

November 4, 1996

MEMORANDUM TO: Thomas T. Martin, Director
Division of Reactor Program Management

FROM: Alfred E. Chaffee, Chief [Original signed by]
Events Assessment and
Generic Communications Branch
Division of Reactor Program Management

SUBJECT: OPERATING REACTORS EVENTS BRIEFING
OCTOBER 30, 1996 - BRIEFING 96-14

On October 30, 1996, we conducted an Operating Reactors Events Briefing (96-14) to inform senior managers from offices of the Commission, OE, AEOD, RES, NRR and regional offices of selected events that occurred since our last briefing on October 23, 1996. Attachment 1 lists the attendees. Attachment 2 presents the significant elements of the discussed events.

Attachment 3 contains reactor scram statistics for the week ending October 27, 1996. One significant event was identified for input into the NRC Performance Indicator Program (Attachment 4).

The statements contained in the attached briefing slides represent the best information currently available to the NRC. Future followup could produce new information that may alter the NRC's current view of the events discussed.

Attachments: As stated (4)

cc w/atts:
See next page

CONTACT: Kathy Gray, NRR
(301) 415-1166

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OFFICE	PECB	E	PECB	E	PECB	C/PECB	N
NAME	KGray:kag		ACarter		RDennig	ACHaffee	
DATE	10/31/96		10/1/96		10/1/96	10/1/96	

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09:11-6 meeting
XIDIR-5-1 operating
experiences

96-14/

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PDR ORG NRR
PDR

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CC:

F. Miraglia, NRR (O-12G18)
F. Gillespie, NRR (O-12G18)
R. Zimmerman, NRR (O-12G18)
A. Thadani, NRR (O-12G18)
B. Sheron, NRR (O-12G18)
S. Varga, NRR (O-14E4)
J. Zwolinski, NRR (O-14H3)
J. Roe, NRR (O-13E4)
E. Adensam, NRR (O-13E4)
G. Lainas, NRR (O-7D26)
G. Holahan, NRR (O-8E2)
M. Virgilio, NRR (O-8E2)
D. O'Neal, NRR (O-10E4)
B. Boger, NRR (O-9E4)
M. Markley, ACRS (T-2E26)
E. Jordan, AEOD (T-4D18)
C. Rossi, AEOD (T-4A9)
F. Congel, AEOD (T-4D28)
R. Barrett, AEOD (T-4A43)
S. Rubin, AEOD (T-4D28)
M. Harper, AEOD (T-4A9)
W. Leschek, AEOD (T-4A9)
V. McCree, EDO (O-17G21)
J. Gilliland, PA (O-2G4)
D. Morrison, RES (T-10F12)
W. Hill, SECY (O-16G15)
H. Miller, Region I
R. Cooper, Region I
S. Ebnetter, Region II
E. Merschhoff, Region II
S. Vias, Region II
A. Beach, Region III
J. Caldwell, Acting, Region III
L. Callan, Region IV
J. Dyer, Region IV
K. Perkins, Region IV/WCFO
G. Fader, INPO
J. Zimmer, DOE

R. Lobel, NRR (O-8H7)

LIST OF ATTENDEES

OPERATING REACTORS EVENTS FULL BRIEFING (96-14)

OCTOBER 30, 1996

<u>NAME</u>	<u>OFFICE</u>	<u>NAME</u>	<u>OFFICE</u>
A. Chaffee	NRR	L. Rossbach	NRR
K. Gray	NRR	W. Burton	NRR
R. Dennig	NRR	E. Adensam	NRR
J. Carter	NRR	J. Kauffman	OE
R. Lobel	NRR	R. Lloyd	AEOD
C. Berlinger	NRR	A. Serkiz	RES
T. Martin	NRR	M. Marshall	RES
S. Lee	NRR		
J.D. Wilcox	NRR		

TELEPHONE ATTENDANCE (AT ROLL CALL)

Regions

Region I
Region II
Region III
Region IV

Resident Inspectors

B. Norris, SRI, Nine Mile Point

Misc.

OPERATING REACTORS EVENTS BRIEFING 96-14

LOCATION: O-10B11, WHITE FLINT
WEDNESDAY, OCTOBER 30, 1996 11:00 A.M.

MULTIPLE

SUPPRESSION POOL DEBRIS

PRESENTED BY:

EVENTS ASSESSMENT AND GENERIC COMMUNICATIONS BRANCH
DIVISION OF REACTOR PROGRAM MANAGEMENT, NRR

SUPPRESSION POOL DEBRIS
OCTOBER 29, 1996

PROBLEM

DEBRIS, CONSISTING OF SLUDGE AND MISCELLANEOUS FOREIGN MATERIAL INCLUDING PLASTIC AND RUBBER SHEET MATERIALS FOUND IN SUPPRESSION POOL AND DOWNCOMERS.

