

APR 27 1988

MEMORANDUM FOR: Charles E. Rossi, Director
 Division of Operational Events Assessment
 Office of Nuclear Reactor Regulation

FROM: Wayne Lanning, Chief
 Events Assessment Branch
 Division of Operational Events Assessment
 Office of Nuclear Reactor Regulation

SUBJECT: THE OPERATING REACTORS EVENTS MEETING
 April 26, 1988 - MEETING 88-17

On April 26, 1988 an Operating Reactors Events meeting (88-17) was held to brief senior managers from NRR, RES, AEOD and Regional Offices on events which occurred since our last meeting on April 19, 1988. The list of attendees is included as Enclosure 1.

The events discussed and the significant elements of these events are presented in Enclosure 2. Enclosure 3 presents a report-to-date of long-term followup assignments and a summary of reactor scrams. No significant events were identified for input to NRC's performance indicator program. No events were suggested for long-term followup.

Original Signed by
 Wayne D. Lanning

Wayne Lanning, Chief
 Events Assessment Branch
 Division of Operational Events Assessment
 Office of Nuclear Reactor Regulation

Enclosures:
 As stated

cc w/Enclo.:
 See Next Page

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 OPERATING
 EXPERIENCE*

OFC	:EAB:NRR	:C:EAB:NRR	:	:	:	:	:
NAME	:MLReardon	:WLanning	:	:	:	:	:
DATE	:04/27/88	:04/29/88	:	:	:	:	:
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OFFICIAL RECORD COPY

T. Murley, 12G-18
F. Miraglia, 12G-18
E. Jordan, AEOD
E. Beckjord, NL-007
W. Russell, RI
B. Davis, RIII
J. Nelson Grace, RII
R. D. Martin, RIV
J. B. Martin, RV
W. Kane, RI
L. Reyes, RII
E. Greenman, RIII
J. Callan, RIV
D. Kirsch, RV
S. Varga, 14E-4
D. Crutchfield, 13A-2
B. Boger, 14A-2
G. Lainas, 14H-3
G. Holahan, 13E-4
L. Shao, 8E-2
J. Partlow, 9A-2
B. Grimes, 9A-2
F. Congel, 10E-4
E. Weiss, AEOD
S. Black, 12E-4
T. Martin, 12G-18
J. Stone, 9D-4
R. Hernan, 13H-3
H. Bailey, AEOD
J. Guttmann, SECY
A. Thadani, 7E-4
S. Rubin, AEOD

J. Sniezek, 12G-18
J. Forsyth, INPO
J. Calvo, 13D-18
M. Harper, EWS-263
B. Davis, RIII
L. Kintner, 14B-20
E. Adensam, 14B-20
J. Wigginton, 13D-18



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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A handwritten signature in dark ink, appearing to read "Wayne Lanning", written over a circular stamp or mark.

Wayne Lanning, Chief
Events Assessment Branch
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

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As stated

cc w/Enclo.:
See Next Page

LIST OF ATTENDEES

OPERATING REACTORS EVENTS BRIEFING (88-17)

April 26, 1988

<u>NAME</u>	<u>ORGANIZATION</u>	<u>NAME</u>	<u>ORGANIZATION</u>
A. Vietti-Cook	OSP/CP	P. Baranowsky	NRR/DOEA
M.L. Reardon	NRR/DOEA	R. Lobel	NRR/DOEA
C. Schulten	NRR/DOEA	E. Tomlinson	NRR/DRSP
T. Greene	NRR/DOEA	C. Miller	OCM/FB
W. Minners	NRR/DRPS		

OPERATING REACTORS EVENTS BRIEFING 88-17

EVENTS ASSESSMENT BRANCH

LOCATION: 12-B-11 WHITE FLINT

TUESDAY, APRIL 26, 1988, 11:00 A.M.

THIS INFORMATION MAY ALSO BE OBTAINED BY DIALING EXTENSION 21449.

WATERFORD 3

LOOSE PART FROM MSIV IN STEAM LINE

WATERFORD 3

CEA INADVERTENTLY WITHDRAWN DURING
REFUELING

GRAND GULF 1

LOOSE PARTS INDICATION

WATERFORD 3
LOOSE PART FROM MSIV IN STEAM LINE
APRIL 10 - 11, 1988

PROBLEM

A GATE GUIDE CAME LOOSE FROM THE MSIV OF THE "B" STEAM GENERATOR. PORTIONS BECAME LODGED IN THE STRAINER FOR THE MAIN TURBINE THROTTLE VALVE.

