

ACCELERATED DOCUMENT DISTRIBUTION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION, NBR: 9212070318 DOC. DATE: 92/11/30 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.
 BLIND, A.A. Indiana Michigan Power Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-005-01: on 920622, ESF actuation resulted from spurious high reading from one of two unit 1 source range neutron flux detectors. Cause unknown. Failed detectors replaced utilizing approved procedures. W/921130 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		LTTR	ENCL		ID CODE/NAME		LTTR	ENCL	
	PD3-1 LA		1	1		PD3-1 PD		1	1	
	DEAN, W		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		REG FILE 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. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

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

AO-4
 dhp

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



November 30, 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:

92-005-01

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
W. M. Dean - NRC
J. G. Keppler
M. R. Padgett
- G. Charnoff, Esq.
D. Hahn
INPO
S. J. Brewer
B. A. Svensson

07-027

9212070318 921130
PDR ADOCK 05000315
PDR

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

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 corrective actions were to replace both of the detectors. Identification of the root cause of the detector failure is not possible due to the physical and chemical construction of the source range detectors.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

TEXT (If more space is required, use additional NRC Form 366A'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

The root cause for the failures of the detector assemblies remains unknown. Detectors were replaced, channels calibrated and cables to both checked with satisfactory results. The defective source and intermediate range detector assemblies have been removed and stored for possible evaluation. It has been determined that dismantling the detectors in an effort to obtain specific information relative to the root cause is precluded by their physical and chemical construction. No probable benefit in pursuing that course of action was identified by engineering.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

TEXT (If more space is required, use additional NRC Form 366A'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

The failed detectors were replaced and calibrated utilizing approved procedures. Measures beyond these actions was not indicated inasmuch as such failures have not been repetitive in nature. The licensee continues to perform surveillances and tests of this instrumentation on a regular basis as plant conditions and Technical Specifications direct.

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
EIIIS Code: DET

Previous Similar Events

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