CAUSE

A THOROUGH CLEANING OF THE SUPPRESSION POOL AND INTERFACING EQUIPMENT HAD NOT YET BEEN MADE.

SAFETY-SIGNIFICANCE

THE FOREIGN MATERIAL WAS OF A TYPE AND QUANTITY THAT OPERATION OF RECIRCULATION PUMPS TAKING SUCTION FROM THE SUPPRESSION POOL COULD BE ADVERSELY IMPACTED.

DISCUSSION

- DURING THE PAST APPROXIMATELY 10 YEARS, DEBRIS OF AN UNANTICIPATED NATURE AND QUANTITY HAS BEEN FOUND IN A NUMBER OF LOCATIONS NOT PREVIOUSLY EXPLICITLY CONSIDERED IN SAFETY EVALUATIONS.
- A NUMBER OF GENERIC COMMUNICATIONS HAVE BEEN ISSUED:
 - SOME PROVIDED EXAMPLES UNIQUE TO EITHER BWRs OR PWRs
 - A FEW WERE DIRECTED TO EITHER PWRs OR BWRs
 - FOUR BULLETINS, INCLUDING SUPPLEMENTS, AND ONE GENERIC LETTER HAVE BEEN ISSUED

CONTACT:	J. CARTER, NRR/DRPM/PECB	AIT: NO
REFERENCES:	10 CFR 50.72 #31172, #31159; MR 1-96-0093	SIGEVEN: <u>NO</u>

- BULLETIN 95-02 ISSUED OCTOBER 17, 1995, REQUESTED BWR LICENSEES TO:
 - VERIFY OPERABILITY OF ALL PUMPS
 - SCHEDULE A CLEANING OF THE SUPPRESSION POOL
 - REVIEW FOREIGN MATERIAL EXCLUSION PROCEDURES AND CORRECT WEAKNESSES
 - REPORT EXTENT OF COMPLIANCE WITH ABOVE REQUESTED ACTIONS
- STAFF WAS SURPRISED TO LEARN THAT SOME LICENSEE STATEMENTS OF "CLEANING" MEANT ONLY SPOT CLEANING.
- ON OCTOBER 16, LASALLE, UNIT 2, REPORTED FINDING SUFFICIENT FOREIGN MATERIAL BURIED UNDER SLUDGE THAT OPERABILITY OF EMERGENCY CORE COOLING SYSTEMS WAS CHALLENGED:
 - LASALLE HAD PREVIOUSLY ONLY "SPOT CLEANED" THE POOL
 - DEBRIS WAS FOUND FLOATING ON WATER INSIDE SOME DOWNCOMERS
- ON OCTOBER 17, DURING A RE-INSPECTION OF THE SUPPRESSION POOL AREA, NINE MILE POINT, UNIT 2, REPORTED FINDING CLEANLINESS COVERS ON SEVEN DOWNCOMERS AND DEBRIS FLOATING ON THE WATER IN OTHER DOWNCOMERS:
 - LICENSEE HAD PREVIOUSLY THOROUGHLY CLEANED THE SUPPRESSION POOL
- FOREIGN MATERIALS BELIEVED TO HAVE BEEN PRESENT SINCE INITIAL OPERATION.
- SOME AREAS ARE INACCESSIBLE AND DIFFICULT TO INSPECT AND CLEAN.

FOLLOWUP

- AN INFORMATION NOTICE IS BEING PREPARED TO ALERT LICENSEES TO THE SIGNIFICANCE OF CHECKING DOWNCOMERS FOR CLEANLINESS.
- CONSIDERATIONS FOR ISSUING GENERIC COMMUNICATION:
 - CLEANING ACTIVITIES AT LASALLE AND NINE MILE POINT, UNIT 2, WERE A CONSEQUENCE OF THE ACTIONS REQUESTED IN BULLETIN 95-02:
 - LASALLE WAS PERFORMING INITIAL THOROUGH CLEANING
 - NINE MILE POINT, UNIT 2, WAS PERFORMING ENHANCED SURVEILLANCE
 - LICENSEES ESTABLISHED THEIR SCHEDULE FOR CLEANING THE SUPPRESSION POOL:
 - NOT ALL LICENSEES ARE KNOWN TO HAVE THOROUGHLY CLEANED THE POOL
 - SOME MAY HAVE ONLY REMOVED VISIBLE DEBRIS
 - EXTENT OF CLEANING OF INTERFACING SYSTEMS/COMPONENTS VARIES
 - GENERIC COMMUNICATIONS DID NOT EITHER DELINEATE SPECIFIC ACTIONS OR A SPECIFIC DATE FOR COMPLETION OF LICENSEE CHOSEN ACTIONS:
 - LICENSEES MAY HAVE READ INFORMATION NOTICES NARROWLY AND LITERALLY
 - THE SIGNIFICANCE OF THE GENERIC CONCERN EXPRESSED IN BULLETINS AND A GENERIC LETTER MAY NOT HAVE BEEN APPRECIATED OR THE RAMIFICATIONS OF VARIOUS ASPECTS UNDERSTOOD
 - NOT LIKELY TO IMPACT LICENSEE'S SELECTION OF LARGER STRAINERS TO RESOLVE BULLETIN 96-03, VERSUS BACKFLUSH CAPABILITY OR SELF CLEANING STRAINERS.