CAUSE

FASTENERS HOLDING THE RAIL TO THE SKIRT FAILED - INVESTIGATION ONGOING.

SIGNIFICANCE

THE VALVE AFTER FAILURE COULD STILL PERFORM ITS FUNCTION. POTENTIAL FOR DEGRADED PERFORMANCE.

DISCUSSION

- o MSIVs MADE BY ACF INDUSTRIES. SIMILAR MSIVs USED AT SAN ONOFRE 2/3.
- o GUIDE IS 2 1/2 FEET X 2 INCHES X 3 INCHES.
- o PARTS OF BROKEN FASTENERS FOUND WITHIN STEAM LINE.
- o ONE DOWNSTREAM GUIDE FOUND IN STRAINER IN TWO PIECES.
- o ONE DOWNSTREAM GUIDE FOUND IN VALVE BODY.
- o UPSTREAM GUIDES INTACT BUT ABOUT HALF OF THE FASTENERS HAD FAILED.
- o POSSIBLE ROOT CAUSES ARE UNDER INVESTIGATION:

FOLLOWUP

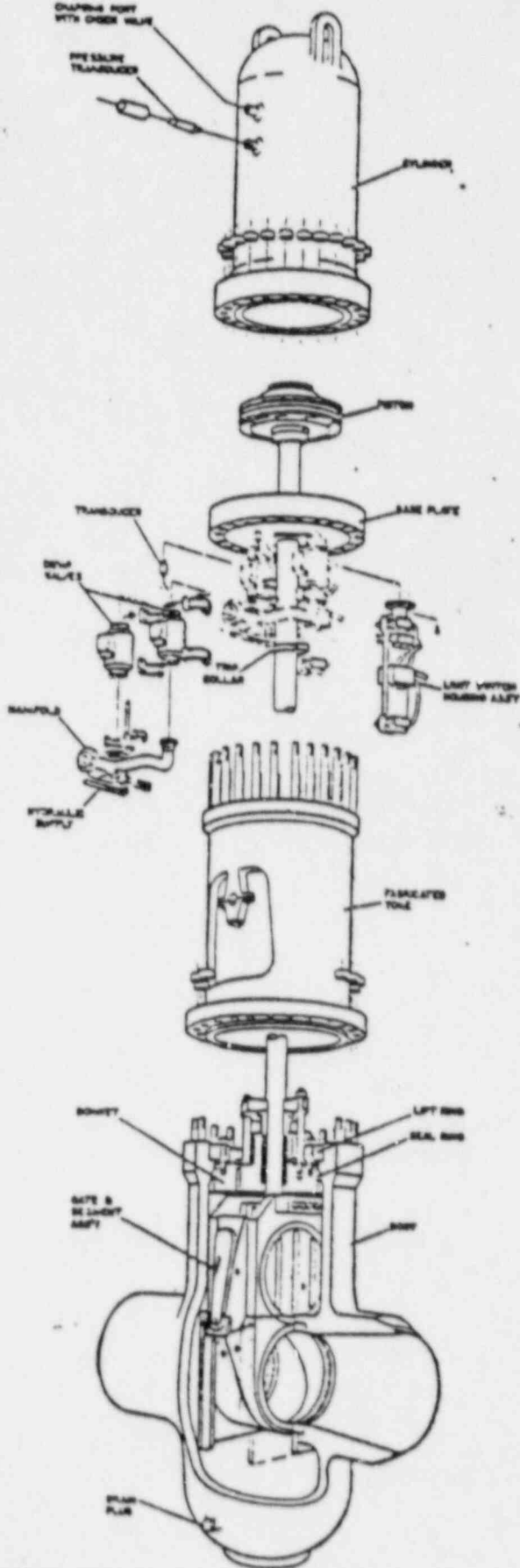
- o REGION IV HAS THE LEAD.
- o EMEB WILL TAKE THE LEAD IN ANY GENERIC ACTION.
- o EAB CONTACTED REGION V ABOUT SAN ONOFRE 2/3.

