



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

JAN 21 1988

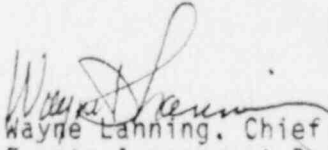
MEMORANDUM FOR: Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

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

SUBJECT: THE OPERATING REACTORS EVENTS MEETING
January 19, 1988 - MEETING 88-03

On January 19, 1988 an Operating Reactors Events meeting (88-03) was held to brief senior managers from NRR, RES, AEOD and Regional Offices on events which occurred since our last meeting on January 12, 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, a summary of reactor scrams, and a comparison of this week's statistics with industry averages. One significant event was identified for input to NRC's performance indicator program. Enclosure 4 provides a 50.72 report tabulation and summary for January 1 through January 10, 1988.


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

Enclosures:
As stated

cc w/Encl.:
See Next Page

8801290319 880121
PDR ORG NRRB PDR

TDH R-5-1
OPERATING
EXPERIENCE

cc:

T. Murley
F. Miraglia
E. Jordan
J. Taylor
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. Snizek
M. Slosson
R. Capra
E. Sylvester
E. Adensam

LIST OF ATTENDEES

OPERATING REACTORS EVENTS BRIEFING (88-03)

January 19, 1988

<u>NAME</u>	<u>ORGANIZATION</u>	<u>NAME</u>	<u>ORGANIZATION</u>
W. Lanning	NRR/DOEA	J. Snizek	NRR
M.L. Reardon	NRR/DOEA	W. Minners	RES/DRPS
D. Neighbors	NRR/PDR I-1	V. Benaroya	AEOD/DSP
R. Scholl, Jr.	NRR/DOEA	R. Lobel	NRR/DOEA
B. Boger	NRR/ADRI	R.A. Capra	NRR/PD I-1
E. Weiss	AEOD/DOA	E.G. Adensam	NRR/PD 2-1
R. Dudley	NRR/DRSP	L. Engle	OEDO
E. Rossi	NRR/DOEA	G. Lainas	NRR/ADR II
J. Roe	NRR/DLPQ		

OPERATING REACTORS EVENTS BRIEFING 88-03

TUESDAY, JANUARY 19, 1988

THIS INFORMATION MAY ALSO BE OBTAINED BY DIALING EXTENSION 27174.

INDIAN POINT 2

STEAM GENERATOR BOILED DRY
(AIT UPDATE)

BRUNSWICK 2

RECIRCULATION PIPE INDICATION

BRUNSWICK UNIT 2
RECIRCULATION PIPE INDICATION
JANUARY 11, 1988

PROBLEM

ISI ULTRASONIC TESTING DETECTED 4.8 INCH LONG 85% THRU WALL CRACK IN SAFE END NOZZLE WELD (WELD 2-B32-RR-12-ARES)(12 INCH DIAMETER, 0.875 INCH).

CAUSE

THE CAUSE IS UNKNOWN, BUT IT APPEARS TO HAVE STARTED AS INTERGRANULAR STRESS CORROSION CRACKING THE INCONEL WELD CLADDING.

SIGNIFICANCE

- o THIS CRACK IS DIFFERENT FROM THE PREVIOUSLY REJECTED INDICATIONS IN THAT IT HAS APPARENTLY PASSED THRU SOME OF THE LOW ALLOY STEEL I.E, NOT LIMITED TO WELD REGION. (A SIMILAR EVENT TOOK PLACE IN TAIWAN.)

DISCUSSION

- o NEW INSPECTION TECHNIQUE (SAME AS BEING REQUIRED FOR ALL BWR IN GENERIC LETTER NOW BEING PREPARED) WAS USED.
- o REVIEW OF 1986 AND 1984 DATA SHOWS THAT THIS IS NOT A NEW INDICATION.
- o BECAUSE OF OLDER TEST TECHNIQUES, PREVIOUS TESTS DID NOT SHOW THE COMPLETE CRACK. THEREFORE, IT WAS PREVIOUSLY CLASSIFIED AS A SUB-SURFACE INDICATION.

