONDED TO AL ON U1
- x WENT BACK ONE OTHER TIME TO OBSERVE INSTRUMENTATION
- x IN LINE SITE OF U1 PANELS
- x REMAINED AWARE OF U1 RESPONSIBILITIES

6:45 A.M. U1N OPER. RETURNED TO U1 FOR T.O.
WITH U1D OPER.

- x NORMAL T.O.
- x U1N OPER. STAYED TO ASSIST ON U2
- x U1D OPER. STAYED AT U1

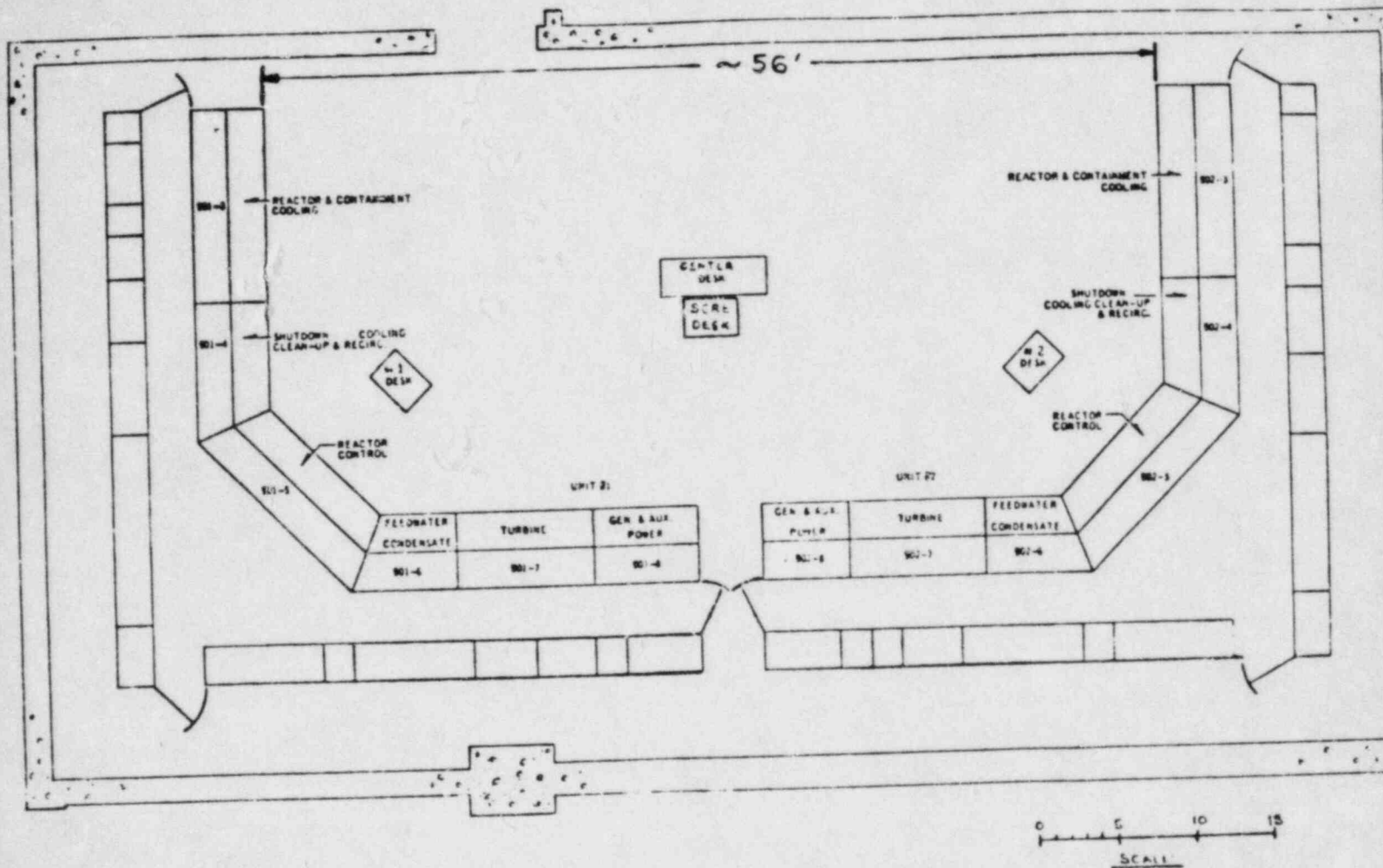
CONCLUSION:

