REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8711130095 DOC. DATE: 87/11/02 NOTARIZED: NO DOCKET #
FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
AUTH. NAME AUTHOR AFFILIATION
BEILMAN, T. P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
SMITH, W. G. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-011-00: on 871002, Train A reactor trip not received as required. Caused by personnel error. Safety injection signal reset & plant returned to pre-event status. W/871102 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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	PD3-3 LA	1	1	PD3-3 PD	1	1
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	ARM/DCTS/DAB	1	1	DEDRO	1	1
	NRR/DEST/ADS	1	0	NRR/DEST/CEB	1	1
	NRR/DEST/ELB	1	1	NRR/DEST/ICSB	1	1
	NRR/DEST/MEB	1	1	NRR/DEST/MTB	1	1
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	NRR/DRIS/SIB	1	1	NRR/PMAS/ILRB	1	1
	REG FILE 02	1	1	RES DEPY GI	1	1
	RES TELFORD, J	1	1	RES/DE/EIB	1	1
	RGN3 FILE 01	1	1			
EXTERNAL:	EG&G GROH, M	5	5	H ST LOBBY WARD	1	1
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	NSIC HARRIS, J	1	1	NSIC MAYS, G	1	1

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
D. C. COOK NUCLEAR PLANT - UNIT 2	0 5 0 0 0 3 1 6	1 OF 0 3

TITLE (4) ESF ACTUATION CAUSED BY PERSONNEL ERROR - BLOCKS NOT REINSTATED WHEN RETURNING SOLID STATE PROTECTION SYSTEM TO SERVICE

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)
										0 5 0 0 0
1 0	0 2	8 7	8 7	— 0 1 1	— 0 0	1 1	0 2	8 7		0 5 0 0 0

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	X 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)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
T. P. BEILMAN INSTRUMENTATION AND CONTROL SUPERINTENDENT	AREA CODE 6 1 6 4 6 5 - 5 9 0 1

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	J C	E C B D	W 1 2 0	Y					

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On October 2, 1987 at 1657 hours with the unit in Cold Shutdown, a Train A Safety Injection signal (SI) occurred when Instrument and Control (I and C) technicians were returning the Train A Solid State Protection System (SSPS) to service after repair. Prior to the event, both trains of SSPS had been disabled for outage work. At outage completion, SSPS was returned to service, but not yet tested for operability. One of the operability tests was being performed on Source Range Nuclear Instrumentation (NI) when a Train A Reactor Trip signal was not received as required. I and C then started troubleshooting and repair without the benefit of evaluation of the change in work scope. Consequently, they did not utilize the process designed to control repair evolutions. The source of the NI problem was found to be the Undervoltage Output board of the SSPS. When returning the SSPS to service, the technicians failed to properly sequence reinstating of SI blocks with SSPS switch positions. Immediate corrective action involved assessment and termination of the SI signal (no injection occurred). Train A SSPS was functionally tested after repair and proved operable. Train B was also tested with no problems identified. I and C personnel have been reminded to obtain a re-evaulation when it becomes apparent that the work required to complete a task exceeds the original scope.

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1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
D. C. COOK NUCLEAR PLANT - UNIT 2	0 5 0 0 0 3 1 6	8 7	— 0 1 1	— 0 0	0 2 OF 0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Conditions Prior To Occurrence

Unit Two in Mode 5 (cold shutdown), Reactor Coolant System temperature at 85 degrees Fahrenheit.

Description of Event

On October 2, 1987 during surveillance testing on Unit Two Source Range Nuclear Instrumentation (EIIS/IG-RIS), the Train A Reactor Trip was not received as required. The problem was determined to be a faulted Under Voltage Output (UV) board in the Solid State Protection System (SSPS) (EIIS/JC). When the SSPS was being returned to service at 1657 hours, a Train A Safety Injection signal (EIIS/BQ) occurred because of personnel error (failure to correctly position a switch in SSPS prior to reinstating blocks from the control board). Therefore, the block signal was not recognized by SSPS. No other structures, components or systems were inoperable which contributed to this event. Due to the SSPS having been intentionally removed from service during the outage (not required in Mode 5), it could not be determined exactly when the UV board had failed.

Cause of Event

The Safety Injection block was not reinstated because of failure to properly sequence (SSPS) switches. Attributing to this failure was the technicians working on the SSPS without either; 1) obtaining a job re-evaluation, or 2) obtaining the procedure which contains the steps to remove/restore SSPS and allow repair. They mistakenly believed they could work on SSPS under the same job evaluation performed for simply removing/returning SSPS for outage work.

Analysis of Event

This is being reported per the requirements of 10CFR50.73(a)(2)(iv), as an event that resulted in automatic actuation of an Engineered Safety Feature. No actual injection occurred due to equipment tag-out for cold overpressure protection. The Train A (CD) Emergency Diesel Generator (EIIS/EK) started and Containment Isolation (EIIS/JM) occurred as required. Prior to the outage, the Train A SSPS board was tested satisfactorily during surveillances and is not considered to have been inoperable during any mode where it was

required operable. Had Train A failed while at operation, the unit would have not been affected and the failure would have been detected at the next monthly surveillance. The redundant Train B was proven to have remained operable and would have supplied Reactor Trip if necessary.

Corrective Action

The Safety Injection signal was reset and the plant returned to pre-event status. The faulted UV board was replaced and Train A SSPS was functionally tested. The Source Range surveillance was completed and Train B SSPS was tested with no problems. All I and C personnel were reminded to obtain a re-evaluation when it becomes apparent that the work required to complete a task exceeds the original scope of the task.

Failed Component Identification

Plant Designation: Unit 2, Train A, SSPS
Manufacturer: Westinghouse Electric Corporation
Model: Solid State Protection System UV Output Board Assembly
Part No.: 6058D45G01
EIIS Code: JC-ECBD

Previous Similar Events

None.

Indiana Michigan
Power Company
Cook Nuclear Plant
P.O. Box 458
Bridgman, MI 49106
616 465 5901

AEP
INDIANA
MICHIGAN
POWER

November 2, 1987

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Operating License DPR-74
Docket No. 50-316

Document Control Manager:

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

87-011-0

Sincerely,

W. G. Smith, Jr.
Plant Manager

WGS:afh

Attachment

cc: John E. Dolan
A. B. Davis, Region III
M. P. Alexich
R. F. Kroeger
H. B. Brugger
R. W. Jurgensen
NRC Resident Inspector
R. C. Callen
G. Charnoff, Esq.
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