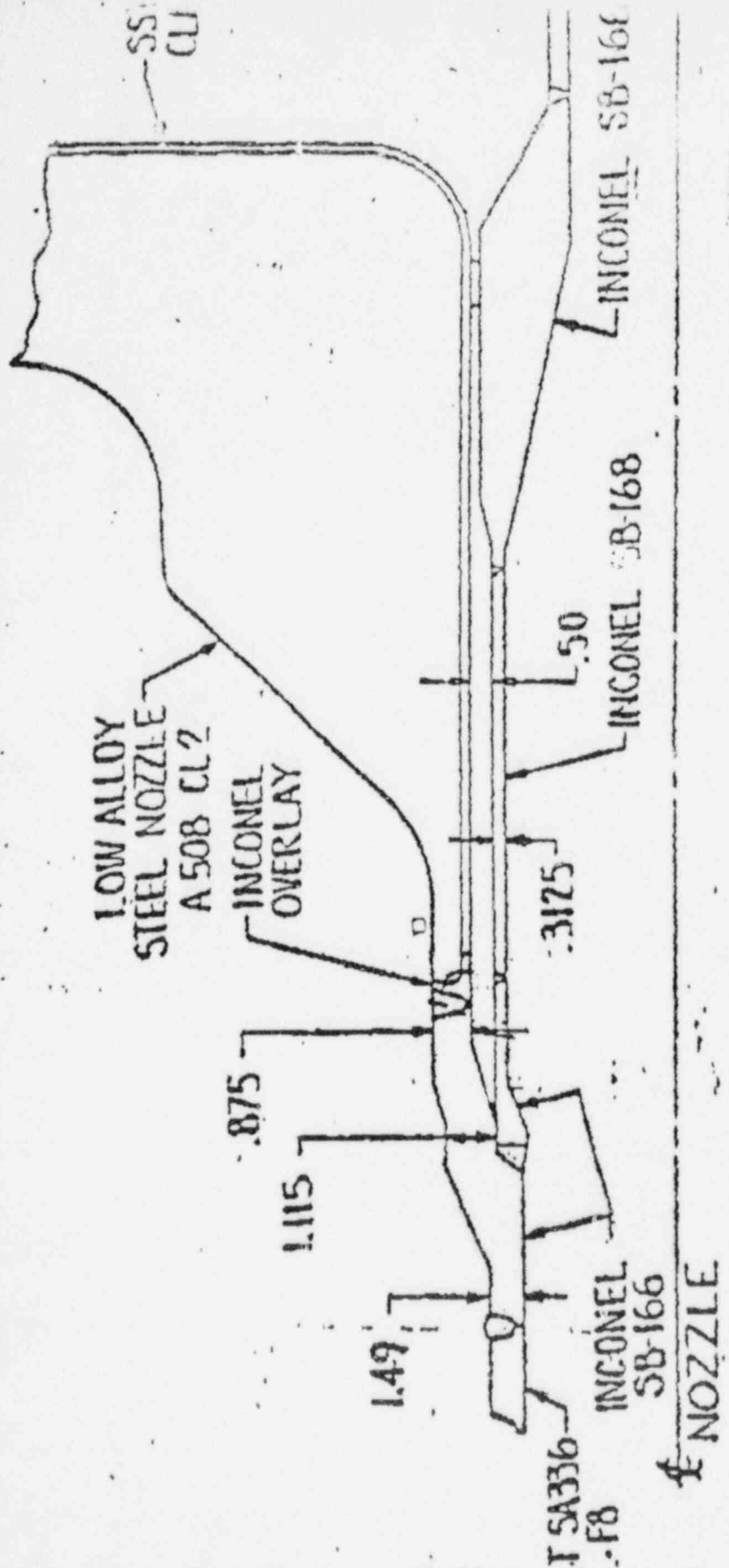
FOLLOWUP

- o BRUNSWICK UNIT 1 ISI DATA IS GOING TO BE REVIEWED FOR SIMILAR PROBLEMS.
- o BRUNSWICK UNIT 2 DATA IS BEING REVIEWED. SEVEN OF TEN RISER WELDS HAVE BEEN INSPECTED WITH ONLY THIS ONE REJECTABLE INDICATION. THE OTHER THREE RISERS, BOTH CORE SPRAY NOZZLES AND BOTH JET PUMP INSTRUMENT NOZZLES WILL BE INSPECTED. BOTH 28" SUCTION NOZZLES HAVE BEEN INSPECTED WITHOUT REJECTABLE INDICATIONS.

