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 PLANT UNIT - 2	0 5 0 0 0 3 1 6	1 OF 0 6

TITLE (4)

INOPERABLE FIRE BARRIER

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 2	0 4	8 5	8 5	0 0 6	0 0	0 3	0 6	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 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
J.F. STIETZEL - QUALITY 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	

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 FEBRUARY 4, 1985, AT 1610 HOURS WITH UNIT 2 AT 100 PERCENT REACTOR THERMAL POWER, AN EIGHT INCH BY SIXTEEN INCH OPENING WAS FOUND IN A WALL IN QUADRANT 1 OF THE UNIT 2 REACTOR CABLE TUNNEL DURING THE PERFORMANCE OF SYSTEM WALKDOWNS TO VERIFY FLOW DIAGRAMS.

THIS OPENING CONSTITUTED AN INOPERABLE FIRE BARRIER, AS ADDRESSED IN TECHNICAL SPECIFICATION 3.7.10. THE OPENING IS BELIEVED TO HAVE EXISTED SINCE INITIAL PLANT CONSTRUCTION. A FIRE WATCH WAS ESTABLISHED WITHIN ONE HOUR AND THE OPENING WAS REPAIRED WITHIN SEVEN DAYS (FEBRUARY 11, 1985), THUS FULFILLING TECHNICAL SPECIFICATION ACTION REQUIREMENT 3.7.10.A.

THE OPENING IS IN AN OBSCURE AREA OF THE ROOM AND WAS NOT DETECTED DURING THE EIGHTEEN MONTH SURVEILLANCE. THE UNIT 1 REACTOR CABLE TUNNEL (QUADRANT 1) WAS CHECKED AND VERIFIED THAT A SIMILAR OPENING DID NOT EXIST IN UNIT 1.

IE22
1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
D.C. COOK PLANT UNIT - 2	0 5 0 0 0 3 1 6	85	-- 0 0 6	— 0 0	0 2 OF 0 6

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

ON FEBRUARY 4, 1985, AT 1610 HOURS WITH UNIT 2 AT 100 PERCENT REACTOR THERMAL POWER, AN EIGHT INCH BY SIXTEEN INCH OPENING WAS FOUND IN A WALL IN QUADRANT 1 OF THE UNIT 2 REACTOR CABLE TUNNEL DURING THE PERFORMANCE OF SYSTEM WALKDOWNS TO VERIFY FLOW DIAGRAMS.

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THE OPENING IS IN AN OBSCURE AREA OF THE ROOM AND WAS NOT DETECTED DURING THE EIGHTEEN MONTH SURVEILLANCE. THE UNIT 1 REACTOR CABLE TUNNEL (QUADRANT 1) WAS CHECKED AND VERIFIED THAT A SIMILAR OPENING DID NOT EXIST IN UNIT 1.

FIRE PROTECTION TECHNICAL EVALUATION

BACKGROUND INFORMATION

AN 8 INCH BY 16 INCH OPENING WAS FOUND IN THE WALL BETWEEN THE UNIT 2 QUADRANT 1 REACTOR CABLE TUNNEL AND THE UNIT 1 SPENT FUEL PIT FILTER ROOM (FIRE AREA 27 AND FIRE ZONE 36 RESPECTIVELY). THE UNSEALED PENETRATION IS AT THE 613 FT. ELEVATION WHICH IS 17 FEET ABOVE THE FLOOR IN FIRE AREA 27 AND 4 FEET ABOVE THE FLOOR OF FIRE ZONE 36. FIRE ZONE 36 IS A PART OF THE FIRE AREA WHICH ALSO CONTAINS ZONES 3, 32, 48, 49, 50, 51, 52 and 69.

THE FOLLOWING IS A SUMMARY OF THE IMPACT OF THE SUBJECT OPENING ON SAFE SHUTDOWN OF THE PLANT. THE SUMMARY TRACES THE FIRE PATH, ASSUMING IT SPREADS THROUGH THE OPENING AND SHOWS THERE IS NO SIGNIFICANT IMPACT ON SAFE SHUTDOWN.

