NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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)
INOPERABLE FIRE DOOR

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)
1 0	1 0	8 5	8 5	—	0 2 9	—	0 0	1 1	0 8	8 5		0 5 0 0 0
												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)	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)	X 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
	AREA CODE
J. D. ALLARD, MAINTENANCE SUPERINTENDENT	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	K Q	D R	X 9 9	N							

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 10, 1985 AT 0755 HOURS WITH THE REACTOR SYSTEM IN MODE 5 (COLD SHUTDOWN), A SAFETY RELATED FIRE DOOR (IEEE/DR) WAS FOUND INOPERABLE DUE TO A LOOSE SEQUENCER ARM ASSEMBLY PREVENTING THE DOOR FROM CLOSING COMPLETELY. MISSING SCREWS FROM THE MOUNTING PLATE HAD ALLOWED THE ARM TO TILT INTO A PRONOUNCED DOWNWARD POSITION WHICH PREVENTED THE DOOR FROM CLOSING THE FINAL 3-4 INCHES. POST-MAINTENANCE SURVEILLANCE TESTING IN COMPLIANCE WITH TECHNICAL SPECIFICATION 4.7.10.3 WAS COMPLETED SATISFACTORILY AT 2300 HOURS ON OCTOBER 10, 1985.

THE SUBJECT DOOR IS LOCATED AT THE ENTRANCE TO QUADRANT 2 ON THE 612 ELEVATION AND IS VERIFIED OPERABLE ONCE EVERY 24 HOURS. DETECTION AND CO2 SUPPRESSION SYSTEMS HAVE REMAINED OPERABLE DURING THE ENSUING TIME PERIOD.

IT IS UNKNOWN AT THIS TIME WHY THE PLATE HAD THE SCREWS MISSING. TO PREVENT RECURRENCE, THE NEW SCREWS WERE STAKED AS A SAFEGUARD TO INHIBIT ANY ROTATIONAL MOVEMENT. THE REMAINING SAFETY RELATED FIRE DOORS HAVE BEEN INSPECTED ON THEIR 24 HOUR DAILY TOUR.

IE22
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 5	— 0 2 9	— 0 0	0 2 OF 0 3

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

ON OCTOBER 10, 1985 AT 0755 HOURS WITH UNIT 2 IN MODE 5 (COLD SHUTDOWN), FIRE DOOR (IEEE/DR) NUMBER 388 WAS DISCOVERED INOPERABLE AT THE ENTRANCE TO UNIT 2 QUADRANT 2 ON THE 612 ELEVATION IN THE AUXILIARY BUILDING. THIS IS CONTRARY TO TECHNICAL SPECIFICATION 3.7.10.

FIRE DOOR NO. 388 PROVIDES A BARRIER BETWEEN FIRE AREA 39 (QUAD 2) AND FIRE AREA 448 (AUXILIARY BUILDING), IN UNIT 2. THE DOUBLE DOORS SWING INTO THE ROOM AND ARE EQUIPPED WITH A DEVICE THAT PERMITS ONE DOOR TO CLOSE FIRST.

THIS DEVICE (SEQUENCER ARM ASSEMBLY) HAD TWO OF ITS FOUR MOUNTING SCREWS MISSING. THE MISSING SCREWS ALLOWED THE UNIT TO TILT IN A DOWNWARD POSITION WHICH PREVENTED THE DOOR'S ACTIVE LEAF FROM CLOSING COMPLETELY, AN OPENING OF 3-4 INCHES REMAINED DUE TO THE OBSTRUCTION. THE MISSING SCREWS WERE NOT FOUND AND THE REASON FOR THE SCREWS ABSENCE REMAINS UNKNOWN. AFTER INSTALLING NEW SCREWS, POST MAINTENANCE SURVEILLANCE TESTING IN COMPLIANCE WITH TECHNICAL SPECIFICATION 4.7.10.3 WAS COMPLETED AT 2300 HOURS ON OCTOBER 10, 1985.

INSPECTION TOURS OF SAFETY RELATED FIRE DOORS ARE PERFORMED EVERY 24 HOURS. THE SUBJECT FIRE DOOR HAD BEEN INSPECTED, PRIOR TO DISCOVERY, ON OCTOBER 9, 1985 DURING THE DAY SHIFT.

IT IS BELIEVED THAT THE FIRE PROTECTION OF THE FACILITY WAS NOT HAMPERED BY THE DOOR IN THE AJAR POSITION. A FIRE WOULD NOT PROPAGATE THROUGH THE AJAR DOOR FOR THE FOLLOWING REASONS:

A. AREAS ON BOTH SIDES OF THE DOOR HAVE FIRE DETECTION SYSTEMS WHICH ALARM IN THE CONTROL ROOM. ALARMS ARE PROMPTLY INVESTIGATED AND IF A FIRE WERE TO HAVE OCCURRED, THE FIRE BRIGADE WOULD QUICKLY RESPOND. FIRE ESTINGUISHERS, A LOW PRESSURE CARBON DIOXIDE HOSE REEL AND ONE AND A HALF INCH WATER FIRE HOSE IS AVAILABLE FOR BRIGADE USE.

B. THE AREA IN THE AUXILIARY BUILDING IS PROTECTED WITH AN AUTOMATIC SPRINKLER SYSTEM. OPERATION OF THIS SYSTEM WILL ALARM IN THE CONTROL ROOM RESULTING IN PROMPT RESPONSE.

C. QUAD 2 IS PROTECTED WITH A LOW PRESSURE CARBON DIOXIDE EXTINGUISHING SYSTEM. IT ALARMS THE CONTROL ROOM ON ACTIVATION RESULTING IN PROMPT RESPONSE.

D. IF NEEDED, THE FIRE BRIGADE COULD HAVE CLOSED THE DOOR TO PREVENT FIRE SPREAD.

E. FIRE LOADING IS LOW NEAR THE DOOR ON BOTH SIDES, MINIMIZING HEAT RADIATING THROUGH THE DOOR OPENING.

F. THE CO2 PRESSURIZES THE ROOM AND TENDS TO CLOSE THE DOOR.

THE EVALUATION OF THE EFFECT OF THE DOOR BEING AJAR ON THE CARBON DIOXIDE SYSTEM IN QUAD 2 REVEALED THE CONCENTRATION WOULD BE DOWN AT THE END OF THE DISCHARGE. HOWEVER, SINCE THE SYSTEM ACCEPTANCE TEST REVEALED A CONCENTRATION OF 58%, THERE WAS EXCESS CARBON DIOXIDE IN THE ROOM. WITH THE DOOR ASSUMED 6 INCHES AJAR, 50% MORE THAN REPORTED, THE CONCENTRATION WOULD HAVE REACHED OVER 55%, AND AT THE END OF 10 MINUTES WOULD HAVE BEEN 47%. THESE CONCENTRATIONS ARE SUFFICIENT TO EXTINGUISH FIRES. THUS, THE AJAR DOOR WOULD NOT SERIOUSLY AFFECT THE CARBON DIOXIDE PROTECTION.

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

TO PREVENT RECURRENCE, THE NEW SCREWS WERE STAKED AS A SAFEGUARD TO INHIBIT ANY ROTATIONAL MOVEMENT. THE REMAINING SAFETY RELATED FIRE DOORS HAVE BEEN INSPECTED ON THEIR 24 HOUR DAILY TOUR.

INDIANA & MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106
(616) 465-5901

November 8, 1985

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 10CFR50.73 entitled Licensee Event Reporting System, the following report/s are being submitted:

RO 85-029-0

Sincerely,

W.G. Smith, Jr.
Plant Manager

/cbm

Attachment

cc: John E. Dolan
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