

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Cooper Nuclear Station DOCKET NUMBER (2) 0501021918 PAGE (3) 1 OF 13

TITLE (4) Unplanned Actuation of Group Isolation Engineered Safety Feature. While Shutdown Due to Relay Failure

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	4	2	8	8	8	0	5	1	9	8	8	0	5	0	0	0

OPERATING MODE (9) N THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

20.402(b)	<input type="checkbox"/>	20.406(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	<input type="checkbox"/>
20.405(a)(1)(i)	<input type="checkbox"/>	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)	<input type="checkbox"/>
20.405(a)(1)(ii)	<input type="checkbox"/>	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	<input type="checkbox"/>
20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<input type="checkbox"/>		
20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	<input type="checkbox"/>		
20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)	<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)

NAME Donald L. Reeves, Jr. TELEPHONE NUMBER 402825-3811

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS
X	JIM		3G080	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On April 22, 1988, while shutdown for the 1988 Refueling Outage, partial Group 2 and Group 6 Isolations unexpectedly occurred at 3:45 A.M. These partial Engineered Safety Feature (ESF) actuations were traced to a failed (opened) coil for relay 16A-K17, a Group 2 Isolation relay. Due to existing plant conditions, the effects of the partial Group 2 Isolation (Primary Containment Isolation) resulted in no impact on plant activities. However, the effects of the Group 6 Isolation (Secondary Containment Isolation and initiation of the Standby Gas Treatment [SGT] System) were evident in that normal Reactor Building ventilation was automatically shutdown and one half of the Secondary Containment Isolation Valves automatically closed. Whereas, the A SGT System train normally would have started due to this failure, it had previously been removed from service for outage related maintenance and, therefore, was not actuated. The relay failure was considered to be random in nature and not due to any specific cause.

The relay was replaced, the partial Group 2 and 6 Isolations were reset, and normal Reactor Building ventilation was restored. No additional corrective action was necessary. Failures of relays of this type (CR120A relays manufactured by General Electric) have occurred on a random basis in the past. No unusual failure trends for relays of this type have been noted at Cooper Nuclear Station.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		0 1 2	0 0 0	0 2	OF	0 3

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

A. Event Description

On April 22, 1988, while shutdown for the 1988 Refueling Outage, partial Group 2 and Group 6 Isolations unexpectedly occurred at 3:45 A.M. These partial Engineered Safety Feature (ESF) actuations were traced to a failed (opened) coil for relay 16A-K17, a Group 2 Isolation relay. Due to existing plant conditions, the effects of the partial Group 2 Isolation (Primary Containment Isolation) resulted in no impact on plant activities. However, the effects of the Group 6 Isolation (Secondary Containment Isolation and initiation of the Standby Gas Treatment [SGT] System) were evident in that normal Reactor Building ventilation was automatically shutdown and one half of the Secondary Containment Isolation Valves automatically closed. Whereas, the A SGT System train normally would have started due to this failure, it had previously been removed from service for outage related maintenance and, therefore, was not actuated. The B SGT System train was not actuated since it is controlled by the B logic system. The relay failure was considered to be random in nature and not due to any specific cause.

B. Plant Status

Shutdown for the 1988 Refueling Outage which commenced March 5, 1988.

C. Basis for Report

Unplanned partial actuation of Groups 2 and 6 Isolations, reportable in accordance with 10CFR50.73(a)(2)(iv).

D. Cause

Equipment failure of a random nature, not due to any specific cause.

E. Safety Significance

None. Other than loss of normal Reactor Building ventilation, there were no related plant effects. Had this failure occurred during power operation, due to the fact that Reactor Recirculation MG Set ventilation would have been interrupted, the following sequence of events could occur:

1. rapidly rising Recirculation MG Set temperatures, which could potentially have resulted in a trip of both MG sets due to high internal air temperatures either while the HVAC System was off or upon its restart,
2. trip of both Reactor Recirculation Pumps, causing reactor flow to be reduced to that available via natural circulation only, and
3. a potential reactor scram due to a reactor water level transient.

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TEXT (If more space is required, use additional NRC Form 305A's) (17)

In any event, if both Reactor Recirculation pumps were lost, regardless of whether or not an automatic trip would have occurred, the reactor would have to be manually shutdown in accordance with plant procedures to reinitiate forced recirculation flow and effect recovery.

F. Corrective Action

The relay was replaced, the partial Group 2 and 6 Isolations were reset, and normal Reactor Building ventilation was restored. No additional corrective action was necessary. Failures of relays of this type (CR120A relays manufactured by General Electric) have occurred on a random basis in the past. No unusual failure trends for relays of this type have been noted at Cooper Nuclear Station.

G. Similar Events

Relay failures of this nature, resulting in ESF actuations for which reportability is required, have not previously occurred.



Nebraska Public Power District

COOPER NUCLEAR STATION
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CNSS886124

May 19, 1988

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Gentlemen:

Cooper Nuclear Station Licensee Event Report 88-012 is forwarded as an attachment to this letter.

Sincerely,

G. R. Horn
Division Manager of
Nuclear Operations

GRH:sg

Attachments

cc: D. D. Martin
L. G. Kunc1
K. C. Walden
C. M. Kuta
R. J. Singer
INPO Records Center
ANI Library
NRC Resident Inspector

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