

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9207290003 DOC. DATE: 92/07/22 NOTARIZED: NO DOCKET #
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana M 05000315
 AUTH. NAME AUTHOR AFFILIATION
 BEILMAN, T.P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 BLIND, A.A. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-005-00: on 920622, ESF actuation resulted from spurious high reading from one of two source-range neutron flux detectors. Cause unknown. Both detectors replaced, channels calibr & cables checked. W/920721 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID	CODE/NAME	LTR	ENCL		ID	CODE/NAME	LTR	ENCL
	PD3-1	LA	1	1	PD3-1	PD	1	1	
	STANG,	J	1	1					
INTERNAL:	ACNW		2	2	AEOD/DOA		1	1	
	AEOD/DSP/TPAB		1	1	AEOD/ROAB/DSP		2	2	
	NRR/DET/EMEB 7E		1	1	NRR/DLPQ/LHFB10		1	1	
	NRR/DLPQ/LPEB10		1	1	NRR/DOEA/OEAB		1	1	
	NRR/DREP/PRPB11		2	2	NRR/DST/SELB 8D		1	1	
	NRR/DST/SICB8H3		1	1	NRR/DST/SPLB8D1		1	1	
	NRR/DST/SRXB 8E		1	1	<u>REG FILE</u> 02		1	1	
	RES/DSIR/EIB		1	1	RGN3 FILE 01		1	1	
EXTERNAL:	EG&G BRYCE, J.H		2	2	L ST LOBBY WARD		1	1	
	NRC PDR		1	1	NSIC MURPHY, G.A		1	1	
	NSIC POORE, W.		1	1	NUDOCS FULL TXT		1	1	

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTR 29 ENCL 29

10-4

Indiana Michigan
Power Company
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
616 465 5901



July 21, 1992

United States Nuclear Regulatory Commission
Document Control Desk
Rockville, Maryland 20852

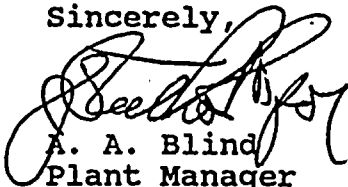
Operating Licenses DPR-58
Docket No. 50-315

Document Control Manager:

In accordance with the criteria established by
10 CFR 50.73 entitled Licensee Event Report System, the
following report is being submitted:

92-005-00

Sincerely,



A. A. Blind
Plant Manager

/sb

Attachment

c: D. H. Williams, Jr.
A. B. Davis, Region III
E. E. Fitzpatrick
P. A. Barrett
R. F. Kroeger
B. Walters - Ft. Wayne
NRC Resident Inspector
J. F. Stang - NRC
J. G. Keppler
M. R. Padgett
G. Charnoff, Esq.
D. Hahn
INPO
S. J. Brewer/B. P. Lauzau
B. A. Svensson

9207290003 920722
PDR ADDCK 05000315
S PDR

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **D. C. Cook Nuclear Plant, Unit 1** DOCKET NUMBER (2) **0 5 0 0 0 3 1 5** PAGE (3) **1 OF 0 3**

TITLE (4) **Engineered Safety Feature actuation due to spurious indication from source range instrument while Unit 1 descending for refuelling outage.**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
06	22	92	92	005	00	07	22	92			05000
											05000

OPERATING MODE (9)	3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10)	010	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
		20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)					
		20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366AJ)					
		20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(vii)(A)						
		20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)						
		20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)						

LICENSEE CONTACT FOR THIS LER (12)

NAME **T. P. Beilman - Maintenance Superintendent** TELEPHONE NUMBER **616 416151-1519101**

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	I	G D E T	W 1 2 0						

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) **1 0 3 0 9 2**

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On June 22, 1992, at 0458 hours, an Engineered Safety Feature actuation resulted from a spurious high reading from one of two Unit 1 source range neutron flux detectors. The source range detectors energized automatically as expected in conjunction with the preplanned shutdown of the unit for refueling. At the time the trip occurred, Unit 1 was in Hot Standby (Mode 3) with three of four control rod banks fully inserted and wide range neutron detectors indicating decreasing flux levels.

All actions required by plant emergency operating procedures were implemented immediately to verify proper response of the automatic protection system and to assess plant conditions for appropriate recovery actions. Boration was initiated as a conservative measure. The remaining control rod bank and all shutdown banks fully inserted. The short term corrective actions were to replace both of the detectors. Identification of the root cause, and implementation of long term corrective actions has not taken place as of the date of this report. An update addressing these topics will be submitted at a later date.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) D. C. Cook Nuclear Plant - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 5	LER NUMBER (8)			PAGE (3)		
		YEAR 9 2	SEQUENTIAL NUMBER - 0 0 5	REVISION NUMBER - 0 0			

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Conditions Prior to Occurrence

Unit One in Mode 3 (Hot Standby).

Description of Event

On June 22, 1992, at 0458 hours with Unit 1 in Mode 3 (Hot Standby) nuclear instrumentation source range neutron flux detectors (EIIS/DET) were energized as part of a planned shutdown. Once energized, one of the detectors (1-NRI-32) indicated a reading of 10 (+06) counts per second (cps). This reading was above the setpoint limit for the detector, which measures neutron activity when not at power, of 10 (+05) cps. The immediate result was a trip of the Unit 1 reactor. At the time of the trip three of four control rod banks (B, C & D) were fully inserted. Control rod bank A was within 85 steps of being fully inserted. The reactor was subcritical at the time the high neutron flux indication caused the reactor trip. As a conservative measure, Operators initiated boration of the reactor. Shutdown banks and the one remaining control rod bank fully inserted as a result of the Engineered Safety Feature (ESF) actuation. All systems and components required to function during this evolution did so with no abnormalities noted. No other structures, components or systems were inoperable at the start of, or contributed to, the event.

At the time that 1-NRI-32 gave the high neutron flux indication, Operations personnel also observed that 1-NRI-31 (the other one of two source range neutron flux detectors installed) was cycling between 10 (+2) and 10 (+05) cps. Though erratic in operation, it was determined that 1-NRI-32 caused the reactor trip. Both of the unit's wide range radiation detectors, 1-NRI-21 and 1-NRI-23 (EIIS/DET) indicated decreasing flux levels of under 10 (+05) cps at the time of the event.

Cause of Event

At this time the root cause for the failures is unknown. Detectors were replaced, channels calibrated and cables to both checked with satisfactory results. Defective units have been removed and stored for evaluation. Results will be reported by Oct. 30, 1992. The detector which caused the ESF actuation had been in service since July, 1985 and had been checked in Nov., 1990, with satisfactory results.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) D. C. Cook Nuclear Plant - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 5	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 2	- 0 0 5	- 0 0	0 3	OF 0 3

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Analysis of Event

This event is considered reportable per 10CFR50.73 (A) (2) (IV) in that the high source range indication resulted in an automatic actuation of an Engineered Safety Feature (ESF) which was not part of a planned sequence or test.

The systems responded as required to the spurious signal. It has been concluded that this event does not constitute an unreviewed safety question as defined by 10 CFR 50.59. The health and safety of the public were not affected.

Corrective Action

Corrective actions will be based on the results of the evaluation. The details of the corrective measures developed based on the root cause determination will be reported at a later date. It is the intention of the licensee to complete the followup report by Oct. 30, 1992.

Failed Component Identification

Unit 1 Nuclear Instrumentation Source Range Neutron Flux Detector
 Plant Description: 1-NRI-31 and 1-NRI-32
 Manufacturer: Westinghouse
 Model: B10
 EIIS Code: DET

Previous Similar Events

LER 316/86-021
 LER 315/85-059