

MAY 21 1987

MEMORANDUM FOR: Charles E. Rossi, Director  
Division of Operational Events Assessment

FROM: Wayne Lanning, Acting Chief  
Events Assessment Branch  
Division of Operational Events Assessment

SUBJECT: THE OPERATING REACTORS EVENTS MEETING  
MAY 19, 1987 - MEETING 87-15

On May 19, 1987 an Operating Reactors Events meeting (87-15) was held to brief senior managers from NRR, RES, AEOD and Regional Offices on events which occurred since our last meeting on May 12, 1987.

The events discussed and the significant elements of these events are presented in Enclosure 1. Enclosure 2 provides a summary of reactor scrams and "significant events" that will be input to NRC's performance indicator program.

Original Signed By

*for* Wayne Lanning, Acting Chief  
Events Assessment Branch  
Division of Operational Events Assessment

Enclosures:  
As stated

cc w/Encl.:  
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Central File

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JCARTER Rdg w/o Enclosure

EAB Members

PWR:EAB  
JCARTER  
5/20/87

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SL:PWR:EAB  
RLOBEL  
5/21/87

*PB*  
SL:PWR:EAB  
PBARANOWSKY  
5/21/87

*Rh for*  
ACT.BC:EAB  
WLANNING  
5/21/87

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OPERATING  
EXPERIENCE

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*Richard Lobel*

*for* Wayne Lanning, Acting Chief  
Events Assessment Branch

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

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A handwritten signature in dark ink, appearing to read "Wayne Lanning", is written over the typed name.

Wayne Lanning, Acting Chief  
Events Assessment Branch  
Division of Operational Events Assessment

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As stated

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OPERATING REACTORS EVENTS BRIEFING 87-15

MAY 19, 1987

DYRON 1

DAMAGE TO STEAM LINE SUPPORTS

OTHER EVENTS OF INTEREST

DIABLO CANYON

NON EQ SWITCHES USED IN SAFETY APPLICATIONS

ROBINSON

LIMITORQUE VALVE LUBRICATION PROBLEM

PEACH BOTTOM

SLEEPING UNLICENSED AUXILIARY PLANT OPERATOR

PIPE WALL THINNING

MAY 19, 1987

## BYRON 1 - DAMAGE TO STEAM LINE SUPPORTS

### PROBLEM

BROKEN PIPE SUPPORT (EMBEDDED SUPPORT PLATES, BROKEN HANGER WELD, AND BROKEN SNUBBERS)

CAUSE SUSPECTED WATERHAMMER IN STEAM LINE

SIGNIFICANCE POTENTIAL FOR STEAM LINE DAMAGE

### DISCUSSION

- ° DAMAGE TO STEAM PIPE SUPPORT DISCOVERED BY LICENSEE ABOUT 6:30 A.M., MAY 9, 1987
- ° BELIEVED TO BE THE RESULT OF WARMING THE MAIN STEAM LINES FOR ENTRY INTO MODE 3
- ° STEAM LINES HAVE BEEN WARMED FOR PLANT STARTUP ON NUMEROUS OTHER OCCASIONS AT BYRON 1 WITHOUT DAMAGE
- ° STEAM LINES WERE RECENTLY MODIFIED TO INCORPORATE A BRAIDWOOD ANTI-WATERHAMMER MODIFICATION
- ° PRESSURE AND TEMPERATURE DATA HAVE NOT INDICATED ABNORMAL CONDITIONS
- ° LICENSEE HAS ASSEMBLED A TASK FORCE OF COMMONWEALTH EDISON AND SARGENT AND LUNDY PERSONNEL
  - EVALUATE AND COMPARE PROCEDURE AND PRESSURE/TEMPERATURE DATA
  - REVIEW ALL MODIFICATIONS TO AFFECTED STEAM PIPE
  - REVIEW INSPECTION OF DAMAGED PIPE
  - REPAIR ANALYSIS
  - COMPUTER ANALYSIS OF EVENT

### FOLLOWUP

REGION III IS FOLLOWING UP REPAIR OPERATIONS TO ENSURE STEAM PIPING IS SOUND BEFORE STARTUP

NPP MECHANICAL ENGINEERING SHOULD PROVIDE LONG TERM FOLLOWUP FOR CAUSE OF EVENT, REVIEW OF LICENSEE REPORTS AND ANY PROPOSED MODIFICATIONS

