

908/17/83

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)
DISTRIBUTION FOR INCOMING MATERIAL

50-315

REC: KEPPLER J G
NRC

ORG: SHALLER D V
IN & MI PWR

DOCDATE: 08/14/78
DATE RCVD: 08/17/78

DOCTYPE: LETTER NOTARIZED: NO

COPIES RECEIVED

LTR 1 ENCL 1

SUBJECT:

FORWARDING LICENSEE EVENT REPT (RO 50-315/78-045) ON 07/15/78 CONCERNING
QUADRANT TILT RATIO OF 1.022 WAS EXHIBITED EXCEEDING LIMIT OF 1.02 IDENTIFIED
IN TECH SPEC 3.2.4.A... OCCURENCE CAUSED BY A DAMPED XENON OSCILLATION... W/ATT
LER78-046.

PLANT NAME: COOK - UNIT 1

REVIEWER INITIAL: XJM
DISTRIBUTOR INITIAL: ✓

***** DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****

NOTES:

I & E - 3 CYS ALL MATERIAL

INCIDENT REPORTS
(DISTRIBUTION CODE A002)

FOR ACTION: BR CHIEF ORB#1 BC**W/4 ENCL

INTERNAL:

REG FILE**W/ENCL

I & E**W/3 ENCL
I & C SYSTEMS BR**W/ENCL
NOVAK/CHECK**W/ENCL
AD FOR ENG**W/ENCL
HANAUER**W/ENCL
AD FOR SYS & PROJ**W/ENCL
ENGINEERING BR**W/ENCL
KREGER/J. COLLINS**W/ENCL
K SEYFRIT/IE**W/ENCL

NRC PDR**W/ENCL
MIPC**W/3 ENCL
EMERGENCY PLAN BR**W/ENCL
EEB**W/ENCL
PLANT SYSTEMS BR**W/ENCL
AD FOR PLANT SYSTEMS**W/ENCL
REACTOR SAFETY BR**W/ENCL
VOLLMER/BUNCH**W/ENCL
POWER SYS BR**W/ENCL

EXTERNAL:

LPDR'S
ST. JOSEPH, MI**W/ENCL
TIC, LIZ CARTER**W/ENCL
NSIC**W/ENCL
ACRS CAT B**W/16 ENCL

DISTRIBUTION: LTR 45 ENCL 45
SIZE: 1P+2P+1P

CONTROL NBR: 782190342

Ro 4 60

***** THE END *****



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INDIANA & MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106

FILE

D. Latham

August 14, 1978

Mr. J.G. Keppler, Regional Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

DIS. IN
SERVICES
BRANCH

1978 SEP 8 AM 11 52

RECEIVED DISTRIBUTION
SERVICES UNIT

Operating License DPR-58
Docket No. 50-315

Dear Mr. Keppler:

Pursuant to the requirements of the Appendix A Technical Specifications
the following reports are submitted:

RO 78-045/03L-0
RO 78-046/03L-0.

Sincerely,

D.V. Shaller

D.V. Shaller
Plant Manager

/bab

cc: J.E. Dolan
R.W. Jurgensen
R.F. Kroeger
R. Kilburn
R.J. Vollen BPI
K.R. Baker RO:III
R.C. Callen MPSC
P.W. Steketee, Esq.
G. Charnoff, Esq.
R. Walsh, Esq.
G. Olson
J.M. Hennigan
PNSRC
J.F. Stietzel
R.S. Keith
T.P. Beilman/J.L. Rischling
Dir., IE (30 copies)
Dir., MIPC (3 copies)

AUG 21 1978

Acc 2/1

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CONTROL BLOCK:

					(1)
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(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	M	I	D	C	C	1	(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	(3)	4	1	1	1	1	(4)			(5)	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
LICENSEE CODE								LICENSE NUMBER																	LICENSE TYPE					CAT		

CON'T

REPORT SOURCE: L 0 5 0 0 0 3 1 5 7 0 7 1 5 7 8 8 0 8 1 4 7 8 9

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0	2	ON JULY 15, 1978 AT 0430 HOURS A QUADRANT TILT RATIO OF 1.022 WAS EXHIBITED
0	3	WHICH IS IN EXCESS OF THE LIMIT OF 1.02 IDENTIFIED IN T.S. 3.2.4.A POWER LEVEL
0	4	REDUCTION FROM 62 PER CENT TO 49 PER CENT WAS PERFORMED BY 0640 IN FULL COMPLIANCE
0	5	WITH T.S. 3.2.4 ACTION ITEM a.1.b.
0	6	
0	7	
0	8	

09		SYSTEM CODE X X		11	CAUSE CODE X		12	CAUSE SUBCODE Z Z Z Z Z Z					14	COMP. SUBCODE Z		15	VALVE SUBCODE Z		16
7	8	9	10		11			12	13		14	15	16	17	18	19	20		
17 LER/RO REPORT NUMBER		EVENT YEAR 7 8			SEQUENTIAL REPORT NO. 0 4 5				OCCURRENCE CODE 0 3			REPORT TYPE L			REVISION NO. 0				
21	22	23		24	25	26	27	28	29	30	31	32							
ACTION TAKEN X		FUTURE ACTION Z		EFFECT ON PLANT B		SHUTDOWN METHOD Z		HOURS 0 0 0 0		ATTACHMENT SUBMITTED Y		NPRD-4 FORM SUB. N		PRIME COMP. SUPPLIER N		COMPONENT MANUFACTURER W 1 2 0			
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49			

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 THE QUADRANT TILT, WHICH WAS DETERMINED TO BE CAUSED BY A DAMPED XENON OSCILLATION,

1 1 WAS HIGH ONLY IN ONE QUADRANT WHICH RULED OUT THE POSSIBILITY OF A DROPPED ROD.

