

LICENSEE EVENT REPORT (LER)

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

TITLE (4)

IMPROPERLY CLASSIFIED FIRE DAMPERS

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)											
									D.C. COOK UNIT - 2					0 5 0 0 0 3 1 6											
0	2	0	6	8	5	8	5	-	0	0	6	-	0	1	0	2	0	7	8	6	0 5 0 0 0 1 1				

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)					
1		20.402(b)		20.406(e)		80.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0170	20.406(a)(1)(i)		60.36(a)(1)		80.73(a)(2)(v)	73.71(c)
		20.406(a)(1)(ii)		60.36(a)(2)		80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)
	20.406(a)(1)(iii)	X	60.73(a)(2)(i)		60.73(a)(2)(vii)(A)		
	20.406(a)(1)(iv)		60.73(a)(2)(ii)		60.73(a)(2)(viii)(a)		
	20.406(a)(1)(v)		60.73(a)(2)(iii)		60.73(a)(2)(a)		

LICENSEE CONTACT FOR THIS LER (12)		
NAME	AREA CODE	TELEPHONE NUMBER
J. D. ALLARD - MAINTENANCE DEPARTMENT SUPERINTENDENT	616	465-5901

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 B D M P	A 4 3 0	N							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (18)

THIS IS A REVISION TO LER 85-006 PREVIOUSLY SUBMITTED ON 03-08-85. THE PURPOSE OF THIS REVISION IS TO INCLUDE THE SAFETY ASSESSMENT OF THE EVENT.

ON 02-06-85 AT 1300 HOURS WITH UNIT 1 REACTOR IN MODE 1 OPERATING AT 70 PERCENT POWER AND UNIT 2 IN MODE 1 AT 100 PERCENT POWER, AN AUXILIARY BUILDING ACCESS CONTROL VENTILATION DUCT FIRE DAMPER (1EEE/BDMP) WAS FOUND CLOSED DURING THE PERFORMANCE OF MAINTENANCE ACTIVITIES IN THE AREA. INITIAL INVESTIGATION OF THE CONDITION DETERMINED THAT THE FIRE DAMPER WAS DESIGNED TO PERFORM A SAFETY FUNCTION BUT HAD BEEN MISIDENTIFIED AS NON-SAFETY RELATED DURING THE SAFETY RELATED FIRE DAMPER IDENTIFICATION PROGRAM OF 1982. ON RECOGNITION THAT THE DAMPER HAD BEEN IMPROPERLY CLASSIFIED THE DAMPER WAS RESET AND SURVEILLANCE TESTED PURSUANT TO TECHNICAL SPECIFICATION 4.7.10.3 AT 0817 HOURS ON 02-07-85.

A CONTINUING INVESTIGATION INTO THIS EVENT HAS INDICATED THAT FOUR ADDITIONAL FIRE DAMPERS WERE NOT INCLUDED IN THE TABULATION OF SAFETY RELATED FIRE DAMPERS. ALL FIVE (5) FIRE DAMPERS HAVE BEEN ADDED TO THE FIRE DAMPER SURVEILLANCE TEST SCHEDULE.

THE HEALTH AND SAFETY OF THE PUBLIC WAS NOT AFFECTED.

8602190736 860207
PDR ADOCK 05000315
S PDR

IE92

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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

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

THIS IS A REVISION TO LER 85-006 SUBMITTED ON 03-08-85.

ON 02-06-85 AT 1300 HOURS WITH UNIT 1 OPERATING AT 70 PERCENT POWER AND UNIT 2 REACTOR IN MODE 1 AT 100 PERCENT POWER, A CLOSED FIRE DAMPER (IEEE/BDMP) WAS DISCOVERED DURING MAINTENANCE ACTIVITIES BEING PERFORMED ON THE AUXILIARY BUILDING ACCESS CONTROL AREA VENTILATION SYSTEM. INITIAL INVESTIGATION OF THE CONDITION DETERMINED THAT THE FIRE DAMPER WAS DESIGNED TO PERFORM A SAFETY FUNCTION BUT HAD BEEN MISIDENTIFIED AS NON-SAFETY RELATED DURING THE SAFETY RELATED FIRE DAMPER IDENTIFICATION PROGRAM OF 1982. AS A RESULT OF BEING IMPROPERLY CLASSIFIED, THE DAMPER WAS NOT LISTED ON THE SAFETY-RELATED FIRE DAMPER SURVEILLANCE TEST SCHEDULE. A FIRE WATCH WAS POSTED AT THE TIME THE DAMPER WAS VERIFIED TO BE SAFETY RELATED.