CONTACT: E. TOMLINSON

REFERENCE: MORNING REPORT 04/11/88

PREVIOUS REVISION	PRESENT REVISION	PAGE	DATE EFFECTIVE
P077	P136	NO. 8 CONT. 9 ON	10-2-80

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MAIN STEAM
ISOLATION VALVE

WATERFORD 3

FIGURE 1

WATERFORD 3
CEA INADVERTENTLY WITHDRAWN DURING REFUELING
APRIL 23-24, 1988

PROBLEM

- o ON APRIL 23, 1988 (0530) THE LICENSEE NOTICED THAT ONE OF THE FIVE-FINGERED CONTROL ELEMENT ASSEMBLIES (CEA's) WAS STILL LATCHED TO THE UPPER GUIDE STRUCTURE ASSEMBLY (UGSA) WHILE LIFTING THE UGSA FROM THE VESSEL.

CAUSE

UNKNOWN

SAFETY SIGNIFICANCE

WORST CASE SCENARIO IS A DROPPED CEA OVER THE CORE. NO REACTIVITY CONCERN DUE TO HEAVILY BORATED CONDITIONS DURING REFUELING

DISCUSSION

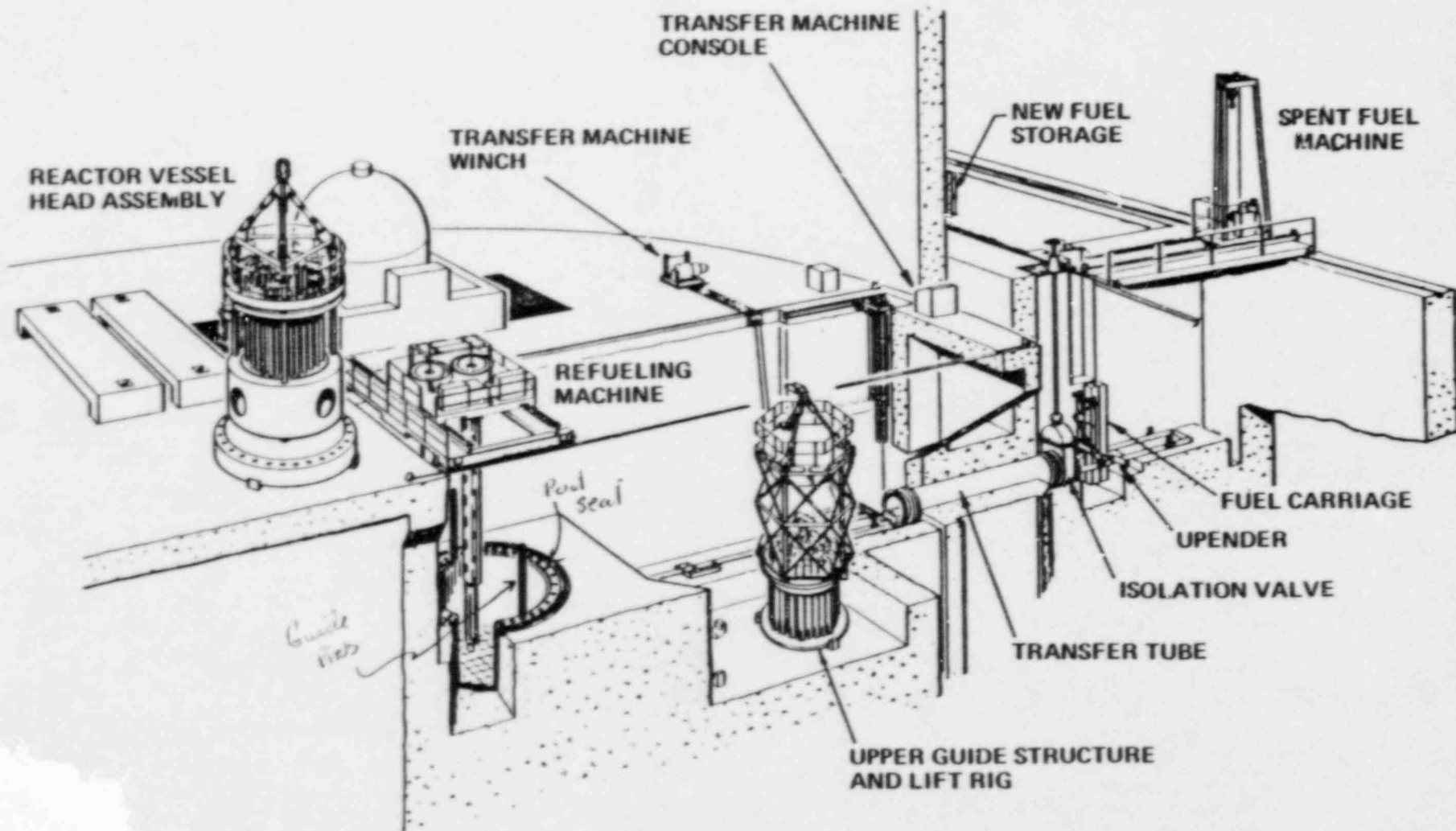
- o USING A SPECIAL TOOL AND CHAIN HOIST, THE LICENSEE MANAGED TO PULL THE CEA EXTENSION SHAFT INTO THE UGSA WITH 15 INCHES EXTENDING OUT THE BOTTOM OF THE UGSA.
- o LICENSEE USED A SUBMARINE-EQUIPPED CAMERA TO VERIFY WHICH CEA WAS STILL LATCHED.
- o THE LICENSEE MANAGED TO MOVE THE UGSA OVER THE REACTOR VESSEL FLANGE AND TO THE REFUELING WATER POOL AND DE-LATCHED THE CEA.
- o CEA REMAINS AT THE BOTTOM OF THE POOL UNTIL OFFLOADING OF FUEL IS COMPLETE.

