

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
 February 9, 1988 - MEETING 88-06

On February 9, 1988 an Operating Reactors Events meeting (88-06) was held to brief senior managers from NRR, RES, AEOD and Regional Offices on events which occurred since our last meeting on February 2, 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. The Enclosure 3 presents a tabulation of long-term followup assignments to be completed and a summary of reactor scrams. No significant events were identified for input to NRC's performance indicator program.

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

DISTRIBUTION
 Central File
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 Circulating Copy EAB Staff
 MLReardon, EAB
 Doudinot, EAB
 LKilgore, SECY, PDR

8803070181 880226
 PDR ORG NRRB
 PDR

*IDAR-5-1
 OPERATING
 EXPERIENCE*

JFC	:EAB:NRR	:C:EAB:NRR	:	:	:	:
NAME	:MLReardon	:WLanning	:	:	:	:
DATE	:02/24/88	:02/24/88	:	:	:	:

cc:

T. Murley
F. Miraglia
E. Jordan
E. Beckjord
W. Russell, RI
B. Davis, RIII
J. Nelson Grace, RII
R. D. Martin, RIV
J. B. Martin, RV
W. Kane, RI
L. Reyes, RII
C. Norelius, RIII
J. Callan, RIV
D. Kirsch, RV
S. Varga
D. Crutchfield
B. Boger
G. Lainas
G. Holahan
L. Shao
J. Partlow
B. Grimes
F. Congel
E. Weiss
S. Black
T. Martin
J. Stone
R. Hernan
H. Bailey
J. Guttman
A. Thadani
S. Rubin

J. Sniezek
J. Hopkins
L. Crocker
S. McNeil
R. Capra
J. Forsyth, INPO



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

FEB 26 1988

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A handwritten signature in cursive script, appearing to read "Wayne 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

LIST OF ATTENDEES

OPERATING REACTORS EVENTS BRIEFING (88-06)

February 9, 1988

<u>NAME</u>	<u>ORGANIZATION</u>	<u>NAME</u>	<u>ORGANIZATION</u>
W. Lanning	NRR/DOEA	J. Mauck	NRR/SICB
R. Lobel	NRR/DOEA	V. Thomas	NRR/ICSB
P. Baranowsky	NRR/DOEA	T. Silko	AEOD
E. Rossi	NRR/DOEA	J. Stoltz	NRR/PDI-4
M. Malloy	OSP/CPD	G. Holahan	NRR/DRSP
M.L. Reardon	NRR/DOEA	P.S. Tam	NRR/DRP
F.R. Orr	NRR/DRP	L.B. Marsh	NRR/DEST
R.A. Capra	NRR/PDI-I	R.W. Woodruff	NRR/DOEA
G. Hammer	NRR/DEST	C. Schulten	NRR/DOEA
J. Partlow	NRR/DRIS	K. Eccleston	NRR/DRPI-II
J. Thompson	NRR/DOEA	E. Murphy	NRR/EMTB
K. Jabbour	NRR/PD II-III	M. Williams	AEOD/TPAB
W. Troskoski	OEDO		

OPERATING REACTORS EVENTS BRIEFING 88-06

TUESDAY, FEBRUARY 9, 1988, 11:00 A.M.

THIS INFORMATION MAY ALSO BE OBTAINED BY DIALING EXTENSION 21161.

VOGTLE 1

GATE VALVE PRESSURE LOCKING PROBLEMS

CATAWBA 2

FOREIGN OBJECTS IN STEAM GENERATOR

CALVERT CLIFFS 2

LOSS OF ANNUNCIATORS DUE TO FIRE
(TELECON)

VOGTLE UNIT 1
GATE VALVE PRESSURE LOCKING PROBLEMS
FEBRUARY 3, 1988

PROBLEM

BOTH RHR CROSS-CONNECT TIE VALVES FAILED TO OPEN DURING SURVEILLANCE TESTING.