FIRE PROTECTION EVALUATION

A FIRE IS NOT LIKELY TO SPREAD THROUGH THE OPENING FROM FIRE AREA 27 TO FIRE ZONE 36 DUE TO THE LACK OF CONTINUITY OF FIXED COMBUSTIBLES IN FIRE ZONE 36 (WHICH HAS A ZERO COMBUSTIBLE LOADING). EVEN IF A FIRE DID SPREAD INTO FIRE ZONE 36 VIA TRANSIENT COMBUSTIBLES, IT WOULD HAVE TO FOLLOW A TORTUOUS PATH THROUGH SEVERAL FIRE ZONES OF VERY LOW FIRE SEVERITY (36, 32 AND 69) BEFORE REACHING FIRE ZONES CONTAINING SAFE SHUTDOWN EQUIPMENT CABLES. FIRE ZONES 49, 50, 51 AND 52 ARE THE ONLY PORTIONS OF THE SUBJECT AREAS WHICH CONTAIN SAFE SHUTDOWN CABLES OR EQUIPMENT AND HAVE BEEN ADDRESSED IN THE MARCH 1983 APPENDIX R SUBMITTAL (SEE SAFE SHUTDOWN EVALUATION FOR EXPLANATION OF SAFE SHUTDOWN CONDITIONS IN FIRE AREA 27). FIRE ZONE 36 CONTAINS NO AUTOMATIC FIRE DETECTION OR SUPPRESSION SYSTEMS, HOWEVER, FIRE ZONES 32 AND 69 CONTAIN AUTOMATIC DETECTION WHILE FIRE ZONE 32 ALSO CONTAINS AN AUTOMATIC PREACTION SPRINKLER SYSTEM. MANUAL FIRE FIGHTING HOSE STATIONS AND PORTABLE FIRE EXTINGUISHERS WERE AVAILABLE FOR USE BY THE FIRE BRIGADE.

DUE TO THE LACK OF FIXED COMBUSTIBLES, A FIRE ORIGINATING IN FIRE ZONE 36 WOULD ONLY ORIGINATE FROM TRANSIENT COMBUSTIBLES. A TRANSIENT FIRE IN FIRE ZONE 36 COULD SPREAD THROUGH THE OPENING INTO FIRE AREA 27. FIRE AREA 27 HAS IONIZATION (SMOKE) AND INFRA-RED (FLAME) TYPE DETECTORS. THE PRESENCE OF EITHER FIRE OR SMOKE IN THIS

FIRE AREA WOULD HAVE ACTUATED ALARMS IN THE CONTROL ROOM WHICH WOULD HAVE RESULTED IN NOTIFICATION OF THE FIRE BRIGADE TO BEGIN FIRE FIGHTING ACTIVITIES. MANUAL FIRE FIGHTING HOSE STATIONS AND PORTABLE FIRE EXTINGUISHERS WERE AVAILABLE FOR USE BY THE FIRE BRIGADE.

THE ABOVE DESCRIPTION OF THE POTENTIAL FIRE SPREAD THROUGH THE SUBJECT OPENING DOES NOT TAKE CREDIT FOR THE POSITIVE EFFECTS OF THE CO2 SYSTEM LOCATED IN FIRE AREA 27. THIS CO2 SUPPRESSION SYSTEM WAS AVAILABLE FOR EITHER AUTOMATIC OR MANUAL ACTUATION. THIS SYSTEM IS ACTUATED BY THE PREVIOUSLY MENTIONED DETECTORS. HAD THE SYSTEM BEEN ACTUATED, THE OPENING WOULD HAVE HAD NO AFFECT ON THE CO2 SYSTEM'S ABILITY TO EXTINGUISH A FIRE IN THE ROOM VOLUME BELOW THE OPENING. FOR THE ROOM VOLUME ABOVE THE OPENING, LEAKAGE OF CO2 THROUGH THE OPENING WOULD HAVE REDUCED THE CONCENTRATION SOMEWHAT. IF ADEQUATE CONCENTRATION WAS NOT MAINTAINED FOR THE LENGTH OF TIME REQUIRED FOR EXTINGUISHMENT, THE SYSTEM WOULD STILL CONTROL OR LIMIT THE SPREAD OF FIRE UNTIL ARRIVAL OF THE FIRE BRIGADE.