REACTOR SCRAM

Reporting Period: 10/21/96 to 10/27/96

<u>DATE</u>	<u>PLANT & UNIT</u>	<u>POWER</u>	<u>TYPE</u>	<u>CAUSE</u>	<u>COMPLICATIONS</u>	<u>YTD ABOVE 15%</u>	<u>YTD BELOW 15%</u>	<u>YTD TOTAL</u>
10/23/96	VOGTLE 2	64	SA	Equipment Failure	NO	2	0	2
10/24/96	NORTH ANNA 1	100	SA	Equipment Failure	NO	2	0	2
10/25/96	OYSTER CREEK 1	100	SM	Equipment Failure	NO	2	1	3

Attachment 3

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
10/27/96

SCRAM CAUSE	NUMBER OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE	3	1.60	1.83	1.52	1.83	2.62
DESIGN/INSTALLATION ERROR	0	0.12	0.12	0.08	0.04	-
OPERATING ERROR	0	0.07	0.15	0.21	0.27	0.31
MAINTENANCE ERROR	0	0.53	0.38	0.54	0.52	0.50
EXTERNAL	0	0.16	0.21	0.17	0.13	-
OTHER	0	0.09	0.06	-	0.02	-
Subtotal	3	2.57	2.75	2.52	2.81	3.43
POWER LESS THAN 15%						
EQUIPMENT FAILURE	0	0.21	0.10	0.27	0.38	0.42
DESIGN/INSTALLATION ERROR	0	0.00	-	0.02	-	-
OPERATING ERROR	0	0.09	0.13	0.08	0.13	0.15
MAINTENANCE ERROR	0	0.07	0.08	-	0.02	0.08
EXTERNAL	0	0.00	-	-	0.04	-
OTHER	0	0.00	-	-	-	-
Subtotal	0	0.37	0.31	0.37	0.57	0.65
TOTAL	3	2.94	3.06	2.89	3.38	4.08

SCRAM TYPE	NO. OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	2	1.84	1.92	2.19	2.44	3.06
TOTAL MANUAL SCRAMS	1	1.12	1.13	0.69	0.94	1.02

TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

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 111 REACTORS HOLDING AN OPERATING LICENSE.
2. PERSONNEL RELATED PROBLEMS INCLUDE HUMAN ERROR, PROCEDURAL DEFICIENCIES, AND MANUAL STEAM GENERATOR LEVEL CONTROL PROBLEMS.
3. COMPLICATIONS: RECOVERY COMPLICATED BY EQUIPMENT FAILURES OR PERSONNEL ERRORS UNRELATED TO CAUSE OF SCRAM.
4. "OTHER" INCLUDES AUTOMATIC SCRAMS ATTRIBUTED TO ENVIRONMENTAL CAUSES (LIGHTNING), SYSTEM DESIGN, OR UNKNOWN CAUSE.

OEAB SCRAM DATA

Manual and Automatic Scrams for 1987	-----	435
Manual and Automatic Scrams for 1988	-----	291
Manual and Automatic Scrams for 1989	-----	252
Manual and Automatic Scrams for 1990	-----	226
Manual and Automatic Scrams for 1991	-----	206
Manual and Automatic Scrams for 1992	-----	212
Manual and Automatic Scrams for 1993	-----	175
Manual and Automatic Scrams for 1994	-----	150
Manual and Automatic Scrams for 1995	-----	159
Manual and Automatic Scrams for 1996	--(YTD 10/27/96)--	127

OPERATING REACTOR PLANTS SIGNIFICANT EVENTS

No Sort Specified

QUERY> Event Type SIG & Event Date >= 09/24/96 & Event Date <= 09/24/96 & "OCONEE" \$ Plant Name

<u>PLANT & UNIT</u>	<u>DATE OF</u> <u>EVENT</u>	<u>50.72</u> <u>NUMBER</u>	<u>DESCRIPTION OF EVENT</u>	<u>SIGNIFICANCE</u>	<u>OR</u> <u>BRIEFING</u>	<u>PRESENTER</u>	<u>CLOSEOUT</u> <u>RECORD</u>
OCONEE 2	09/24/96	31053	Water hammer caused steam line rupture and significant injury to plant staff.	Other - Water Hammer	96-12	KOSHY T.	HIGHLIGHT

ATTACHMENT 4