FOLLOWUP

- o LICENSEE PLANS TO VISUALLY INSPECT CEA FOR DAMAGE AND TO SEE IF THEY ARE ABLE TO REUSE THIS CEA.
- o THIS HAS HAPPENED AT OTHER PLANTS (CRYSTAL RIVER AND ANO-1).

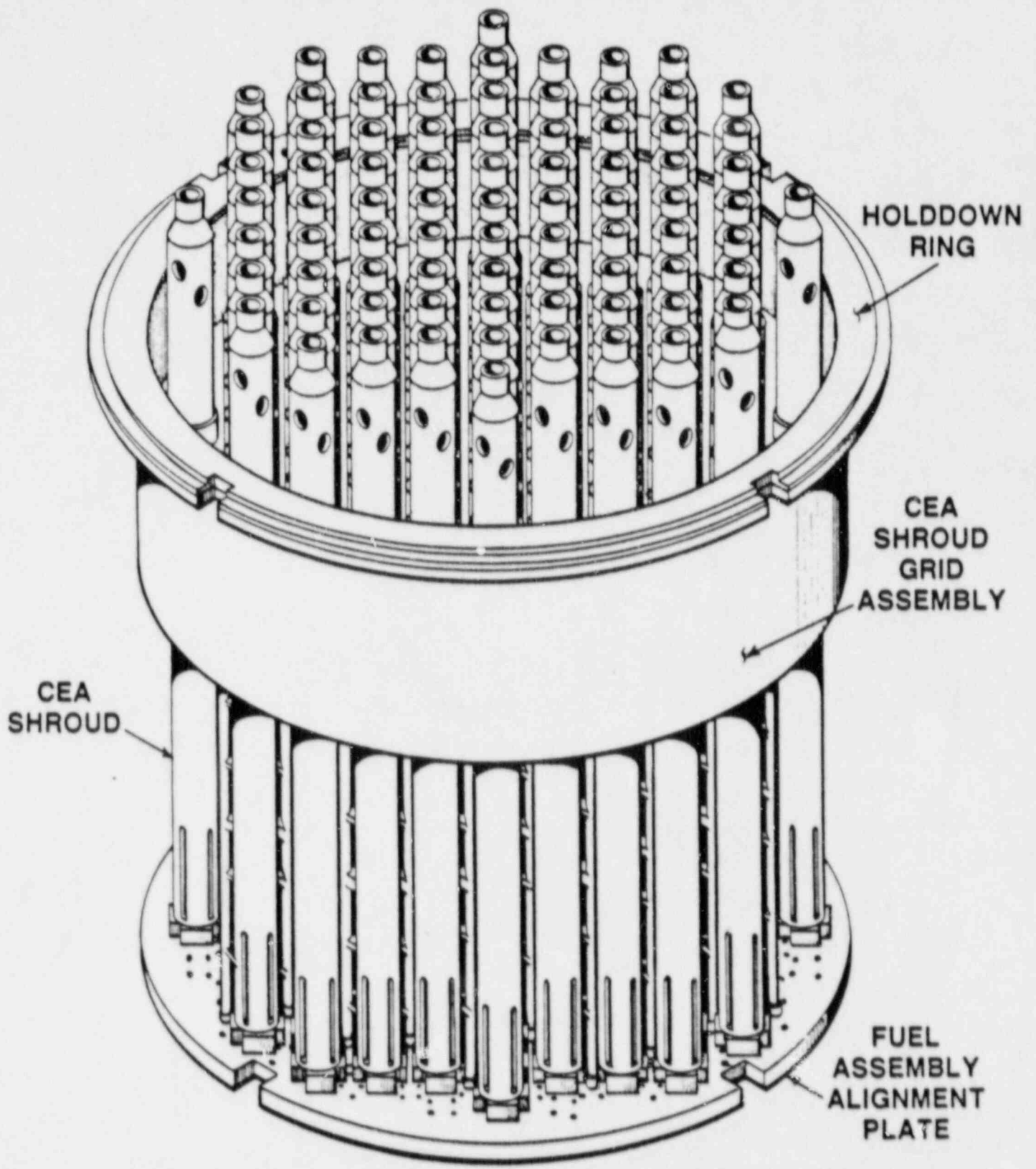
CONTACT: J. THOMPSON

REFERENCE: MORNING REPORT 04/25/88



FUEL HANDLING EQUIPMENT ARRANGEMENT

(TYPICAL)



UPPER GUIDE STRUCTURE ASSEMBLY

(TYPICAL)

GRAND GULF 1
LOOSE PARTS INDICATION
APRIL 9, 1988

PROBLEM

LOOSE PARTS MONITORING SENSOR PICKED UP NOISE IN THE "B" RECIRCULATION LOOP.

CAUSE

SOURCE IS THOUGHT TO BE A VIBRATING PART IN FLOW CONTROL VALVE.

SIGNIFICANCE

POTENTIAL TO DAMAGE FLOW CONTROL VALVE. ALSO PART CAN DISENGAGE AND DAMAGE RECIRCULATION PUMP, JET PUMP, VALVES, FUEL RODS, OR ANY COMPONENT OR EQUIPMENT THE PART COMES IN CONTACT WITH.

DISCUSSION