SAFE SHUTDOWN EVALUATION

THERE WERE NO EQUIPMENT OR CABLES IN FIRE AREA 27 THAT COULD HAVE ADVERSELY AFFECTED THE SAFE SHUTDOWN OF THE PLANT THAT WE WERE COMMITTED TO HAVE OPERATIONAL AS OF THE APPLICABLE DATES OF THIS EVENT.

CONCLUSION

BASED ON THE ABOVE EVALUATION IT IS CONCLUDED THAT THIS EVENT DOES NOT CONSTITUTE AN UNREVIEWED SAFETY QUESTION AS DEFINED UNDER 10CFR50.59, NOR DOES IT IDENTIFY A SUBSTANTIAL HAZARD TO THE HEALTH AND SAFETY OF THE PUBLIC.

ATTACHED IS A COPY OF A DRAWING WHICH SHOWS THE LOCATION OF FIRE ZONE 27.

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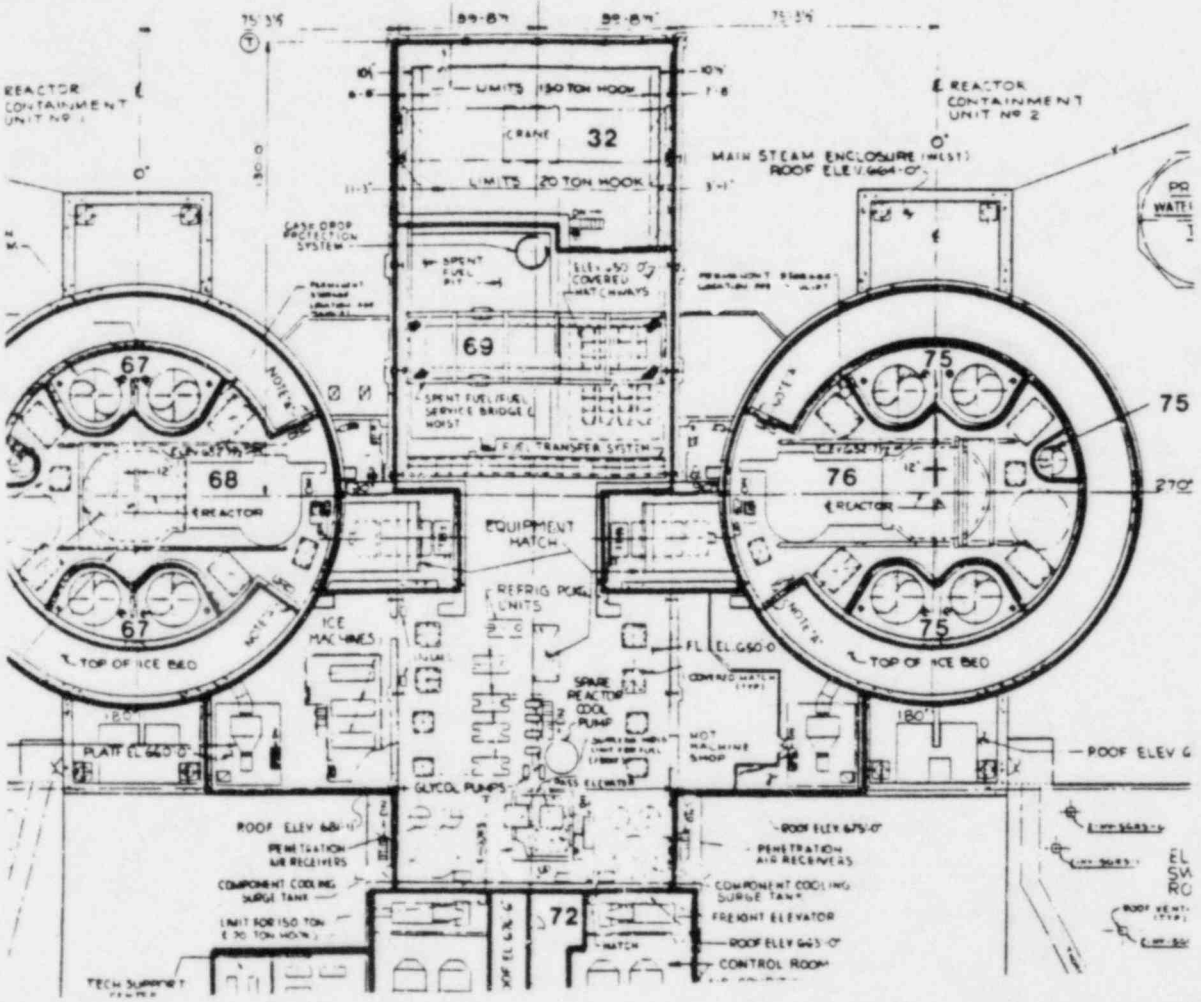
D.C. COOK PLANT UNIT - 2	0 5 0 0 0 3 1 6	8 5	— 0 0 6	— 0 0	0 4 OF 0 6