A MAKEUP AIR PREHEATER STEAM COIL IS LOCATED IN THE VENTILATION DUCT, JUST UPSTREAM OF THE FIRE DAMPER. IT HAS BEEN CONCLUDED THAT A VENTILATION SYSTEM MALFUNCTION ALLOWED A HEAT BUILDUP IN THE DUCT WHICH CAUSED SEPARATION OF THE AUTOMATIC ACTUATION THERMAL LINKS WHICH HELD THE DAMPER IN THE OPEN POSITION. SINCE THE DAMPER ACTUATED AS DESIGNED, NO ADVERSE SAFETY CONSEQUENCES WOULD HAVE RESULTED FROM THE FAILURE TO TEST THIS DAMPER. THE DAMPER WAS SERVICED AND RESET. POST-MAINTENANCE SURVEILLANCE TESTING IN COMPLIANCE WITH TECHNICAL SPECIFICATION 4.7.10.3 WAS COMPLETED SATISFACTORILY PER **12MHP4030.STP. 028 AT 0817 HOURS ON 02-07-85.

THE INVESTIGATION INTO THIS EVENT INDICATED THAT FOUR ADDITIONAL FIRE DAMPERS THAT PERFORM SAFETY FUNCTIONS WERE NOT PROPERLY IDENTIFIED AS SAFETY RELATED AND, THEREFORE, WERE NOT SURVEILLANCE TESTED PRIOR TO THIS DISCOVERY. THE ORIGINAL TECHNICAL SPECIFICATION FIRE DAMPER LIST WAS DEVELOPED BY COMPARING THE FIRE HAZARD ANALYSIS, THE SPECIFICATION DCCFP101QCN, AND THE HVAC DRAWINGS. THE HVAC DRAWINGS, IN SOME CASES, DID NOT SHOW ALL FIRE DAMPERS IN EVERY VIEW - I.E. (SOME FIRE DAMPERS WERE NOT SHOWN IN THE PLAN OF A GIVEN PENETRATION BUT WERE INDICATED IN THE ELEVATION OF THAT PENETRATION.) DESPITE ATTEMPTS TO CROSS-REFERENCE ALL OF THE SAFETY-RELATED DAMPERS, THE FIVE DAMPERS DISCOVERED WERE OMITTED FROM THE LIST.

THE CORRECTIVE ACTION FOR THIS CONDITION HAS BEEN AN INVESTIGATION OF ALL SAFETY RELATED PLANT AREAS TO ENSURE THAT SIMILAR DEFICIENCIES OF THIS TYPE DO NOT EXIST. THE INVESTIGATION WAS PERFORMED BY COMPARING APPENDIX D OF SPECIFICATION DCCFP101QCN, REVISION 9 (A LISTING OF TECH SPEC VS NON-TECH SPEC FIRE AREAS), AGAINST THE FIRE DAMPER TABULATION (HVAC PENETRATION LIST), THE HVAC DRAWINGS, AND THE FIRE DAMPER LIST ATTACHED TO PLANT PROCEDURE 12MHP4030.STP.028.

THE FIVE FIRE DAMPERS HAVE BEEN CHECKED FOR OPERABILITY IN ACCORDANCE WITH OUR TECHNICAL SPECIFICATION SURVEILLANCE PROCEDURES AND HAVE BEEN INCORPORATED INTO THESE PROCEDURES AND CHECKED ON THE PRESCRIBED 18 MONTH SURVEILLANCE PERIOD.

SAFETY EVALUATION

FIVE FIRE DAMPERS WHICH ARE CONSIDERED TO BE TECH SPEC WERE FOUND TO BE EXCLUDED FROM THE TECH SPEC FIRE DAMPER LIST. FOUR OF THESE DAMPERS ARE LOCATED AT THE BOUNDARY INTERFACE BETWEEN THE UNIT 1 AUXILIARY CABLE VAULT EL. 620'-6" (FIRE AREA 56) AND EITHER THE AUXILIARY BUILDING EL. 623' (FIRE ZONE 52) OR THE AUXILIARY BUILDING AIR SUPPLY PLENUM EL. 620'-6" (LOCATED ABOVE THE ACCESS CONTROL AREA - FIRE ZONE 43). THE FIFTH DAMPER IS LOCATED AT THE BOUNDARY INTERFACE BETWEEN THE UNIT 2 AUXILIARY CABLE VAULT EL. 622'-6"

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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

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

(FIRE AREA 59) AND AUXILIARY BUILDING EL. 633' (FIRE ZONE 52). IN EACH CASE, THE DUCTWORK PASSES THROUGH THE AUXILIARY CABLE VAULT AND DOES NOT SUPPLY AIR INTO OR EXHAUST AIR FROM THIS AREA.

