



## Nebraska Public Power District

COOPER NUCLEAR STATION  
P.O. BOX 90, BROWNVILLE, NEBRASKA 68321  
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CNSS948295

September 6, 1994

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 94-016 is forwarded as an attachment to this letter.

Sincerely,

R. L. Gardner  
Plant Manager

RLG/nc

Attachment

cc: L. J. Callan  
G. R. Horn  
J. H. Mueller  
S. J. Jobe  
R. A. Sessoms  
R. E. Wilbur  
D. A. Whitman  
INPO Records Center  
NRC Resident Inspector  
R. J. Singer  
CNS Training  
CNS Quality Assurance

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9409160328 940906  
PDR ADOCK 05000298  
S PDR

Powerful Pride in Nebraska



**Nebraska Public Power District**

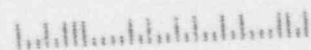
P. O. Box 98  
Brownville, Nebraska 68321

**Powerful Pride in Nebraska**



US NUCLEAR REGULATORY COMMISSION  
ATTENTION: DOCUMENT CONTROL DESK  
WASHINGTON DC 20555

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## LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH  
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.  
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO  
THE INFORMATION AND RECORDS MANAGEMENT BRANCH  
(MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION,  
WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK  
REDUCTION PROJECT (3150-0104), OFFICE OF  
MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.FACILITY NAME (1)  
COOPER NUCLEAR STATIONDOCKET NUMBER (2)  
05000298PAGE (3)  
1 OF 3TITLE (4) Noncompliance With 10CFR50 Appendix R, Inadequate Isolation of Diesel Generator  
Control Circuits

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
08	04	94	94	-- 016 --	00	09	06	94	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	0	20.402(b)	20.405(c)	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
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iv)	X 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  
John R. MyersTELEPHONE NUMBER (Include Area Code)  
(402) 825-3811

## 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)

X YES  
(If yes, complete EXPECTED SUBMISSION DATE).

NO

EXPECTED  
SUBMISSION  
DATE (15)MONTH DAY YEAR  
10 28 94

## ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On August 4, 1994, it was determined that Diesel Generator (DG) 2 was not in compliance with Alternate Shutdown requirements. A single fuse and circuit breaker was located in a control power circuit for DG 2, the dedicated Alternate Shutdown DG. A fire affecting the control cable could have resulted in a fuse failure or breaker trip which would have rendered the DG unable to start. At the time this condition was discovered, the plant was in cold shutdown and Alternate Shutdown was not required to be operable.

The cause of this condition is being evaluated and will be discussed in a supplement to this LER. A design change was implemented to provide isolation fusing of this circuit.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)			PAGE (3)
COOPER NUCLEAR STATION		05000298		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
				94	-- 016 --	00	

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

A. Event Description

On August 4, 1994, a review of a fire protection self assessment open item regarding the lack of redundant fusing for Diesel Generator (DG) 2 control circuitry confirmed that the starting of DG 2 for Alternate Shutdown purposes could be prevented by a fire induced short circuit. A single fuse and circuit breaker in series were located in a control power circuit for DG 2, the dedicated Alternate Shutdown DG. A fire affecting the control cable could have resulted in a fuse failure or breaker trip which would have rendered the DG unable to start. The circuit breaker, located inside the local DG control panel, was not identified in the Post Fire Shutdown procedure, and emergency lighting was not available to illuminate the panel as required by Appendix R to facilitate operator action. Appendix R requirements do not permit credit for fuse replacement for equipment required to achieve hot shutdown.

B. Plant Status

At the time this condition was discovered, the plant was in cold shutdown and Alternate Shutdown was not required to be operable. The deficient condition has existed since the Alternate Shutdown panel was declared operational in July, 1987.

C. Basis for Report

This condition was determined to be reportable per the requirements of 10CFR50.73(a)(2)(i), a condition prohibited by Technical Specifications, and 10CFR50.73(a)(2)(ii), a condition outside the design basis.

D. Cause

The cause of this condition is currently being evaluated and will be discussed in a supplement to this LER.

E. Safety Significance

The effect of a fire is most significant to Alternate Shutdown capability during power operation. With the plant shutdown, Alternate Shutdown was not required to be operable.

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

F. Safety Implications

The Alternate Shutdown capability is provided to mitigate the effects of a special event (i.e., fire), thus this deficiency does not adversely affect the ability of the DG or the Electrical Distribution System to meet their Design Basis Accident requirements. In the event of a fire, DG 2 could potentially have been rendered inoperable due to a fuse failure or breaker trip resulting from a short circuit in the control cable. Based on the assumption that the redundant systems are rendered inoperable because they are not protected from the effects of a fire in the alternate shutdown areas, the ability to reach a safe shutdown condition could have been jeopardized.

A fire of sufficient magnitude to cause such cable damage is extremely unlikely. Stringent controls are placed on combustible materials and ignition sources. Fire detection and suppression for the areas of concern is provided as listed below:

<u>Fire Area/Zone</u> <u>Description</u>	<u>Fire Detection</u>	<u>Fire Suppression</u>
Auxiliary Relay Room	Smoke	Manual
Cable Spreading Room	Smoke & Heat Activated	Pre-action Sprinkler

The fire detection and associated automatic fire suppression system along with the manual fire fighting capability available in these areas is designed to prevent the fire damage thresholds required to cause cable damage.

G. Corrective Action

A design change was implemented to provide isolation fusing of this circuit. Additional corrective actions to address the cause of this condition will be provided in a supplement to this LER. The response to the event described below will be reviewed to determine if the present condition should have been identified as part of the evaluation.

H. Similar Events

LER 92-016, Noncompliance with 10CFR50 Appendix R, Inadequate Isolation of Diesel Generator 2 Differential Protection Relaying, discusses a similar problem related to differential protection relaying.