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



INDIANA & MICHIGAN ELECTRIC CO
DONALD C. COOK
NUCLEAR PLANT
BRIDGMAN MICHIGAN

PLANT ARRANGEMENT
REACTOR BUILDING
MAIN FLOOR ELEV 650'-0"

FP 101-6

THESE FIRE ZONES ARE INDIVIDUALLY NUMBERED WITH ZONE BARRIERS HI-LIGHTED.

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D.C. COOK PLANT UNIT - 2	0 5 0 0 0 3 1 6	8 5	— 0 0 6	— 0 0	0 5 OF 0 6

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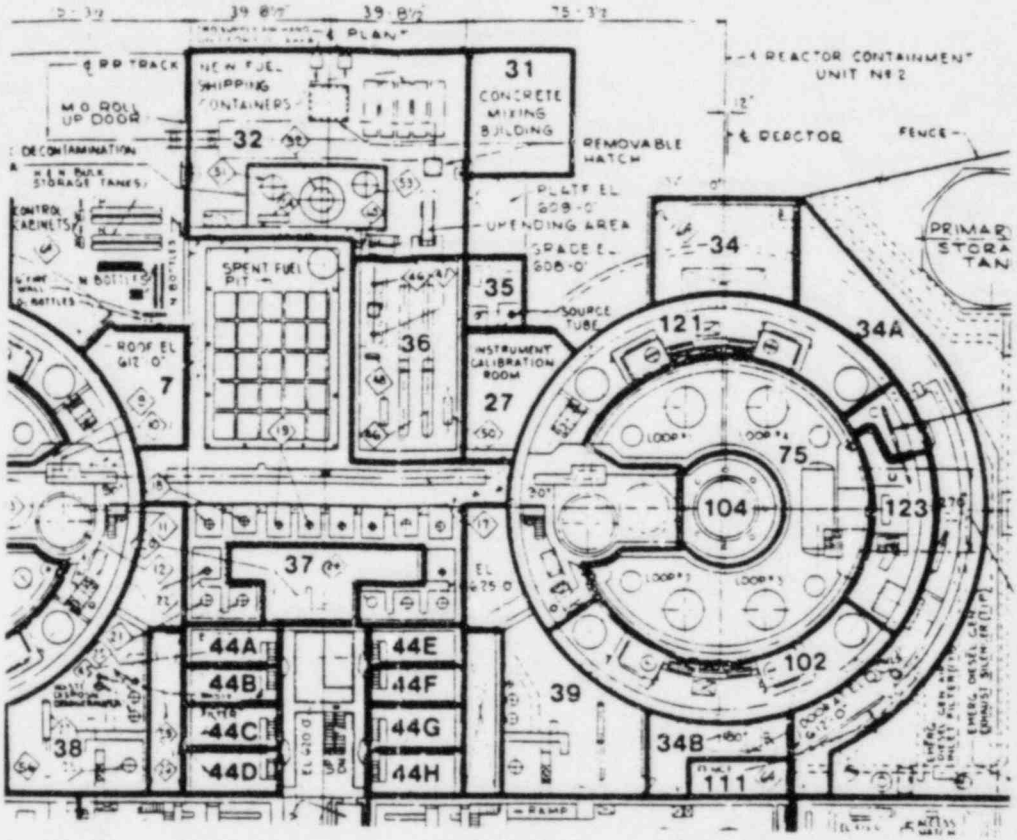

INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT
BRIDGMAN MICHIGAN

PLANT ARRANGEMENT
MEZZANINE FLOOR EL 609'-0"
UNITS 1 & 2

FP-101-3

THESE FIRE ZONES ARE INDIVIDUALLY NUMBERED WITH ZONE BARRIERS HI-LIGHTED.

