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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8904140485 DOC.DATE: 89/04/03 NOTARIZED: NO DOCKET #
 FACIL:50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
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 SMITH,W.G. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-008-00:on 890311,reactor cable tunnel CO2 for
 Quadrants 1,3 & 4 inoperable w/o required firewatch.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) D. C. Cook Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 1 6										PAGE (3) 1 OF 0 3		
TITLE (4) Reactor Cable Tunnel CO2 For Quadrants 1, 3 and 4 Inoperable Without Required Firewatch Due to False Indication of Status Caused by Worn Isolation Switch Key																						
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 3	1 1	8 9	8 9	0 0 8	0 0	0 4	0 3	8 9							0 5 0 0 0							
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																				
4		20.402(b)					20.405(c)					50.73(a)(2)(iv)					73.71(b)					
POWER LEVEL (10)		0 0 0					20.405(a)(1)(i)					50.73(a)(2)(v)					73.71(c)					
		20.405(a)(1)(ii)					50.73(a)(2)(vi)										OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
		20.405(a)(1)(iii)					50.73(a)(2)(vii)(A)															
		20.405(a)(1)(iv)					50.73(a)(2)(viii)(B)															
		20.405(a)(1)(v)					50.73(a)(2)(ix)															
LICENSEE CONTACT FOR THIS LER (12)																						
NAME H. F. Runser, Operations Superintendent										TELEPHONE NUMBER 6 1 6 4 6 5 1 - 5 9 0 1 1												
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																						
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS												
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 March 11, 1989, at 0821 hours, it was identified that the automatic carbon dioxide (CO2) actuation system for the reactor cable tunnel quadrants one, three and four; had been isolated since 0403 hours without the required firewatch. The CO2 automatic actuation was isolated via the local key lock isolation switch at 0357 to allow personnel entry. After personnel exited the area, the key lock switch was restored to what was thought to be the normal position. This was verified by the local indicating light extinguishing when the key lock switch was turned. A second person verified by visual observation that the switch had been restored to the normal position.

At 0831, permission was requested to isolate the reactor cable tunnel CO2 system. The Control Room operator identified that the associated "CO2 isolated" annunciator alarm was already in. It was then identified that the key lock switch was not fully in the normal position.

The root cause of this was an excessively worn key which allowed the key to be removed prior to the switch being fully in the normal position and with only one of the two switch contacts made up (one set of contacts is for the local indicating light, the other set is for the CO2 isolation and Control Room annunciator). The worn key was replaced and a policy has been instituted to replace the affected keys on a periodic basis. Also, the key lock switches will be modified to operate all of the functions from one set of contacts.

8904140485 890403
PDR ADOCK 05000316
S PDC

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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 9	— 0 0 8	— 0 0	0 2	OF	0 3

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

Conditions Prior to Occurrence

Unit Two in Mode 4 (Hot Shutdown).

Description of Event

On March 11, 1989, at 0831 hours, it was identified that the automatic carbon dioxide (CO2) actuation system (EIIS/LW) for the reactor cable tunnel quadrants one, three and four; had been isolated since 0403 without the required firewatches.

The CO2 automatic actuation was isolated via the key lock switch (EIIS/LW-HS) at 0357 to allow personnel entry. After personnel exited the area, the key lock operated switch was restored to what was thought to be the normal position. This was verified by the local indicating light extinguishing when the key lock switch was turned. A second person verified by visual observation that the switch had been restored to the normal position.

At 0831, permission was requested to isolate the reactor cable tunnel CO2 system. The Control Room operator identified that the associated "CO2 isolated" annunciator alarm was already in. It was then identified that the key lock switch was not fully in the normal position.

Cause of Event

The key lock switch has two sets of contacts which are arranged in a gang fashion. The key switch operates the first set of contacts and the first set of contacts then operate the second set of contacts. The first set of contacts are for the local indicating light; the second set is for the automatic actuation circuitry and the Control Room alarm annunciators. The switch is also designed such that the key can only be removed if the switch is fully in the normal or isolate position.

Investigation of this event determined that the key could be removed from the switch, prior to being in the full normal or isolate position, if the key was excessively worn. It was also determined that the first set of contacts could be made up without the second set being made up.

This event was caused by a worn key as described above and is considered the root cause of this event. Contributing to this event was the failure of the Control Room operators to recognize that the annunciator alarm remained in after the local key lock switch was returned to normal. At the time of this event, a cooldown from Mode 4 to Mode 5 was in progress. The level of activity in the Control Room contributed to the operators not identifying the problem.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION R)

U.S. NUCLEAR REGULATORY COMMISSION

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

Analysis of Event

The isolation of the CO2 system without compensatory fire watch coverage, was in violation of Technical specification 3.7.9.3 action a, and is reportable under 10 CFR 50.73 (a)(2)(i)(B).

It has been concluded that in the unlikely event of a fire, personnel would have been promptly aware of its presence and been able to control and extinguish the fire without significant propagation or equipment damage. This conclusion is based on the following: 1) the relatively low fixed combustible load within the area involved; 2) the physical and administrative limits on the introduction of transient combustibles; 3) Operable early warning fire detection systems (consisting of both ionization and infrared detectors), and 4) the existence of a trained on-shift fire brigade.

Based on the above, this event is not considered to have created any significant safety concern and did not constitute an unreviewed safety question as defined by 10 CFR 50.59, nor did it create a significant hazard to the health and safety of the general public.

Corrective Action

1. The worn key was replaced and the Security Department has instituted a policy of replacing all of their CO2 key lock switch keys on a periodic basis.
2. The circuitry for the CO2 key lock switch local indication lights will be modified so that they operate off of the same switch contact which isolates the automatic CO2 actuation. This will be done for Unit One and Unit Two switches. This modification will prevent a false indication of CO2 system status. The modifications are tentatively scheduled for completion by 12/31/90.
3. This event was discussed with several Operations Department personnel. It was determined that the knowledge level in regard to responsibilities associated with the CO2 system annunciator alarms is adequate. No further corrective action in this area is warranted.

Failed Component Identification

None

Previous Similar Events

None

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



April 3, 1989

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:

89-008-00

Sincerely,

A handwritten signature in dark ink, appearing to read 'W. G. Smith, Jr.', with a stylized flourish at the end.

W. G. Smith, Jr.
Plant Manager

WGS:clw

Attachment

cc: D. H. Williams, Jr.
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