IN ORDER TO BREACH A FIRE DAMPER, A FIRE STARTING IN ONE OF THE FIRE ZONES/AREAS WOULD HAVE TO BE OF SIGNIFICANT INTENSITY TO CAUSE ENOUGH DAMAGE TO THE DUCTWORK TO ENTER THE DUCT. THEN IT WOULD HAVE TO TRAVEL THROUGH THE DUCTWORK TO THE DAMPER. ONCE IT PASSES THROUGH THE DAMPER, IT WOULD HAVE TO AGAIN DAMAGE THE DUCT SUFFICIENTLY TO ALLOW THE FIRE TO EXIT INTO THE ADJACENT FIRE ZONE/AREA. THIS IS CONSIDERED TO BE A TORTUROUS FIRE PATH AND ONE WHICH WOULD BE DIFFICULT TO SUBSTANTIATE AS EXPLAINED IN THE FOLLOWING PARAGRAPH.

FIRST, THE FIRE ZONES/AREAS OF CONCERN HAVE ALWAYS (SINCE THE DEVELOPMENT OF THE FIRST TECHNICAL SPECIFICATION FIRE DAMPER LIST) HAD AN AUTOMATIC FIRE SUPPRESSION SYSTEM AND/OR AN AREA IONIZATION DETECTION SYSTEM. AN EXCEPTION TO THIS IS THE SPACE ABOVE THE SUSPENDED CEILING OF THE ACCESS CONTROL AREA WHICH INCLUDES THE AUXILIARY BUILDING AIR SUPPLY PLENUM. THESE SYSTEMS PROVIDE EARLY WARNING FIRE DETECTION LEADING TO RAPID CONTROL OR SUPPRESSION OF A FIRE BEFORE IT COULD BUILD TO SUFFICIENT INTENSITY TO CAUSE DAMAGE TO THE DUCTWORK. SECONDLY, OUTSIDE OF THE AUXILIARY CABLE VAULT AREAS, THE POSTULATED FIRE SEVERITY OF THE ADJACENT FIRE ZONES IS VERY LOW. THIRD, THE HVAC SYSTEMS DO NOT NORMALLY HANDLE COMBUSTIBLE PRODUCTS, SUCH AS FLAMMABLE VAPORS, FUMES, OR COMBUSTIBLE DUCTS: THEREFORE, THERE SHOULD BE NOTHING TO SUPPORT COMBUSTION WITHIN THE DUCT. FOURTH, AS PREVIOUSLY MENTIONED, THE DUCTWORK HAS NO SUPPLY OR EXHAUST OUTLETS WITHIN EITHER AUXILIARY CABLE VAULT TO ALLOW EASY ACCESS OR EXIT OF A FIRE OR ITS PRODUCTS OF COMBUSTION.

A FIRE STARTING IN ANY ONE OF THE FIRE ZONES/AREAS HAVING AN IONIZATION DETECTION SYSTEM WOULD HAVE BEEN DETECTED BY THE SMOKE DETECTOR SYSTEM WHICH WOULD HAVE ALARMED IN THE APPROPRIATE UNIT'S CONTROL ROOM. UPON NOTIFICATION OF THE FIRE, THE FIRE BRIGADE WOULD HAVE BEEN DISPATCHED TO BEGIN FIRE FIGHTING ACTIVITIES. MANUAL HOSE STATIONS AND PORTABLE FIRE EXTINGUISHERS ARE AVAILABLE THROUGHOUT THE AUXILIARY BUILDING FOR USE BY THE FIRE BRIGADE IN THESE AREAS.

BASED ON THE ABOVE DESCRIPTION, THE FIRE PROTECTION OF THE FACILITY WOULD NOT HAVE BEEN DEGRADED BY THE FACT THAT THESE FIVE FIRE DAMPERS HAD NEVER BEEN TESTED FOR OPERABILITY IN ACCORDANCE WITH OUR TECHNICAL SPECIFICATION PROCEDURES. THEREFORE, SAFE SHUTDOWN OF THE PLANT WAS ALSO UNAFFECTED.



INDIANA & MICHIGAN ELECTRIC COMPANY

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

February 7, 1986

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

Operating License DPR-58
Docket No. 50-315

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 85-006-01

Sincerely,

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
R.W. Jurgensen
NRC Resident Inspector
R.C. Callen, MPSC
G. Charnoff, Esq.
D. Hahn
INPO
PNSRC
A.A. Blind
Dottie Sherman, ANI Library
File

IE22

111