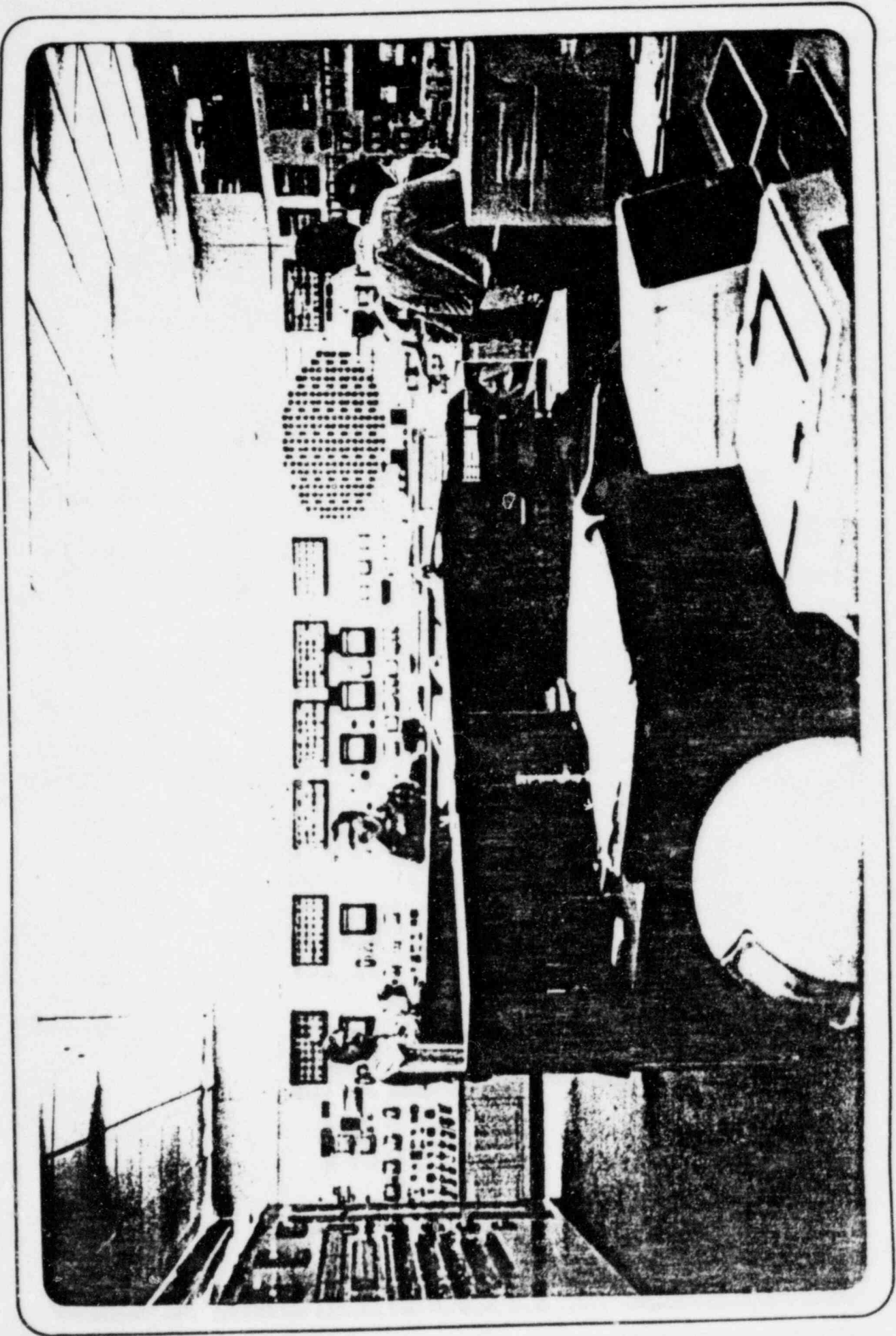
UNACCEPTABLE OPERATOR DECISION

CORR. ACT:

- CONSIDERED DISC. ACT. - NOT APPROPRIATE
- QC INSTRUCTED ALL OPERATING PERSONNEL NOT TO LEAVE PENDING FURTHER INSTRUCTIONS (REST BY 11/9/84)
- CLARIFY WRITTEN INSTRUCTIONS TO ALL STATIONS BY 12/15/84
 - x NOT ALLOWED EXCEPT IF DIRECTED BY C.R. SUPV.
- QC RCIC DESIGN WILL BE REEVALUATED

QUAD-CITIES CONTROL ROOM





ISSUE:

MISSED K-13 ROD POSITION AFTER SCRAM

FACTS:

- CHRONOLOGY

<u>TIME</u>	<u>LAPSED TIME</u>		<u>EVENT</u>
		<u>MINUTES</u>	
6:41/A	0		RX SCRAM
6:50/A	9		LEVEL UNDER CONTROL
6:54/A	13		U2D OPER. REQ. OD-7
7:09/A	28		NUCL. ENGR. OBTD. OD-7 IDENTIFIED K-13 AT POS. 48
7:10/A	29		RX PRESS UNDER CONTROL (HPCI OFF)
7:12/A	31		K13 SCRAMMED FROM BACK PANEL