CONTACT: R. SCHOLL

RECIRCULATION PIPE INDICATION (CONTINUED)

- o THE REPAIR HISTORY OF THE CRACKED WELD WILL BE REVIEWED AS WELL AS PAST RADIOGRAPHY FILMS.
- o C.Y. CHENG, CHIEF, MATERIALS ENGINEERING BRANCH IS RESPONSIBLE FOR LONG TERM PROGRAM DEVELOPMENT AND FOLLOWUP OF THIS EVENT.



TYPE 1B

BRUNSWICK II

CE Nuclear Energy

PROJECT:

CAROLINA POWER & LIGHT
BOLP - UNIT 2
131-48-38766

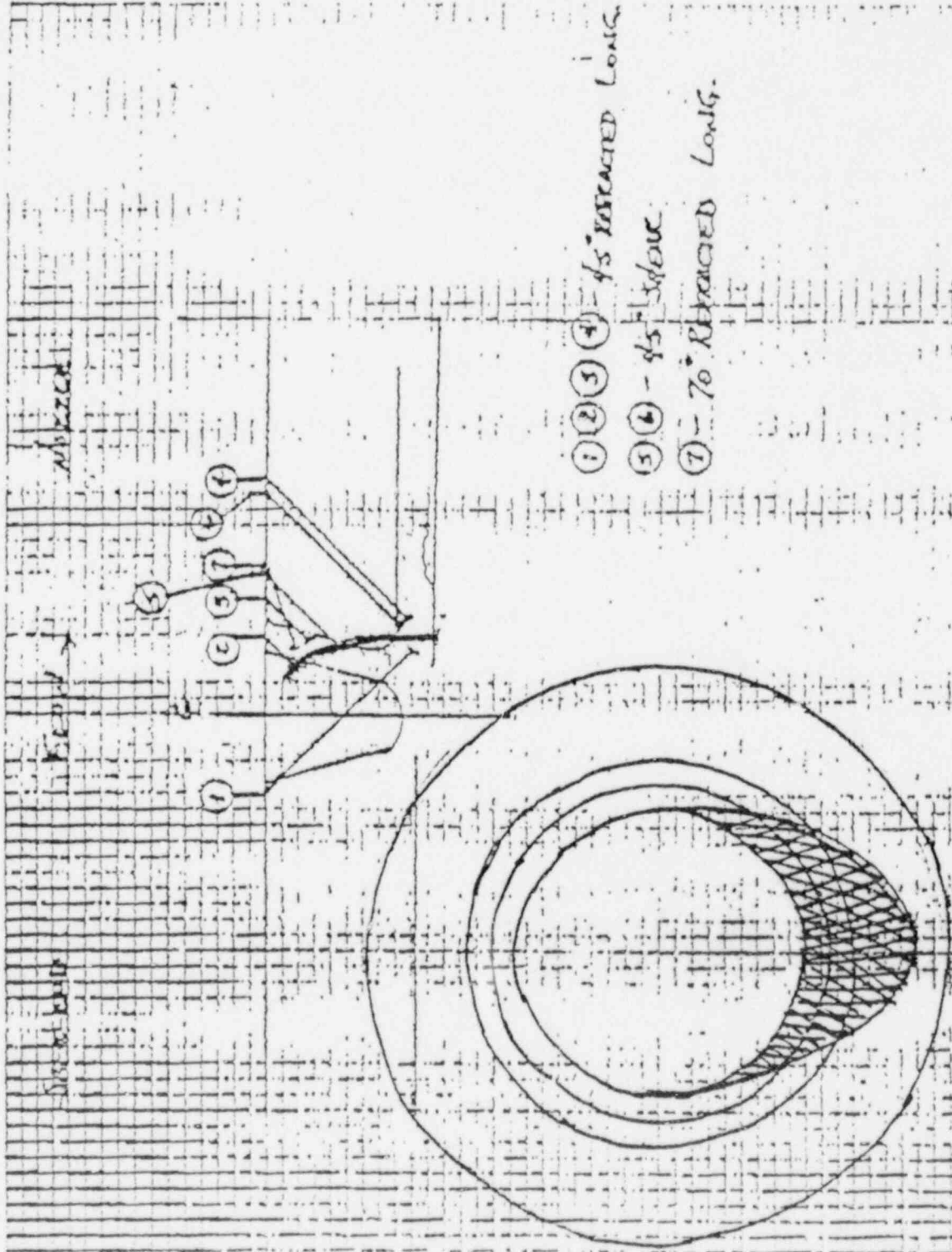
SYSTEM: *Recess* REPORT NO.:

2002-05-1202-ES

WELD NO.: UNIT NO.: *2*

SHEET NO.
2-002

FIGURE 1



- ① ② ③ ④ - 45° RETRACTED LONG.
- ⑤ ⑥ - 45° SHORT
- ⑦ - 70° RETRACTED LONG.

Thomas L. Hoffman
1987

LONGTERM FOLLOWUP ASSIGNMENTS TO BE COMPLETED

<u>ORGANIZATION</u>	<u>LONGTERM FOLLOWUPS OUTSTANDING</u>		
	<u>01/05/88</u>	<u>01/12/88</u>	<u>01/19/88</u>
SPLB	6	6	6
EMTB	1	1	1
OGCB	5	5	5
RVIB	4	4	4
SRXB	2	2	2
PD2-3	1	1	1
OSP	2	2	2
ESGB	2	2	2
AEOD	2	2	2
SICB	3	3	3
SELB	6	6	6
PD2-2	2	1	1
PD5	3	1	1
SICB	3	3	3
PD3-2	1	1	1
DPLQ	1	1	1
OTSB	0	1	1

REACTOR SCRAM SUMMARY
WEEK ENDING 01/17/88

I. PLANT SPECIFIC DATA

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI- CATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
01/12/88	MCQUIRE	2	100 M		EQUIPMENT	NO	1	0	1
01/13/88	NORTH ANNA	1	15 A		EQUIPMENT	YES	1	1	2
01/13/88	COOK	1	90 A		PERSONNEL	NO	1	0	1
01/13/88	TURKEY POINT	3	0 M		EQUIPMENT	NO	0	1	1
01/16/88	CATAWBA	1	0 A		EQUIPMENT	NO	0	1	1
01/17/88	VOGTLE	1	100 A		EQUIPMENT	NO	1	0	1

SUMMARY OF COMPLICATIONS

SITE	UNIT	COMPLICATIONS
NORTH ANNA	1	INDIVIDUAL ROD POSITION INDICATION MALFUNCTION

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.

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01/21/88

PERFORMANCE INDICATORS SIGNIFICANT EVENTS

PLANT NAME	EVENT DATE	EVENT DESCRIPTION	QTR SIGNIFICANCE
BRUNSWICK 2	01/02/88	PRIMARY CONTAINMENT ISOLATION VALVES IN TWO DRAIN TRANSFER LINES FAILED TO CLOSE	1 POTENTIAL FOR OR ACTUAL DEGRADATION OF CONTAINMENT OR SAFETY-RELATED STRUCTURES

