

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) D. C. COOK PLANT - UNIT 1										DOCKET NUMBER (2) 0 5 0 0 0 3 1 5										PAGE 18 1 OF 0 1 2																					
TITLE (4) REACTOR TRIP AND SAFETY INJECTION																																									
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 NAME						DOCKET NUMBER(S)								
0 6			1 7			8 4			8 4			0 0			8			0 0			0 7			1 8			8 4									0 5 0 0 0					
OPERATING MODE (9) 1						THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																73.71(b)																			
POWER LEVEL (10) 0 6 18						20.402(b)						20.405(a)						<input checked="" type="checkbox"/> 80.73(a)(2)(iv)						73.71(c)																	
						20.405(a)(1)(i)						80.38(a)(1)						80.73(a)(2)(v)																							
						20.405(a)(1)(ii)						80.38(a)(2)						80.73(a)(2)(vi)						OTHER (Specify in Abstract below and in Text, NRC Form 305-A)																	
						20.405(a)(1)(iii)						80.73(a)(2)(i)						80.73(a)(2)(vii)(A)																							
						20.405(a)(1)(iv)						80.73(a)(2)(ii)						80.73(a)(2)(vii)(B)																							
						20.405(a)(1)(v)						80.73(a)(2)(iii)						80.73(a)(2)(ix)																							
LICENSEE CONTACT FOR THIS LER (12)																																									
NAME A. A. BLIND ENGINEERING DEPARTMENT SUPERINTENDENT																TELEPHONE NUMBER 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 NRC				CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NRC																					
B E F		C A P		X 9 9 9		Y																																			
SUPPLEMENTAL REPORT EXPECTED (14)																																									
YES (If yes, complete EXPECTED SUBMISSION DATE):																<input checked="" type="checkbox"/> NO						EXPECTED SUBMISSION DATE (15)																			
																						MONTH DAY YEAR																			
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																																									
<p>ON JUNE 17, 1984, AT 2034 HOURS, WHILE IN MODE 1 AND OPERATING AT 68% POWER, A REACTOR TRIP AND SAFETY INJECTION OCCURED FROM THE LOSS OF C.R.I.D. (CONTROL ROOM INSTRUMENT DISTRIBUTION) IV INVERTER. THE REACTOR TRIP OCCURED DUE TO INDICATION OF LOW RCS FLOW WITH REACTOR POWER GREATER THAN THE P-8 SETPOINT. THE SAFETY INJECTION OCCURED DUE TO AN INDICATION OF LOW STEAMLINE PRESSURE CONCURRENT WITH HIGH STEAM FLOW CAUSED BY THE OPERATION OF THE STEAM DUMPS.</p> <p>THE CAUSE OF THE C.R.I.D. FAILURE WAS DETERMINED TO BE A SHORTED C-2 CAPACITOR ON THE SHORTING CIRCUIT BOARD.</p> <p>THIS EVENT AND THE PREVIOUS C-2 CAPACITOR FAILURE ARE THE RESULT OF HIGH AMBIENT TEMPERATURES.</p> <p>A DESIGN CHANGE HAS BEEN INSTALLED WHICH REPLACED THE C-2 CAPACITORS IN ALL FOUR INVERTERS WITH CAPACITORS HAVING A HIGHER TEMPERATURE RATING. AIR CONDITIONING WAS ALSO ADDED SO THAT COOL AIR IS DIRECTED INTO THE INVERTER ENCLOSURES.</p>																																									
8407260149 840718 PDR ADOCK 05000315 S PDR																																									

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 Plant
Unit - 1

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

YEAR

SEQUENTIAL
NUMBERREVISION
NUMBER

0 5 0 0 0 3 1 5 8 4 - 0 0 8 - 0 0 0 2 OF 0 2

TEXT (if more space is required, use additional NRC Form 365A 8/1/77)