CAUSE

THE VALVES FAILED DUE TO PRESSURE LOCKING OF THE VALVE DISKS BY THERMAL EXPANSION OF WATER TRAPPED BETWEEN THE DISKS.

SIGNIFICANCE

DOUBLE DISK WEDGE-TYPE GATE VALVES ARE USED EXTENSIVELY THROUGHOUT SAFETY RELATED SYSTEMS AND MAY BE REQUIRED TO OPEN DURING OR FOLLOWING DESIGN BASIS EVENTS.

DISCUSSION

- o FEBRUARY 3, 1988 - TWO RHR CROSS-CONNECT VALVES FAILED TO OPEN DUE TO PRESSURE LOCKING OF THE VALVE DISKS. THE MOTOR OPERATORS BURNED-UP WHILE ATTEMPTING TO OPEN THE VALVES DURING SURVEILLANCE TESTING.
- o THIS PROBLEM IDENTIFIED IN 1977 BY NRC IE CIRCULAR 77-05, "LIQUID ENTRAPMENT IN VALVE BONNETS."
- o 1981, IE INFORMATION NOTICE 81-31, "FAILURE OF SI VALVES TO OPERATE AGAINST DIFFERENTIAL PRESSURE."
- o 1981, GE SIL LETTER #368, "RECIRCULATION DISCHARGE ISOLATION VALVE LOCKING."
- o 1983, INPO FOREIGN REACTOR EXPERIENCE REPORT, "FAILURE OF RHR SUCTION VALVES." NO SUGGESTED RECOMMENDATIONS TO ADDRESS DOMESTIC PROBLEMS.
- o JULY 1984, AEOD REPORT ON PRESSURE LOCKING OF FLEXIBLE DISK WEDGE-TYPE GATE VALVES.
- o AEOD AND IE AGREED TO ALLOW INPO TO ADDRESS THIS PROBLEM.
- o DECEMBER 1984, INPO REPORT (SOER 84-07) ON PRESSURE LOCKING OF FLEXIBLE DISK WEDGE-TYPE GATE VALVES.