ENCLOSURE 4

5072 REPORT SUMMARY
for
01/04/88 through 01/10/88

January 11, 1988
Page Number: 1

FACILITY	DOCKET NUMBER	EVENT NUMBER	EVENT DATE	POWER/CONDITION	RADIATION RELEASE	SALP CATEGORY	SYSTEM	COMPONENT	CAUSE	EFFECT	BRIEF DESCRIPTION
BRAUNWOOD 1	456	11167	01/08/88	CSD	N	2C	IN	SOL	U	E1	CONTROL RM VENT ISOL; RAD MON SPIKE DUE TO SOLEN
BROWNS FERRY 2	290	11148	01/07/88	CSD	N	3	PM	PUX	HX	E1	RHR SERV WTR PUMPS STARTED DURING CAL OF PRESS SW
BRUNSWICK 1	725	11121	01/04/88	100	N	4	PT	PX	TM	E1	SEC CONT ISOL & SSGTS START DURING EDG LOAD TEST
BRUNSWICK 2	724	11118	01/04/88	CSD	N	4	ZX	SEAL	U	TS	D/W HEAD FLANGE EXCEEDED LEAKAGE RATE DURING LLAT
CALLAWAY 1	480	11117	01/04/88	100	N	1,3	IM	PX	HX	SAE	DUE TO FOWTR ISOL VAL CLOSING DURING TROUBLESHOTS
CALLAWAY 1	480	11158	01/07/88	100	N	1	PD	FLO	HA	LOO1	RHR DROG CONNECT VALVE ACCIDENTALLY CLOSED
CLINTON 1	461	11128	01/05/88	100	N	6	1A	VA	U	NONE	OFFSITE SIRENS FOUND COS DURING MONTHLY TEST
CLINTON 1	461	11147	01/06/88	100	N	6	1A	1A	EN	FR	DURING TEST-14 SIRENS COS DUE TO FREEZING
CLINTON 1	461	11149	01/07/88	100	N	1	1N	111	U	E1	ELECT SPIKE ON CONT PURGE EXH RAD MON-SGGTS START
COOPER 1	298	11170	01/08/88	100	N	3	PX	PX	HX	E1	EDG START WHEN EDG POTENTIAL TRANSFORMER DOOR OPENED
CRYSTAL RIVER 2	302	11150	01/07/88	HSS	N	1	IT	111	U	SA	AFW START WHEN FOWTR DID NOT MAKE UP LEVEL DROP
CRYSTAL RIVER 3	302	11157	01/07/88	HSS	N	1,4	IT	FLSE	U	SA	AFW START (TURBINE DRIVEN CDM T) WHEN AFW TRIPPED
CRYSTAL RIVER 3	302	11172	01/08/88	1	N	1	FI	LOVZ	U	SA	AFW STARTED DUE TO S/U FW VALVE FAILURE
DIABLO CANYON 1	275	11168	01/08/88	100	N	3	PM	PX	HX	SA	FALSE RCS LOOP FLOW SIGNAL WHILE PUSHING 11MTR
DIABLO CANYON 1	275	11176	01/09/88	HSS	N	3	PM	PX	HX	E1	CONT VENTILATION ISOL DUE TO VOLTAGE TRANSIENT
FERMI 2	741	11119	01/04/88	CSD	N	4	PT	111	U	E1	FOUR O/S MSIV'S CLOSED DURING RAD MONITOR SURV
FERMI 2	741	11178	01/10/88	54	N	1	FI	PMP8	U	SAE	FOWTR PUMP TRIPPED; HPCI RCIO INJECTION; LE DECLAR
GRAND GULF 1	416	11181	01/10/88	93	N	1	SA	1PW1	U	SA	MAIN TURBINE TRIP WHEN 13" MAIN TRANSFORMER FAULTD
HATCH 2	766	11156	01/06/88	75	N	1,3,4	BN	13VZ	U	LOO6	RCIO & HPCI 1MOP-RCIO BEING RESTORED TO SERVICE
HOPE CREEK 1	254	11142	01/06/88	100	N	1	1N	111	U	DM	RADWASTE DISC RAD MON INADEQUATE-LOO ACTION DONE
MOORE 1	269	11151	01/07/88	76	N	1	FB	EXC	U	SAE	TURBINE TRIP DUE GENERATOR EXCITOR FAILURE-AFW ON
MOORE 1	269	11156	01/07/88	HSS	N	6	1A	111	EN	EX	15% OF SIRENS COS DUE TO COS STORM
MOLLESTONE 2	427	11121	01/05/88	CSD	N	4	1W	111	U	E1	TRAIN 1M1 E1 SIGNAL DURING LOSS OF POWER TEST
NINE MILE RT 2	410	11129	01/05/88	43	N	4	1N	111	U	EX	SGGTS EXH RAD MON COS-THEN RTR SLOS VENT SECURED
NORTH ANNA 1	778	11165	01/08/88	100	N	1	FR	PMP8	U	SAE	TRIP WHEN CIRC WATER PUMPS TRIPPED-AFW STARTED
PERRY 1	440	11175	01/06/88	CSD	N	4	OB	13VZ	U	TS	PASS ISOL VALVES FAILED LEAK RATE TEST
PERRY 1	440	11163	01/07/88	CSD	N	1	PD	PLO	PD	E1	RHR SHUTDOWN COOLING LOST FOR 18 MIN-ISOLATED
PILGRIM 1	293	11141	01/06/88	CSD	N	3	1W	PLY	LO	E1	RTR SLOS ISOL & SGGTS START
QUAD CITIES 1	254	11154	01/07/88	100	N					FR	RETRACT EVENT NO. 11161 AND 11177
SAVANO 1	312	11146	01/06/88	CSD	N	5	XF	PMPZ	PM	LOOZ	DECLARED FIRE PUMPS 1MOP DUE TO INCORRECT TEST

