NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Cooper Nuclear Station	0 5 0 0 0 2 9 8	1 OF 0 3

TITLE (4) Unplanned Automatic Actuation of Diesel Generator No. 1 Starting Logic Due to 4160V AC Breaker Actuation During Relay Cover Replacement

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 5 0 0 0
0 3	1 6	8 8	8 8	0 0 6	0 0	0 4	1 2	8 8		0 5 0 0 0

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N	0 0 0	20.402(b)	20.405(c)	X 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)	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
Donald L. Reeves, Jr.	4 0 2 8 2 5 - 3 8 1 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 March 16, 1988, at 5:05 P.M., an unplanned automatic actuation of Diesel Generator No. 1 starting logic occurred when the normal power supply breaker (1AF) to 4160V Critical Bus F unexpectedly tripped open. At the time of the event, a cover for an overcurrent relay for Breaker 1AF was being replaced. This relay had just been installed after being removed from the breaker cubicle for calibration and testing. It is suspected that during cover installation, the target reset lever which is attached to the cover, inadvertently contacted the overcurrent relay seal-in contacts, causing the relay to actuate. This resulted in a trip of Breaker 1AF which, in turn, initiated closure of Breaker 1AS, the Emergency Transformer feeder, and automatic startup of Diesel Generator No. 1.

At the time of this event, the plant was shutdown for the 1988 Refueling Outage, with reactor coolant temperature at 75°F and the Residual Heat Removal (RHR) System in operation in the Shutdown Cooling mode. This situation was immediately investigated by Electrical Maintenance supervision. The relay was removed from the cubicle, inspected, satisfactorily retested, re-installed and its cover replaced. Breaker 1AF was then closed, re-energizing 4160V Critical Bus F from its normal source. Further corrective action to be taken will involve a reassessment of the procedural requirements associated with relay testing and, as applicable, implementation of revisions designed to prevent or mitigate the effects of inadvertent relay actuations during removal/replacement activities. Additionally, the Training Department will be requested to include this event in the appropriate craft training activities.

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NRC Form 3
(9-83)

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Cooper Nuclear Station	0 5 0 0 0 2 9 8	8 8	— 0 0 6	— 0 0	0 2 OF 0 3

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

A. Event Description

On March 16, 1988, at 5:05 P.M., an unplanned automatic startup of Diesel Generator No. 1 occurred when the normal power supply breaker (1AF) to 4160V Critical Bus F unexpectedly tripped open. At the time of the event, a cover for an overcurrent relay for Breaker 1AF was being replaced. This relay had just been installed after being removed from the breaker cubicle for calibration and testing. As a result of Breaker 1AF actuation, the Emergency Transformer Supply Breaker (1AS) automatically closed, energizing 4160V Critical Bus F. Consequently, the diesel generator did not assume any load.

B. Plant Status

Shutdown for the 1988 Refueling Outage, with a reactor coolant temperature of 75°F and the Residual Heat Removal (RHR) System in operation in the Shutdown Cooling mode.

C. Basis for Report

An unplanned automatic actuation of an Engineered Safety Feature (ESF) (automatic startup of Diesel Generator No. 1), reportable in accordance with 10CFR50.73 (a)(2)(iv).

D. Cause of Event

An overcurrent protective relay installed to monitor current on 4160V Critical Bus F from the normal power supply had been removed from the breaker cubicle for calibration and testing in accordance with the established preventive maintenance schedule. The relay, which tested satisfactorily, had been re-installed and, at the time of the event, its cover was being replaced. Based upon discussions with the plant Electrician performing the activity, it is suspected that during cover installation the target reset lever, which is attached to the cover, inadvertently contacted the overcurrent relay seal-in contacts, causing the relay to actuate. This resulted in a trip of Breaker 1AF which, in turn, initiated closure of Breaker 1AS and automatic startup of Diesel Generator No. 1.

E. Safety Significance

None. 4160V Critical Bus F was automatically re-energized from the Emergency Transformer and Diesel Generator No. 1 automatically started as designed. No further effects throughout the plant occurred. An event such as this during power operation would not be expected since relay cover removal and replacement is not normally done when at power.

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

F. Corrective Action

This situation was immediately investigated by Electrical Maintenance supervision. The relay was removed from the cubicle, inspected, satisfactorily retested, re-installed, and its cover replaced. Breaker 1AF was then closed, re-energizing 4160V Critical Bus F from its normal power source. Diesel Generator No. 1, was subsequently tied to 4160V Critical Bus F and maintained in operation for performance of normal surveillance testing. Upon satisfactory completion of surveillance testing at 7:06 P.M., the diesel was secured and restored to its normal standby condition. This event has been discussed with all relay technicians and they have been cautioned about the specifics of this event.

Removal and replacement of relay covers is a necessary evolution for performing relay testing and calibration. As such, the potential exists for unplanned relay actuations. Further corrective action to be taken will involve a reassessment of the procedural requirements associated with relay testing. Appropriate procedure revisions will be made to alleviate the possibility of further inadvertent relay actuations during relay cover removal/replacement activities. Additionally, the Training Department will be requested to include this event in the appropriate craft training activities.

G. Past Similar Events

No events of this nature have previously been reported.

Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402) 825-3811

CNSS886064

April 12, 1988

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 88-006 is forwarded as an attachment to this letter.

Sincerely,

G. R. Horn
Division Manager of
Nuclear Operations
Cooper Nuclear Station

GRH:sg

Attachment

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

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