

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) D. C. Cook Nuclear Plant, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 1 6	PAGE (3) 1 OF 0 3
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TITLE (4)  
Seismic Qualification of Battery Charger Timer Switches

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	9	12	8	6	0	0	1	0	D.C. Cook, Unit 1	0 5 0 0 0 3 1 6
0	9	12	8	6	0	0	1	0		0 5 0 0 0 1 1 1

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)				
POWER LEVEL (10) 0 8 1 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	<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"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)		
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(iii)	<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)			

LICENSEE CONTACT FOR THIS LER (12)

NAME T. P. Beilman I&C/Planning Department Superintendent	TELEPHONE NUMBER AREA CODE: 6 1 6 4 6 5 1 5 9 0 1 1
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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)

<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15) MONTH: 1 2 DAY: 1 1 YEAR: 8 6
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On September 12, 1986, during a corporate engineering review of the documentation package for design change RFC-12-4064, it was determined that the replacement timer switches for the 250 volt DC battery chargers had questionable seismic qualifications. On 09-12-86, at approximately 1845 hours, the 5 plant battery chargers (1-AB-2, 2-AB-1, 2-AB-2, 2-CD-1, and 2-CD-2) incorporating these timers were declared inoperable as a precautionary measure. This action left Unit 2 without an operable charger as required by Technical Specification 3.8.2.3.

An engineering review of the charger circuitry yielded a method of electrically isolating the involved switches from the chargers thereby negating any possible adverse affects resulting from a seismic event. The affected chargers were returned to operable status on 09-12-86 following completion of the temporary modifications. Additional corrective/preventive action will be determined following the completion of the engineering evaluation.

An investigation is currently underway to determine: 1) why seismic concerns were not addressed prior to installation of design change (cause of event), and 2) the seismic qualifications of the currently installed switches. A supplemental report will be submitted that discusses the results of the investigation and planned corrective/preventive actions.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR 8 6	SEQUENTIAL NUMBER 0 2 5	REVISION NUMBER 0 0			

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

Conditions Prior to Occurrence

Unit 1 - 90 percent reactor thermal power.

Unit 2 - 80 percent reactor thermal power.

Description of Event

On September 12, 1986 during a corporate engineering review of the document-ation package for design change RFC 12-4064, it was determined that the replacement timer switches (EIIS/IS) for the 250 volt DC battery chargers (EIIS/BYC) had questionable seismic qualifications. On 09-12-86, at approximately 1845 hours, the 5 plant battery chargers (1-AB-2, 2-AB-1, 2-AB-2, 2-CD-1, and 2-CD-2) incorporating these timers (EIIS/TMR) were declared inoperable as a precautionary measure. This action left Unit 2 without an operable charger as required by Technical Specification 3.8.2.3.

The NRC was notified via ENS at 1916 hours. Unit 2 shutdown commenced at 1915 hours. Unit shutdown was terminated at 2205 hours following the by-passing of the unqualified switches.

With the exception of the affected battery chargers, there were no inoperable structures, components or systems that contributed to this event.

Cause of Event

An investigation is currently underway to determine: 1) why seismic concerns were not addressed prior to installation of design change (cause of event), and 2) the seismic qualifications of the currently installed switches. A supplemental report will be submitted that discusses the results of the investigation and planned corrective/preventive actions.

Analysis of Event

This event is reportable per 10 CFR 50.73 (a)(2)(i)(B) (any operation or condition prohibited by the plant's Technical Specifications). Investigation as to the seismic qualifications of the timer switches will require further engineering evaluation and seismic testing tentatively scheduled to be complete by 11-28-86.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8   6	-   0   2   5	-   0   0	0   3	OF	0   3

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

Because the replacement timer has not been qualified to withstand seismic forces, a review was conducted to determine what effect an earthquake would have on the timer and associated equipment. Because of the size and mounting configuration, it was judged that the timer would not become a missile during an earthquake. A review of the wiring diagram indicated that it was conceivable that the timer could fail during an earthquake and damage the battery charger. However, when the timer was rewired so it was no longer part of the circuit, this was no longer a concern.

Loss of the battery charger would be detected by low voltage alarms; however, battery charging capability would not have been available until corrective actions were taken.

Because the occurrence of an earthquake is a low-probability event, and the batteries have a three-hour capacity, it is judged that this event did not significantly affect plant safety systems nor did it pose a threat to the health and safety of the public.

Corrective Actions

An Engineering review of the charger circuitry yielded a method of electrically isolating the involved switches from the chargers thereby negating any possible adverse effects resulting from a seismic event. The affected chargers were returned to operable status on 09-12-86 following completion of this temporary modification. Additional corrective/preventive action will be determined following the completion of the engineering evaluation.

Failed Component Identification

None.

Previous Similar Events

None.