NOTE REPORT SUMMARY
for
01/04/88 through 01/10/88

January 11, 1988
Page Number: 1

FACILITY	DOCKET NUMBER	EVENT NUMBER	EVENT DATE	POWER/ CONDITION	RADIATION RELEASE	SALP CATEGORY	SYSTEM	COMPONENT	CAUSE	PLANT EFFECT	BRIEF DESCRIPTION
RIVER BEND 1	458	11140	01/06/88	100	N	1	PK	P2	HY	XX	ANNULUS RAD MONITORS DCS DUE TO SERV WTR VALVE SHUT
RIVER BEND 1	458	11179	01/10/88	100	N	4	PT	PK	PM	SA	SCRAM ON ATWS SIGNAL DURING SURV IN ATWS APT LOGIC
SALEM 1	272	11166	01/08/88	HGB	N	1,3	AB	CSO	U	UE	LEAKING CRAN COLUMN DISCOVERED-BEAL WELD
SALEM 1	272	11171	01/09/88	CSO	N	6	EL	XXX	U	XX	ENS TELEPHONE OUT OF SERVICE
SETUOYAH 1	327	11132	01/07/88	CSO	N					INFO	PRESS RELEASE DUE TO CRANK CALLER TO LOCAL RESIDENT
SHOREHAM 1	322	11137	01/06/88	CSO	N	1	ED	112	U	E1	POWER INTERRUPTION CAUSED FNCU ISOLATION
SOUTH TEXAS 1	498	11120	12/27/87	CSO	N	12				FR	RETRACT REPORT NO.10990
SOUTH TEXAS 1	498	11179	01/06/88	CSO	N	1,4	PT	P40	HP	E1	CR VENT RECIRC MODE STARTED WHEN WRONG BRKR OPENED
SOUTH TEXAS 1	498	11145	01/06/88	CSO	N	3	PM	PK	HP	XX	TWO CONT ISOL VALVES INOP DUE TO NOT DOING LLRT
SOUTH TEXAS 1	498	11177	01/10/88	CSO	N	1,3	16	ZZ	U	E1	CONTROL RM VENT IN RECIRC DUE TO TOXIC GAS MON DCS
BURR 1	380	11147	01/06/88	100	N	6	EL	XXX	U	XX	ENS & OFFSITE TELEPHONES OUT OF SERVICE
TROTAN 1	344	11149	01/08/88	100	N	1,3	TU	TS	U	SA	SPURIOUS SIGNAL ON ONE CH & ANOTHER OUT FOR MAIN
WATERFORD 3	382	11175	01/09/88	100	N	1,3	HH	118	U	LCO	BOTH TRAINS OF CONTROL RM EMER VENT INOP

January 11, 1988

Page Number: 3

SECURITY EVENT SUMMARY

for

01/04/88 through 01/10/88 -

FACILITY	DOCKET NUMBER	EVENT NUMBER	EVENT DATE
BIG ROCK POINT 1	155	11123	01/05/88
BROWNS FERRY 1	259	11164	01/07/88
CATAWBA 1	413	11180	01/10/88
COOK 1	315	11134	01/06/88
DIABLO CANYON 1	275	11170	01/08/88
HARRIS 1	400	11159	01/07/88
HARRIS 1	400	11173	01/09/88
MILLSTONE 2	336	11126	01/05/88
PEACH BOTTOM 2	277	11162	01/07/88
PEACH BOTTOM 2	277	11174	01/09/88
SEQUOYAH 1	327	11122	01/05/88
SEQUOYAH 1	327	11125	01/05/88
VOSTLE 1	424	11138	01/06/88
WATERFORD 3	382	11132	01/05/88