- o MAINTENANCE WORK PERFORMED ON FLOW CONTROL VALVE LAST REFUELING OUTAGE.
- o ON 04/09/88 INCREASED POWER FROM 70% TO 100%.
- o LOOSE PARTS MONITORING SENSORS PICKED UP NOISE IN "B" RECIRCULATION LOOP.
- o TWO SENSORS: ONE LOCATED 20 FEET DOWNSTREAM OF FLOW CONTROL VALVE AND ONE LOCATED 20 FEET DOWNSTREAM OF SUCTION ISOLATION VALVE.
- o ON 04/20/88 NRR WAS INFORMED.
- o B&W REPRESENTATIVES ON SITE REFINING ANALYSIS OF NOISE.
- o CONCLUSIONS ARE:
 - (A) NOISE COMING FROM FLOW CONTROL VALVE IN PIPING OF "B" RECIRCULATION LOOP.
 - (B) SOUNDS LIKE METAL-TO-METAL CONTACT.
- o LICENSEE HAS CHECKED ALL RECIRCULATION PUMP PARAMETERS AND FOUND THEM NORMAL.
- o LICENSEE HAS VARIED FLOW IN RECIRCULATION PUMP SEAL, RWCU SYSTEM AND CRD. ALSO PERFORMED JET PUMP SURVEILLANCE TESTING. NOISE REMAINED THE SAME.