CONTACT: J. THOMPSON

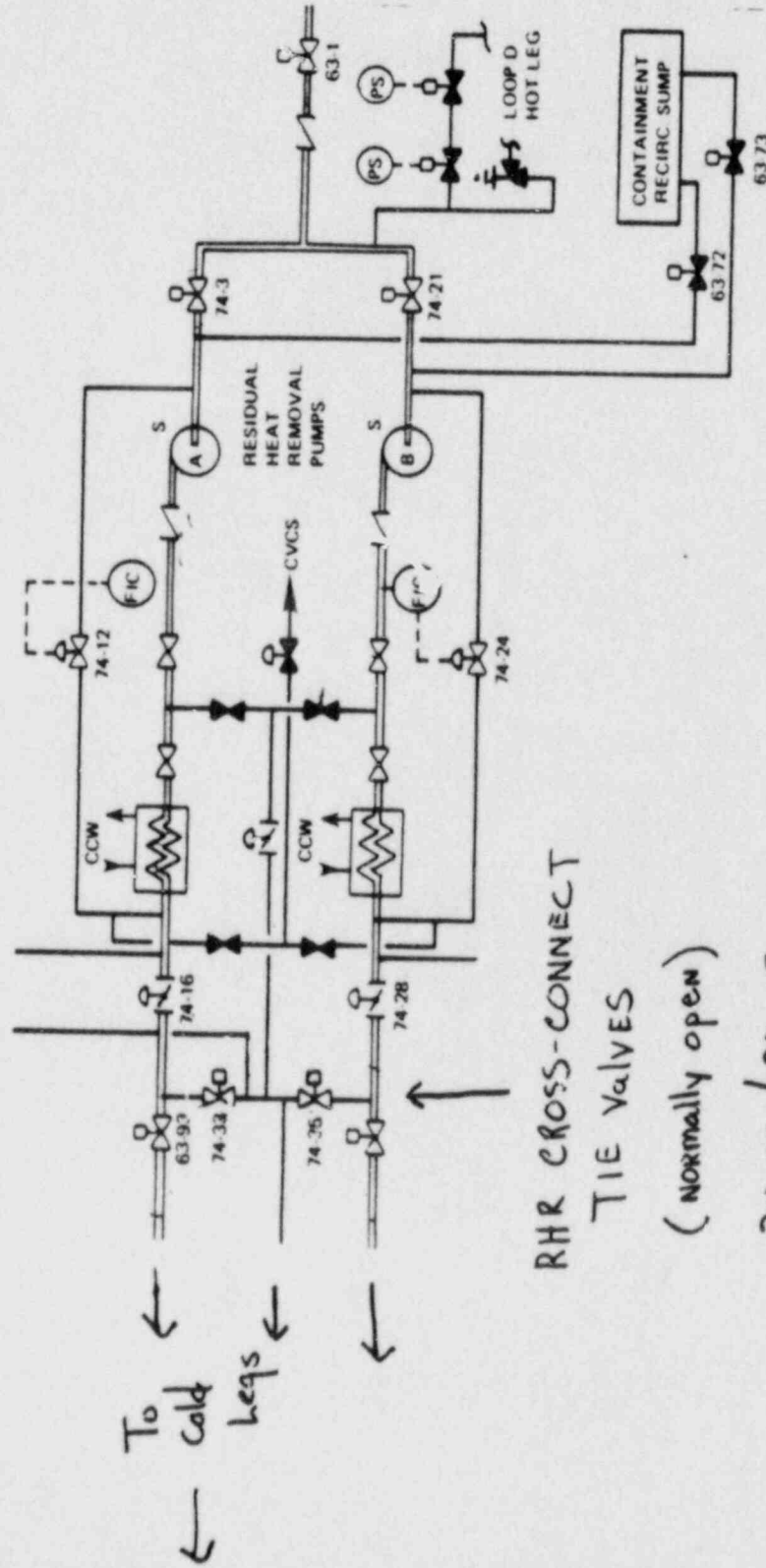
REFERENCE: 50.72# 11404

- o INPO SOER 84-7 DID NOT ADDRESS NORMALLY OPEN VALVES WHICH CLOSE AND CANNOT BE REOPENED.
- o THIS PROBLEM APPEARS TO BE LIMITED TO VALVES SUBJECTED TO PRESSURE/TEMPERATURE CHANGES (E.G., RHR (PWR/BWR)).

FOLLOWUP

- o INPO TEAM DISPATCHED TO VOGTLE SITE FOR EVENT ASSESSMENT AND TO GATHER NEW INFORMATION FOR ISSUANCE OF A SUPPLEMENT TO THE 1984 INPO SOER.
- o LICENSEE PERFORMING SAFETY ANALYSIS TO DETERMINE OTHER AFFECTED VALVES.
- o VOGTLE MODIFICATION TO THE RHR VALVES WILL BE TO DRILL A PRESSURE RELIEF HOLE IN VALVE DISK ON THE DOWNSTREAM SIDE.
- o EAB CONSIDERING INFORMATION NOTICE ON VOGTLE VALVE FAILURES DEPENDING ON THE ADEQUACY OF THE UPDATED INPO SOER.

RHR SYSTEM (Vogtle)



RHR CROSS-CONNECT
TIE VALVES
(Normally open)
74-33 / 74-35

CATAWBA 2
FOREIGN OBJECTS IN STEAM GENERATOR
JANUARY 22, 1988

PROBLEM

DEBRIS FOUND ON THE SECONDARY SIDE OF STEAM GENERATORS HAS APPARENTLY CAUSED TUBE THINNING.

CAUSE

INADEQUATE QA.