ON JUNE 17, 1984, AT 2034 HOURS, WHILE IN MODE 1 AND OPERATING AT 68% POWER, A REACTOR TRIP AND SAFETY INJECTION OCCURED FROM THE LOSS OF C.R.I.D. (CONTROL ROOM INSTRUMENT DISTRIBUTION) IV INVERTER. THE REACTOR TRIP OCCURED DUE TO INDICATION OF LOW RCS FLOW WITH REACTOR POWER GREATER THAN THE P-8 SETPOINT. THE SAFETY INJECTION OCCURED DUE TO AN INDICATION OF LOW STEAMLINE PRESSURE CONCURRENT WITH HIGH STEAM FLOW CAUSED BY THE OPERATION OF THE STEAM DUMPS. DURING ACTIVATION OF THE SAFETY INJECTION, THE MAIN STEAM ISOLATION VALVES CLOSED TO THE DETENT POSITION DUE TO THE SHORT TERM INDICATION OF THE HIGH STEAM FLOW.

FOLLOW-UP TESTING INCLUDED:

-VERIFICATION THAT A SHORT TERM ACTIVATION OF THE SAFETY INJECTION MASTER RELAY WOULD CLOSE THE MAIN STEAM ISOLATION VALVES TO THE DETENT POSITION.

-THE HIGH STEAM FLOW BISTABLES AND THE STEAMLINE PRESSURE MISMATCH BISTABLES WERE TESTED. THE BISTABLE TRIP SETPOINTS WERE FOUND TO BE WITHIN SPECIFICATIONS.

-TRAIN - A OF THE SOLID STATE PROTECTION SYSTEM WAS VERIFIED TO OPERATE CORRECTLY BY THE PERFORMANCE OF A SURVEILLANCE TEST WHICH CHECKS THE LOGIC AND OUTPUT RELAYS.

THIS TESTING VERIFIED THAT THE SAFETY FUNCTIONS OPERATED CORRECTLY AT THE PROPER ACTUATION POINTS.

THE CAUSE OF THE C.R.I.D. FAILURE WAS DETERMINED TO BE A SHORTED C-2 CAPACITOR (IEEE COMPONENT FUNCTION IDENTIFIER = CAP) ON THE SHORTING CIRCUIT BOARD. THE FAILED CAPACITOR WAS MANUFACTURED BY SPRAGUE - PART NO. 330 P 72.

PREVIOUS OCCURRENCES OF A SIMILAR NATURE WERE REPORTED ON LERS: 050-315/1980-20, 1979-22 AND 050-316/1983-81, 52, 1981-27.

THE CAUSE OF THE NUMEROUS C-2 CAPACITOR FAILURES HAS BEEN DETERMINED TO BE THE HIGH AMBIENT TEMPERATURES.

A DESIGN CHANGE HAS BEEN INSTALLED WHICH REPLACED THE C-2 CAPACITORS IN ALL FOUR INVERTERS WITH CAPACITORS HAVING A HIGHER TEMPERATURE RATING. AIR CONDITIONING WAS ALSO ADDED SO THAT COOL AIR IS DIRECTED INTO THE INVERTER ENCLOSURES.



INDIANA & MICHIGAN ELECTRIC COMPANY

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

July 18, 1984

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

Operating License DPR-58
Docket No. 50-315

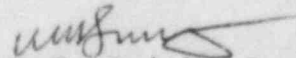
Document Control Manager:

On July 16, 1984, Licensee Event Report 84-010-0 was transmitted to your office. This Licensee Event Report should have been transmitted utilizing the following number:

RO 84-008-0

A complete copy of the LER with the correct number is attached. Would you please take the necessary steps to delete LER 84-010-0 from your files.

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. Brugger
E.R. Swanson, RO:III
R.C. Callen, MPSC
G. Charnoff, Esq.
J.M. Hennigan
R.O. Bruggee, EPRI
INPO
PNSRC
J.F. Stietzel
E.L. Townley
Dottie Sherman, ANI Library

IE22
1/1