REACTOR SCRAM SUMMARY  
WEEK ENDING 05/17/87

## I. PLANT SPECIFIC DATA

DATE	SITE	UNIT	POWER	RFS	CAUSE	COMPLI- CATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
05/11/87	DIABLO CANYON	1	43	A	EQUIP/ELECT.	NO	4	0	4
05/12/87	DRESDEN	3	95	A	EQUIP/MECH.	NO	3	0	3
05/13/87	VOSTLE	1	90	A	PERSONNEL	NO	7	6	13
05/13/87	FERMI	2	18	A	EQUIP/VIBR.	YES	4	0	4
05/14/87	MILLSTONE	3	70	A	UNKNOWN	NO	5	2	7
05/14/87	FARLEY	1	100	A	PERSONNEL	NO	4	1	5
05/16/87	SUPRY	1	100	A	UNKNOWN	NO	1	0	1
05/17/87	COOPER	1	74	A	PERSONNEL	NO	4	1	5

## SUMMARY OF COMPLICATIONS

SITE	UNIT	COMPLICATIONS
FERMI	2	RWCU PUMPS TRIPPED

# 11. COMPARISON OF WEEKLY STATISTICS WITH INDUSTRY AVERAGES

SCRAMS FOR WEEK ENDING  
05/17/87

SCRAM CAUSE	POWER	NUMBER OF SCRAMS (5)	1987 WEEKLY AVERAGE YTD	1986 WEEKLY AVERAGE (3)(4)	1985 WEEKLY AVERAGE (8)(9)
** POWER >15%					
EQUIP. RELATED	>15%	3	3.8	4.3	5.4
PERS. RELATED (6)	>15%	3	1.7	1.8	2.0
OTHER (7)	>15%	2	1.3	0.4	0.2
** Subtotal **		8	6.8	6.5	8.0
** POWER <15%					
EQUIP. RELATED	<15%	0	1.0	1.4	1.7
PERS. RELATED	<15%	0	0.8	0.8	0.9
OTHER	<15%	0	0.4	0.2	0.2
** Subtotal **		0	2.2	2.4	2.8
*** Total ***		8	9.0	8.9	10.8

## MANUAL VS AUTO SCRAMS

TYPE	NUMBER OF SCRAMS	1987 WEEKLY AVERAGE YTD	1986 WEEKLY AVERAGE	1985 WEEKLY AVERAGE
MANUAL SCRAMS	0	1.5	1.0	1.0
AUTOMATIC SCRAMS	8	7.5	7.9	9.4



## 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.
2. RECOVERY COMPLICATED BY EQUIPMENT FAILURES OR PERSONNEL ERRORS UNRELATED TO CAUSE OF SCRAM.
3. 1986 INFORMATION DERIVED FROM ORAS STUDY OF UNPLANNED REACTOR TRIPS IN 1986. WEEKLY DATA DETERMINED BY TAKING TOTAL TRIPS IN A GIVEN CATEGORY AND DIVIDING BY 52 WEEKS/YEAR.
4. IN 1986, THERE WERE AN ESTIMATED TOTAL OF 461 AUTOMATIC AND MANUAL UNPLANNED REACTOR TRIPS AT 104 REACTORS (HOLDING OPERATING LICENSES). THIS YIELDS AN AVERAGE RATE OF 4.4 TRIPS PER REACTOR PER YEAR AND AN AVERAGE RATE OF 8.6 TRIPS PER WEEK FOR ALL REACTORS.
5. BASED ON 107 REACTORS HOLDING AN OPERATING LICENSE.
6. PERSONNEL RELATED PROBLEMS INCLUDE HUMAN ERROR, PROCEDURAL DEFICIENCIES, AND MANUAL STEAM GENERATOR LEVEL CONTROL PROBLEMS.
7. "OTHER" INCLUDES AUTOMATIC SCRAMS ATTRIBUTED TO ENVIRONMENTAL CAUSES (LIGHTNING), SYSTEM DESIGN, OR UNKNOWN CAUSE.
8. 1985 INFORMATION DERIVED FROM AN ORAS STUDY OF UNPLANNED REACTOR TRIPS IN 1985. WEEKLY DATA DETERMINED BY TAKING TOTAL TRIPS IN A GIVEN CATEGORY AND DIVIDING BY 52 WEEKS/YEAR.
9. IN 1985, THERE WERE AN ESTIMATED TOTAL OF 541 AUTOMATIC AND MANUAL UNPLANNED REACTOR TRIPS AT 93 REACTORS (HOLDING FULL POWER LICENSES). THIS YIELDS AN AVERAGE RATE OF 5.8 TRIPS PER REACTOR YEAR AND AN AVERAGE RATE OF 10.4 TRIPS PER WEEK FOR ALL REACTORS.

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PERFORMANCE INDICATORS SIGNIFICANT EVENTS

PLANT NAME	EVENT DATE	EVENT DESCRIPTION	QTR CAUSE
BYRON 1	05/09/87	MAIN STEAM LINE SUPPORTS DAMAGED OUTSIDE CONTAINMENT	1 UNKNOWN