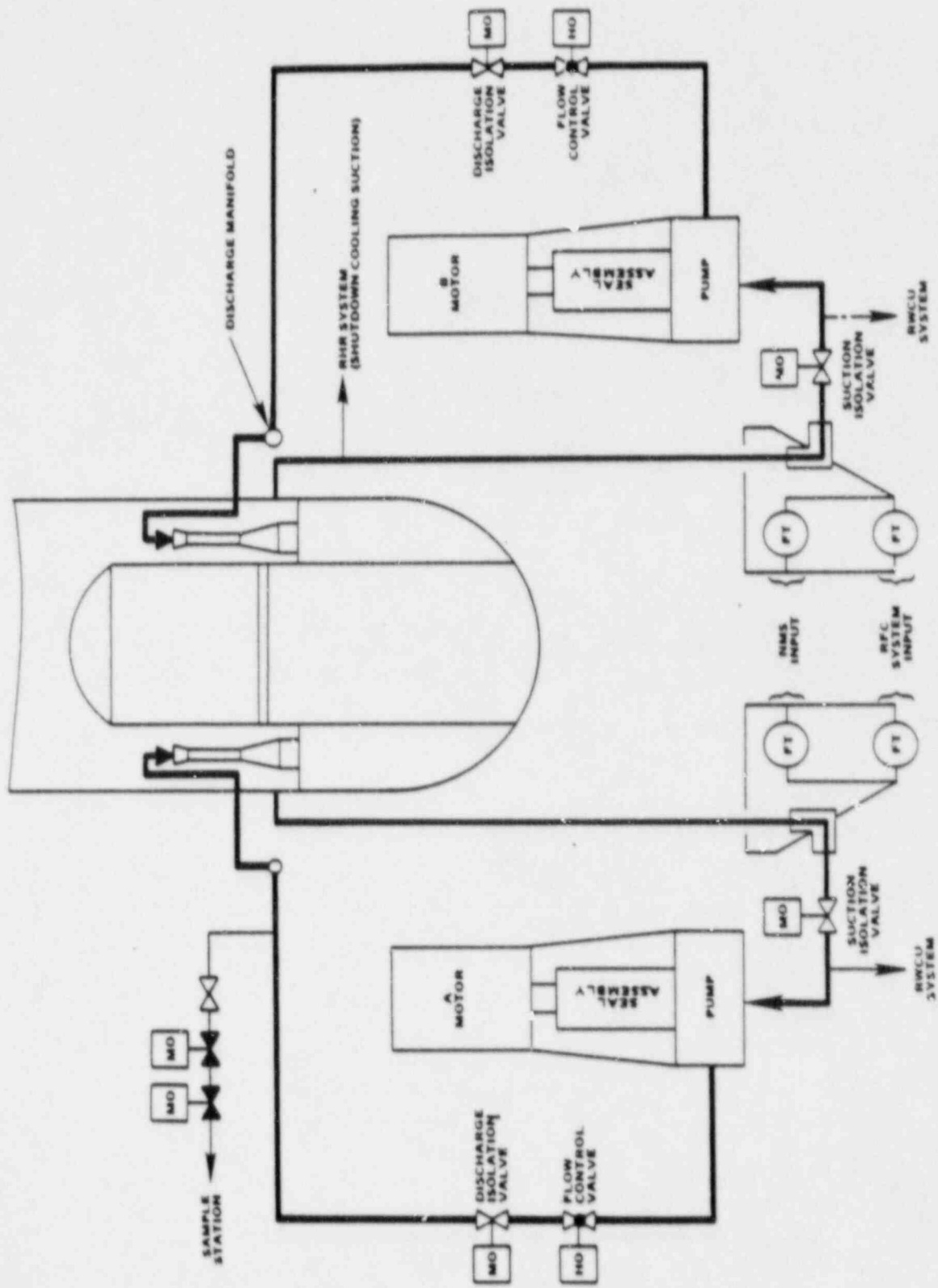
CONTACT: T. GREENE

REFERENCE: MORNING REPORT 04/21/88

- o LICENSEE REDUCED FLOW IN "B" RECIRCULATION LOOP TO 85%. NOISE GREATLY REDUCED.
- o LICENSEE HAS REQUESTED GE TO DETERMINE WHAT ADDITIONAL INSTRUMENTS ARE NEEDED TO MONITOR FLOW CONTROL VALVE AND ASSESS POSSIBLE CAUSES OF NOISE IN FLOW CONTROL VALVE.

FOLLOWUP

THE REGION AND EAB ARE CONTINUING TO FOLLOW EVENT.