10-25-84

00-7. CONTROL ROD POSITIONS, NEW SCAN 10-25-84 06:54:14 QUAD CITIES UNIT 1

59					00	00	00	00	00						
55			00	00	00	00	00	00	00	00	00				
51		00	00	00	00	00	00	00	00	00	00	00			
47		00	00	00	00	00	00	00	00	00	00	00	00		
43		00	00	00	00	00	00	00	00	00	00	00	00	00	
39	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
35	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
31	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
27	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
23	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
19		00	00	00	00	00	00	00	00	00	00	00	00	00	00
15		00	00	00	00	00	00	00	00	00	00	00	00	00	00
11			00	00	00	00	00	00	00	00	00	00	00	00	00
07				00	00	00	00	00	00	00	00	00	00	00	00
03					00	00	00	00	00	00	00	00	00	00	00

02 06 10 14 18 22 26 30 34 38 42 46 50 54 58

06:59:06 PRINT GOOD T200 TURB THROTTLE STEAM PRESS -3.4 PSIG
 06:59:21 PRINT LRL T206 TURB 1ST STAG SHELL PRES W PSIG

H L
 H L

MISSED K-13 POSITION

FACTS (CONT'D)

- PERSONNEL ACTIVITIES POST SCRAM
 - U2N OPER: RX PRESS, LEVEL CONTROL & RX S.D.
 - U2D OPER: OD-7 INSERT RODS (REACTIVITY CONTROL)
 - CDN OPER: RCIC & CONTAINMENT CLG.
 - CDD OPER: CENTER DESK
 - SE D&N: MONITOR CR ACTIVITIES (LEVEL/PRESS)
 - SCRE D: STA.
- SRM'S IN CORE. U2 N OPERATOR VERIFIED RX S/D
- SE'S & SCRE D KNEW RX S/D
- FULL CORE DISPLAY HAS MULTIPLE LITES DURING SCRAM
- RX PRESS. & LEVEL NOT STABLE FOLLOWING SCRAM
- U2D OPER. INITIAL ACTION TO PUT ALL RODS IN. STARTED WITH ROD AT POS. 02.

ROD K-13 FULL OUT - CONT'D

- CONCLUSIONS:
- FULL CORE DISPLAY FOLLOWING SCRAM IS CONGESTED WITH INFO.
 - OPERATING PERSONNEL CONCENTRATED PROPERLY ON MOST IMPORTANT PARAMETERS NEEDING ATTENTION
 - x RX S/D x PRESS/LEVEL
 - RX SCRAM PROCEDURE WAS FOLLOWED BY U2 ~~N~~ OPER.
 - U2D OPERATOR REVIEWED ROD POSITIONS (OD-7). MISSED K-13 AT POS. 48. WORKED ON ROD AT POS. 02. MINDSET.

- CORR. ACT:
- INSTRUCT ALL OPER. PERSONNEL TO MAKE THOROUGH REVIEW OF OD-7 FOLLOWING SCRAM. (DONE AT QC)
 - REVIEW OPTIONS FOR OD-7
 - REVIEW RWM BYPASS PROCEDURES
 - DCR DR ADDRESS FULL CORE DISPLAY CONGESTION

ISSUE: SHIFT TURNOVER

- FACTS:
- SCRE TURNOVER AT 6:25/A WHILE RX PRESS INCREASING AND RODS COULD NOT BE INSERTED (RWM BLOCK)
 - ALL TURNOVERS REVIEWED AS PART OF INVESTIGATION

<u>POSITION</u>	<u>TIME OF TURNOVER</u>	<u>ACT. PRIOR TO TURNOVER</u>	<u>ACTIVITY AFTER TURNOVER</u>
U 1 OPER. NIGHTS DAYS	6:45 AM	START. U-2 HPCI -	OFFERED HELP ON U-2 U-1 CONTROLS
U 2 OPER. NIGHTS DAYS	AFTER 7:30 AM	PRESSURE/LEVEL CONTROL RODS	WENT HOME U-2 CONTROLS
CENT. DESK OPER. NIGHTS DAYS	AFTER 7:30 AM	RCIC/TORUS CLG -	WENT HOME CENTER DESK
SHIFT ENGINEER NIGHTS DAYS	6:15 AM	IN CONTRL RM. -	ASST. ON U-2 MONITORED U-2
SCRE NIGHTS DAYS	6:25 AM	IN CONTROL ROOM -	HELPED UNTIL 6:50 AM STA FOR U-2

