

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Cooper Nuclear Station DOCKET NUMBER (2) 0500021918 PAGE (3) 1 OF 013

TITLE (4) Unplanned Actuation of an Engineered Safety Feature During Performance of Maintenance on the 24V DC Battery System

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)
04	18	88	011	00	05	18	88				05000
<p>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)</p>											

OPERATING MODE (9) <u>N</u>	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) <u>0100</u>	20.405(a)(1)(i)	50.36(e)(1)		50.73(a)(2)(iv)	73.71(c)
	20.405(a)(1)(ii)	50.36(e)(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)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Donald L. Reeves, Jr. TELEPHONE NUMBER 4102825-31811

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

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 18, 1988, with the plant in cold shutdown and the 1988 Refueling Outage in progress, a Group 6 Isolation (closure of Secondary Containment isolation valves and actuation of the Standby Gas Treatment [SGT] System) occurred while performing maintenance on the A 24V DC Battery. The Isolation was initiated by actuation of trip relays for one of the Reactor Building Exhaust Plenum Radiation Monitors when a momentary decrease in battery bus voltage occurred. The decrease in battery bus voltage was due to loosening of a battery inter-cell connector, being removed for cleaning.

This event occurred due to a miscommunication of Clearance Order requirements and the actual work to be performed on the 24V DC Batteries. Prior to initiating work, a utility electrician reviewed with the Licensed Operator the clearance order to be implemented. Subsequently, the 1A1 and 1A2 24V Charger DC output circuit breakers were opened, isolating the Chargers from the bus. However, the A1 and A2 24V DC Batteries remained tied to the bus. The Licensed Operator was not aware that loss of the 24V DC Batteries would occur during performance of the work.

Corrective action taken included restoration of the A 24V DC Battery Bus to its normal configuration and restoration of normal Reactor Building ventilation, returning the SGT System to standby. The Electricians and Operation Department personnel directly involved were counselled by their respective supervisors, emphasizing the need to ensure both plant and personnel safety. Further corrective action includes disseminating information regarding this event to Electricians and Operations Department personnel.

IE 22

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

A. Event Description

On April 18, 1988, with the plant in cold shutdown and the 1988 Refueling Outage in progress, a Group 6 Isolation (closure of Secondary Containment isolation valves and actuation of the Standby Gas Treatment [SGT] System) occurred while performing maintenance on the A 24V DC Battery. The Group 6 Isolation was initiated by actuation of trip relays for one of the Reactor Building Exhaust Plenum Radiation Monitors when a momentary decrease in battery bus voltage occurred. At the time the battery was the sole power source for the bus. The decrease in battery bus voltage was due to loosening of a battery inter-cell connector which was being removed for cleaning.

B. Plant Status

Shut down for the 1988 Refueling Outage, which commenced March 5, 1988.

C. Basis for Report

Unplanned actuation of an Engineered Safety Feature (ESF), Group 6 Isolation, reportable in accordance with 10CFR50.73(a)(2)(iv).

D. Cause

Personnel. An approved Maintenance Work Item had been issued to disassemble, clean, reassemble, and retorque the battery cell connectors for the A2, B1, and B2 24V DC Batteries. The utility Electrician involved discussed with the Licensed Operator the Clearance Order requirements that he believed were needed in order to proceed with the work. However, the requirements identified were not sufficient to isolate the 24V DC Battery from the bus. The Licensed Operator who issued the Clearance Order did not fully understand that during performance of the work activity, the 24V DC Battery circuit would be interrupted. In lieu of de-energizing the A 24V DC Battery Bus, as a planned sequence, only the 1A1 and 1A2 24V Charger DC output circuit breakers were opened and tagged.

E. Safety Significance

None. The response of the Reactor Building Exhaust Plenum Radiation Monitor to a momentary decrease in 24V DC supply voltage was as expected, initiating a Group 6 Isolation. Additionally, the Group 6 Isolation circuitry actuated as designed, isolating Secondary Containment and initiating the SGT System. No other plant effects resulted. This maintenance activity is performed during a plant shutdown; consequently, an event of this nature would not be expected to occur when at power.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

F. Corrective Action

As previously noted, the Electrician retightened the inter-cell connector that had been loosened, restoring A Battery Bus voltage to normal. The Group 6 Isolation was reset, normal Reactor Building ventilation was restored, and the SGT System was returned to its normal standby status.

An immediate investigation into the situation was conducted by the Electrical Maintenance Supervisor and Shift Supervisor. The Electricians involved were counselled regarding the need to ensure that work to be performed is properly communicated to Operations Department personnel and that the Clearance Order that is implemented is adequate for the work to be performed. Additionally, Operations Department personnel involved were counselled regarding their responsibilities to ensure that Clearance Orders developed provide adequate protection for the scope of maintenance work to be performed and are suitable for plant and personnel safety. Further corrective action to be taken includes disseminating information regarding this event to all Maintenance and Operations Department personnel, emphasizing their Clearance Order responsibilities. Additionally, due to the unique nature of the 24V DC Battery System, during discussions of this event with Electrical Maintenance and Operations Department personnel, the 24V DC System will be reviewed and differences between it and the 125/250V DC Systems will be discussed.

G. Similar Events

Situations involving ESF actuations stemming from inadequate Clearance Orders have not occurred in the past.



# Nebraska Public Power District

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

CNSS886116

May 18, 1988

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

Gentlemen:

Cooper Nuclear Station Licensee Event Report 88-011 is forwarded as an attachment to this letter.

Sincerely,

G. B. Horn  
Division Manager of  
Nuclear Operations

GRH:sg

Attachments

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

IE22  
11