GRAND GULF 1

RECIRCULATION SYSTEM

APRIL 26, 1988
STATUS REPORT ON LONGTERM FOLLOWUPS ASSIGNED

ORGANIZATION	BACKLOG OVERVIEW (LAPSED TIME IN MONTHS)			MONTHLY ACTIVITIES	
	LONGTERM FOLLOWUPS GREATER THAN 6 MO.	LONGTERM FOLLOWUPS 3 TO 6 MO.	LONGTERM FOLLOWUPS LESS THAN 3 MO.	ACTIONS ADDED APRIL 1988	ACTIONS COMPLETED APRIL 1988
AEDD	0	0	1	0	0
EAB	0	0	1	0	0
EEDD	0	0	0	1	0
EMTB	0	1	1	0	0
HLEB	0	0	1	0	0
ICSD	0	2	0	0	1
OTSB	0	1	0	0	0
PD2-2	1	0	0	0	0
PD2-3	1	0	0	0	0
PD2-2	1	0	0	0	0
PD5	0	2	0	0	0
R111	0	0	1	0	0
RV1B	1	4	1	0	0
SELB	1	3	2	0	1
SICB	0	0	1	0	0
SE1B	2	0	0	1	0
SE1B	1	2	1	1	0
TOTAL	9	15	10	3	2

NOTE: An event assigned for longterm followup may have been assigned to multiple branches and a single TAC may have been assigned to similar events at multiple plants, i.e., TAC #67344 was assigned to HF1B and SICB for events at Beaver Valley 2, Calvert Cliffs 2, and Rancho Seco 1.

REACTOR SCRAM SUMMARY
WEEK ENDING 04/24/88

I. PLANT SPECIFIC DATA

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI- CATIONS	YTD	YTD	YTD
							ABOVE 15%	BELOW 15%	TOTAL
04/12/88	KEMUNEE	1	25	A	PERSONNEL	NO	2	0	2
04/13/88	MILLSTONE	3	100	A	EQUIPMENT	NO	2	0	2
04/16/88	MCQUIRE	1	100	M	EQUIPMENT	NO	3	0	3
04/17/88	HATCH	2	79	A	UNKNOWN	NO	2	1	3
04/17/88	CALLAWAY	1	10	A	EQUIPMENT	NO	3	1	3
04/18/88	BYRON	1	98	A	UNKNOWN	NO	1	0	1
04/18/88	PALE VERDE	1	100	A	PERSONNEL	NO	1	0	1
04/19/88	HATCH	1	100	A	MAINTENANCE	NO	2	0	2
04/21/88	CALLAWAY	1	94	M	EQUIPMENT	NO	3	1	4
04/21/88	SALEM	2	100	A	EQUIPMENT	NO	1	0	1
04/22/88	SALEM	2	7	A	UNKNOWN	NO	1	1	2
04/24/88	VOOTLE	1	100	A	UNKNOWN	NO	4	0	4

NOTES

1. PLANT SPECIFIC DATA BASED ON INITIAL REVIEW OF EC.72 REPORTS FOR THE WEEK OF INTEREST. PERIOD IS MIDNIGHT SUNDAY THROUGH MIDNIGHT; SUNDAY SCRAMS ARE DEFINED AS REACTOR PROTECTIVE ACTUATIONS WHICH RESULT IN ROD MOTION, AND EXCLUDE PLANNED TESTS OR SCRAMS AS PART OF PLANNED SHUTDOWN IN ACCORDANCE WITH A PLANT PROCEDURE. THERE ARE 109 REACTORS HOLDING AN OPERATING LICENSE.

2. COMPLICATIONS: RECOVERY COMPLICATED BY EQUIPMENT FAILURES OR PERSONNEL ERRORS UNRELATED TO CAUSE OF SCRAM.

3. PERSONNEL RELATED PROBLEMS INCLUDE HUMAN ERROR, PROCEDURAL DEFICIENCIES, AND MANUAL STEAM GENERATOR LEVEL CONTROL PROBLEMS.

4. "OTHER" INCLUDES AUTOMATIC SCRAMS ATTRIBUTED TO ENVIRONMENTAL CAUSES (LIGHTNING), SYSTEM DESIGN, OR UNKNOWN CAUSE.