- CONCLUSIONS:
- SCRE TURNOVER UNTIMELY
 - ALL OTHER TURNOVERS SATISFACTORY
- CORR. ACT:
- WITH EVENT AS EXAMPLE, INSTRUCTED ALL OPERATING PERSONNEL AT GC NOT TO CONDUCT TURNOVERS DURING TRANSIENTS
 - CORP. OFC. WILL MODIFY "CONDUCT OF OPERATIONS" DIRECTIVE

ISSUE:

SCRE PERFORMANCE

FACTS:

- 6:25/A SCRE N CONDUCTED STO WITH SCRE D
DURING UNSTABLE RX CONDITIONS
- SCRE N HAD DIFFICULTY CONTACTING SE N BY
TELEPHONE IN HIS OFFICE
- SCRE'S @ QC UNCOMFORTABLE IN ROLE OF CONTROL
ROOM SUPERVISOR DURING TRANSIENTS (LACK OF
EXPERIENCE)
- SCRE D DID NOT RECOGNIZE CR K-13 WAS AT POS.
48 FOLLOWING SCRAM
- AMBIGUOUS INSTRUCTIONS FOR ALL STATIONS RE.
TRANSITION FROM CONT. RM. SUPV. TO STA ROLE
- SCRE D OR N DID NOT RECOGNIZE THAT U1 N
OPER. LEFT U1 TO HELP ON U2

CONCLUSIONS:

- QUESTIONABLE (WEAK) SCRE PERFORMANCE
- SCRE D PERFORMANCE AS STA FOLLOWING SCRAM
WAS SATISFACTORY

SCRE PERFORMANCE - CONT'D

CORRECTIVE

ACTIONS:

INSTRUCT SE/SCRE'S

1) LESSONS LEARNED FROM THIS EVENT (ALL
STA.: DONE AT QC)

x OPERATOR LEAVE UNIT

x NO STO DURING TRANSIENT

x ALL RODS IN

2) SCRE NOTIFIES SE IMMEDIATELY GIVEN
UNEXPECTED EVENT (@ QC FOR NOW: DONE)

3) SE MONITOR CR ACTIVITIES MORE CLOSELY
(@ QC FOR NOW: DONE)

4) CORP. OFC. REVIEW APPLICABILITY OF 2) &
3) FOR ALL STATIONS

5) CLARIFY SCRE ROLE SUCH THAT SCRE
BECOMES STA FOLLOWING A RX SCRAM (ALL
STATIONS)

- CORP. OFC. REVIEW SHIFT ORGANIZATION WITH
SPECIAL EMPHASIS ON:

1) ROLE OF SCRE

2) NEED FOR SHIFT SUPERINTENDENT

ISSUE:

- SIMILAR EVENT(S) MIGHT OCCUR AT OTHER STATIONS
- OPERATOR LEAVING OPERATING UNIT CONTROLS TO HELP ON UNIT EXPERIENCING TRANSIENT
 - SCRE PERFORMANCE
 - STUCK ROD OVERLOOKED FOLLOWING SCRAM
 - HCU ISOLATION VALVES IMPORTANCE (BWR)

FACTS:

- CORP. OFC. DIRECTIVES, STATION PROCEDURES, INPO GUIDANCE, AND NRC GUIDANCE LACK CLARITY WITH DEFINITION OF "AT-THE-CONTROLS" DURING TRANSIENT
- THERE IS DISAGREEMENT AMONGST MGMT. RE ROLE SCRE DURING SCRAM
- QC HAS HAD MOST DIFFICULTY FILLING SCRE POSITION
- SCRE AS CONTROL ROOM SUPERVISOR HAS HAD VARIED ACCEPTABILITY ACROSS STATIONS
- CORP. OFC. JUST COMPLETED SCRE POSITION REVIEW AND MODIFIED POSITION DESCRIPTION

CONCLUSIONS: THIS EVENT PROVIDES SEVERAL GOOD EXAMPLES OF LESSONS LEARNED WHICH CAN LEAD TO IMPROVED OVERALL PERFORMANCE OF CONTROL ROOM PERSONNEL

SIMILAR EVENT(S) MIGHT OCCUR AT OTHER STATIONS (CONT'D)

CORRECTIVE
ACTIONS:

- PSE AND LER WILL BE USED AS TAILGATE SOURCE FOR ALL CECO STATIONS
- WILL CONSIDER LOCKWIRE ON HCU CRITICAL VALVES AT ALL CECO STA.
- WILL CLARIFY WRITTEN INSTRUCTION RE "AT-THE-CONTROLS" DURING TRANSIENT FOR ALL CECO STA. (DIRECTED BY CR SUPV.)
- WILL RE-REVIEW SCRE POSITION AT ALL STATIONS (PER SCRE PERF. CONCERN)
- WILL REVIEW SHIFT ORGANIZATION (PER SCRE PERF. CONCERN)

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