1 2 THE OSCILLATION MAY HAVE BEEN CAUSED BY AN ASSYMETRICAL BORON CONCENTRATION IN THE

1 3 RCS ALTHOUGH THE DATA WAS NOT SUFFICIENT FOR A FULL DETERMINATION.SUPPLEMENT ATTACHED

1 4

FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION	
1	5	F	28	0	6	2	29	NA	30
7	8	9	10	11	12	13	14	15	16
ACTIVITY		CONTENT		AMOUNT OF ACTIVITY		LOCATION OF RELEASE			
1	6	Z	33	Z	34	35	36	37	38
7	8	9	10	11	12	13	14	15	16
PERSONNEL EXPOSURES		NUMBER		TYPE		DESCRIPTION			
1	7	0	0	0	37	Z	38	39	40
7	8	9	10	11	12	13	14	15	16
PERSONNEL INJURIES		NUMBER		DESCRIPTION					
1	8	0	0	0	40	41	42	43	44
7	8	9	10	11	12	13	14	15	16
LOSS OF OR DAMAGE TO FACILITY		TYPE		DESCRIPTION					
1	9	Z	42	43	44	45	46	47	48
7	8	9	10	11	12	13	14	15	16
PUBLICITY		ISSUED		DESCRIPTION					
2	0	N	44	45	46	47	48	49	50
7	8	9	10	11	12	13	14	15	16

NAME OF PREPARER

T. P. Beilman

PHONE:

616-465-5901

ATTACHMENT TO LER #78-045/03L-0

SUPPLEMENT TO CAUSE DESCRIPTION

POWER OPERATION ABOVE FIFTY PER CENT WAS STARTED SUBSEQUENT TO RETURNING THE QUADRANT POWER TILT RATIO TO WITHIN ITS LIMIT. THE QUADRANT TILT RATIO WAS MONITORED EVERY HOUR FROM FIFTY PER CENT THERMAL POWER TO NINETY-FIVE PER CENT POWER WITH NO FURTHER OCCURRENCES.

LICENSEE EVENT REPORT

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	M	I	D	C	C	L	2	0	0	0	0	0	0	0	0	0	0	0	3	4	1	1	1	1	4			5
7	8	LICENSEE CODE						14	LICENSE NUMBER												25	LICENSE TYPE				30	57	CAT	58

REPORT SOURCE L 6 0 5 0 0 0 3 1 5 7 0 7 1 9 7 8 8 0 8 1 4 7 8 9

60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 WHILE IN MODE 1 THE INDICATED POSITION OF ROLS R-10, G-5, E-9, C-9, F-8 AND R-6

0 3 INDICATED A DEVIATION OF GREATER THAN TWELVE STEPS FROM DEMAND POSITION. THIS IS IN

0 4 EXCESS OF THE LIMIT IMPOSED BY T.S.3.1.3.2. SIMILAR OCCURRENCES OF THIS TYPE

0 5 PREVIOUSLY SUBMITTED ARE : 050-0315/76-13, 44 AND 54; 0315/77-27,28,33 AND 34;

0 6 0315/78-04-07,38, ,AND 050-0316/78-07,08,22,31 AND 41.

0	7	
0	8	

0 9		SYSTEM CODE I E		CAUSE CODE E		CAUSE SUBCODE Z		COMPONENT CODE I N S T R U				COMP. SUBCODE I		VALVE SUBCODE Z			
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
LER/RO REPORT NUMBER		EVENT YEAR 7 8		SEQUENTIAL REPORT NO. 0 4 6		OCCURRENCE CODE 0 3		REPORT TYPE L		REVISION NO. 0							
21	22	23	24	25	26	27	28	29	30	31	32						
ACTION TAKEN E		FUTURE ACTION X		EFFECT ON PLANT Z		SHUTDOWN METHOD Z		HOURS 0 0 0 0		ATTACHMENT SUBMITTED N		NPRD-4 FORM SUB. N		PRIME COMP. SUPPLIER N		COMPONENT MANUFACTURER W 1 2 0	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 THE CAUSE WAS TRACED TO THE SIGNAL CONDITIONING MODULES WHICH HAD DRIFTED HIGH. THE
1 1 MODULES WERE RESPANNED AND THE INDICATED POSITIONS OF THE SIX RODS RETURNED TO WITHIN
1 2 SPECIFICATIONS. THE ROOT CAUSE OF THIS PROBLEM HAS NOT YET BEEN DETERMINED ALTHOUGH
1 3 AN ENGINEERING REVIEW IS IN PROGRESS.

1 4

7 8 9

80

FACILITY STATUS								% POWER						OTHER STATUS										METHOD OF DISCOVERY		DISCOVERY DESCRIPTION																																	
1	5		E	(28)	1	0	0	(29)	NA										A	(31)	OPERATIONAL EVENT										(32)																												
7	8	9			10	11	12		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

ACTIVITY CONTENT
RELEASED OF RELEASE

1 6 9 Z 33 10 34

7 8 9 10 11

AMOUNT OF ACTIVITY (35)

NA

44

LOCATION OF RELEASE (36)

NA

45 80

PERSONNEL EXPOSURES			DESCRIPTION	
NUMBER	TYPE			
17	000	37	Z	38 NA

PERSONNEL INJURIES		NUMBER		DESCRIPTION	
1	8	0	0	0	NA

1		9		7		8		9		10		80	
TYPE		DESCRIPTION											
Z		42		NA									

PUBLICITY										NRC USE ONLY											
ISSUED		DESCRIPTION																			
2	0	N	44	NA																	
7	8	9	10																		

NAME OF PREPARER T. P. Beilman

PHONE: 616-465-5901

NRC USE ONLY

017-926