50.72 REPORT TABULATION - 1/11/88

4

Tabulation - 50.72 Reports for the past week:

- (1) Total number of reports 43
- (2) Plants in outage 7
- (3) Plants in power ascension 11
- (4) Summary of causes

EN	Acts of nature	2
HA	Accidental action	1
HP	Failure to follow procedure	2
PM	Defective maintenance proc	3
HE	Other human action	6
PO	Inadequate operations proc	1
IC	Internal to Component	1
U	Unknown	14
	No cause - info only	3

=====

Plant Status - 1/11/88

Plants in power ascension testing or scheduled outages, especially refueling, are more likely to produce more reports due to the increased activity occurring, therefore a listing of these plants is either activity is useful.

A. Plants in refueling and scheduled outages during the week:

Beaver Valley 1	Haddam Neck	Perry 1
Brunswick 2	Millstone 2 & 3	Pilgrim
Catawba 2	Palladas	Prairie Island 2
	Palo Verde 1	Salmon 1

B. Plants in power ascension testing during the week:

Baldwood 1 & 2	Farley 2	Palo Verde 3
Clinton	Nine Mile Point 2	South Texas 1

KEY

SALP Categories

Cause Codes (EPR1)

Plant Effects

1	Plant operations	D	Design/Mfg/Constr Inadequacy	DM	Systems, equipment, and/or structures found not to be designed, manufactured, constructed, or installed in accordance with approved plant design specifications.
2	Radiological controls	DR	Plant Definition Requirements Inadequacy		
	a occupational rad safety	DE	Design Error or Inadequacy		
	b rad waste management	DM	Mfg Error or Inadequacy		
	c rad effluent control & monitoring	DC	Constr Error or Inadequacy		
	d rad mat'l transportation	DX	Other		
	e water chemistry controls	E	Abnormal Environmental Stress	EA	ESF actuation - automatic
3	Maintenance	EE	EM Interference	EI	ESF actuation - inadvertent or spurious
		EM	H2O (spray, flood, etc.)	EM	ESF actuation - manual
4	Surveillance	EF	Fire	EF	ESF failure
		ET	Temp (abnormal high or low)	ED	ESF degradation
5	Fire Protection	ER	Radioactive Radiation	EX	External event (e.g. fire, earthquake)
6	Emergency Preparedness	EC	Chemical Reactions		
		EV	Vibration Loads	FR	Follow up report
7	Security	EI	Impact Loads		
		EH	Human-caused External Event	INFO	Information report only
8	Outages	EN	Acts of Nature	LCD	Entry into an LCD with action statement of hours/days. (e.g. LCD2h represents entry into an LCD with a 2 hour action statement; LCD7d would be for a 7 day action statement)
9	Quality Programs	I	Internal		
10	Licensing Activities	IC	Internal to Component		
11	Training	IE	Ambient Env Stress		
12	Engineering support	H	Human Actions, Plant Staff		
		HP	Failure to Follow Procedures	NONE	No immediate effect on plant
		HM	Misdiagnosis (followed wrong procedure)	PI	Power reduction - intentional
		HA	Accidental Action		
		HX	Other	PS	Power reduction - automatic (runback)
		M	Maintenance		
		MS	Sched Prev Maint (including surv tests and calib)	RA	Radioactivity release or contamination event
		MF	Forced Maint (repair of a known failure)	SA	Scram - automatic
				SAE	Scram - automatic w/ESF actuation
				SME	Scram - manual w/ESF actuation
		P	Procedures Inadequacy (ambiguous, incomplete, erroneous)	SM	Scram - manual
				SS	Scram signal - no rod movement/rods already inserted
		PD	Defective Oper Procedure		
		PM	Defective Maint Procedure	TS	Tech Spec violation
		PC	Defective Calib/Test Procedure	UE	Unusual Event declared
		PX	Other	XI	Other reportable occurrence
		U	Unknown		

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
January 19, 1988 - MEETING 88-03

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