SIGNIFICANCE

- o POTENTIAL FOR TUBE FAILURES.
- o BREAKDOWN IN QA APPARENTLY AT WESTINGHOUSE AND DUKE.

DISCUSSION

- o DURING 8/87, EDDY CURRENT (EC) TESTING OF SGs A AND D INDICATED NO ANOMALIES.
- o DURING 12/87, EC TESTING OF SGs B AND C DISCLOSED WORN TUBE IN SG B.
- o VISUAL INSPECTION DISCLOSED PRESENCE OF 3 JACKING STUDS (2-3" LONG BY 2-1/4" IN DIAMETER) ON TUBE SHEET BETWEEN TUBE WRAPPER AND BUNDLE.
- o STUDS WERE APPARENTLY EXTRAS INADVERTENTLY LEFT IN SGs DURING FABRICATION.
- o SUBSEQUENTLY, VISUAL INSPECTION OF SGs A AND D DISCLOSED THE PRESENCE OF A CARBON STEEL BLOCK (1-1/2" X 2" X 3") AND A SEMICIRCULAR SLIVER OF STEEL 8" X 3/8" THICK.
- o IN SGs A AND D, PLUGGING OF 1 TUBE EACH WAS REQUIRED BECAUSE OF TUBE WALL WEAR.
- o ADDITIONAL DEBRIS FOUND INCLUDES SMALL GAUGE WIRE, 1 NAIL, A PIECE OF WELD ROD, WELD SLAG, AND ROCKS.
- o SOME OF THE METAL PIECES FOUND ARE BELIEVED TO BE FIT-UP PIECES.
- o PREVIOUS EC TEST DATA WERE REVIEWED FOR SGs A AND D AND A BAD TUBE WAS IDENTIFIED.
- o EC TESTING OF 100% OF PERIPHERAL TUBES IN SGs A AND D WAS PERFORMED.

FOLLOWUP

- o LICENSEE AND WESTINGHOUSE ARE DETERMINING CAUSE.
- o OEAB INTENDS TO DRAFT AN INFORMATION NOTICE.
- o OEAB WILL REQUEST STATUS OF UNIT 1 SGs.

CONTACT: R. WOODRUFF

REFERENCE: 50.72# 11407

LONGTERM FOLLOWUP ASSIGNMENTS TO BE COMPLETED

<u>ORGANIZATION</u>	<u>LONGTERM FOLLOWUPS OUTSTANDING</u>			
	<u>01/19/88</u>	<u>01/26/88</u>	<u>02/02/88</u>	<u>02/09/88</u>
AEOD	2	2	0	0
EAB	1	1	2	2
EMTB	1	1	0	0
ESGB	2	1	1	1
ICSB	3	2	2	2
OGCB	3	2	1	1
OSP	2	2	0	0
OTSB	2	2	2	1
PD2-2	1	1	1	1
PD2-3	1	1	1	1
PD3-2	1	1	1	1
PD5	0	2	2	2
RIII	0	0	0	0
RVIB	4	4	4	4
SELB	5	5	5	5
SPLB	6	6	5	5
SRXB	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
<u>TOTAL</u>	36	35	29	28

REACTOR SCRAM SUMMARY
WEEK ENDING 02/07/88

I. PLANT SPECIFIC DATA

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI- CATIONS	YTD	YTD	YTD TOTAL
							ABOVE 15%	BELOW 15%	
02/02/88	BIG ROCK POINT	1	0	A	PERSONNEL	NO	0	1	1
02/02/88	INDIAN POINT	3	100	M	EQUIPMENT	NO	1	0	1
02/04/88	WNP	2	100	A	PERSONNEL	NO	1	0	1
02/05/88	BIG ROCK POINT	1	10	M	UNKNOWN	NO	0	2	2
02/05/88	GINNA	1	0	A	EQUIPMENT	NO	0	1	1

NOTES

1. PLANT SPECIFIC DATA BASED ON INITIAL REVIEW OF 50.72 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.