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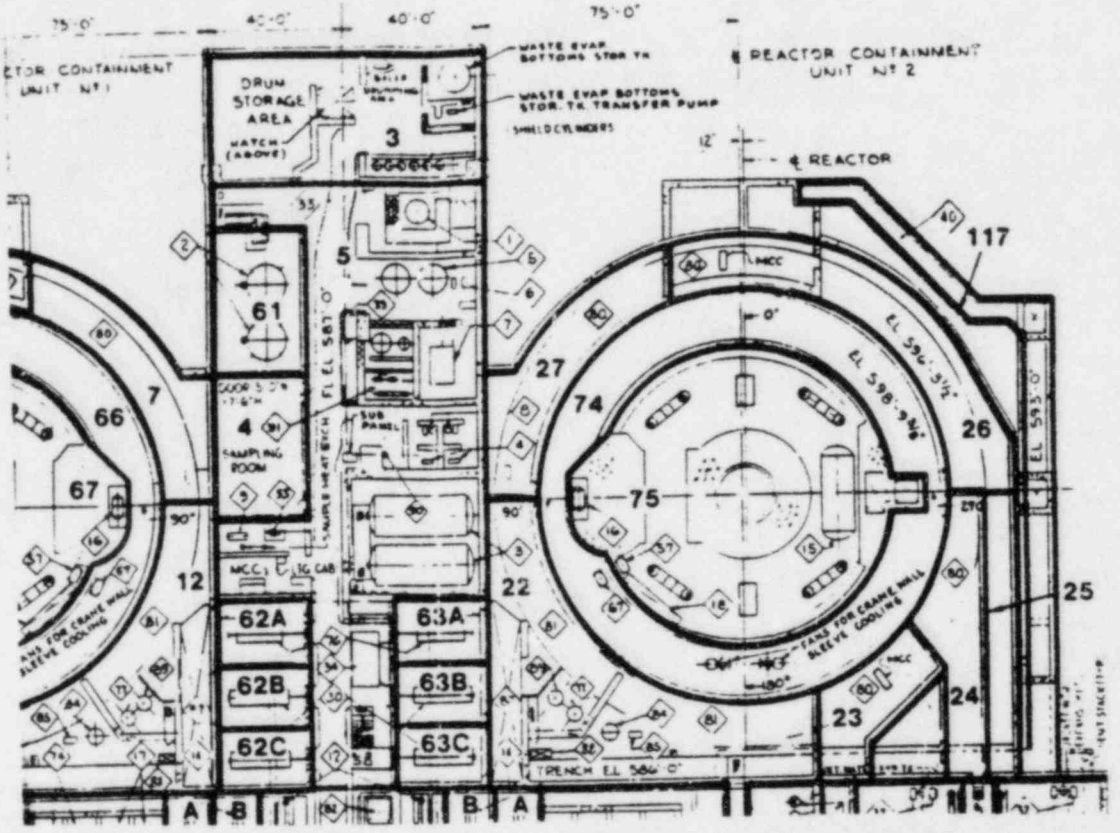

INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT
BRIDGMAN MICHIGAN

PLANT ARRANGEMENT
BASEMENT PLAN
EL 591'-0" & 587'-0"
UNITS 1 & 2

FP 101-2

THESE FIRE ZONES ARE INDIVIDUALLY NUMBERED WITH ZONE BARRIERS HI-LIGHTED.

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

March 6, 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 85-006-0

Sincerely,

for W.G. Smith, Jr.
Plant Manager

/cbm

Attachment

cc: John E. Dolan
J.G. Keppler, RO:III
M.P. Alexich
R.F. Kroeger
H.B. Brugger
NRC Resident Inspector
R.C. Callen, MPSC
G. Charnoff, Esq.
J.M. Hennigan
INPO
PNSRC
J.F. Stietzel
Dottie Sherman, ANI Library

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1/1