

# CATEGORY 1

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ACCESSION NBR: 9810130242      DOC.DATE: 98/10/02      NOTARIZED: NO      DOCKET #  
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana M 05000315  
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 RECIP.NAME      RECIPIENT AFFILIATION

SUBJECT: LER 98-041-00: on 980818, CCW pump surveillance testing had potential to cause unplanned entry into TS 3.0.3. Caused by failure to perform adequate 10CFR50.59 SE. Reviewed & revised plant operating procedures as necessary. With 981002 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
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Indiana Michigan  
Power Company  
Cook Nuclear Plant  
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Bridgman, MI 49106  
616 465 5901



October 2, 1998

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Operating License DPR-58  
Docket No. 50-315

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73 entitled Licensee Event Report System, the following report is being submitted:

98-041-00

Sincerely,

A handwritten signature in cursive script that reads "John R. Sampson".

J. R. Sampson  
Site Vice President

/mbd

Attachment

c: J. L. Caldwell (Acting), Region III  
R. P. Powers  
P. A. Barrett  
J. B. Kingseed  
R. Whale  
D. Hahn  
Records Center, INPO  
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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 MANDATORY INFORMATION COLLECTION REQUEST: 50 0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-1 F33), 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)

Cook Nuclear Plant Unit 1

DOCKET NUMBER (2)

50-315

PAGE (3)

1 of 3

TITLE (4)

Component Cooling Water Pump Surveillance Testing Has Potential to Cause Unplanned Entry Into TS 3.0.3

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	18	98	98	-- 041 --	00	10	02	98	Cook Unit 2	50-316	
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
5			20.2201 (b)				20.2203(a)(2)(v)		<input checked="" type="checkbox"/> 50.73(a)(2)(i)	50.73(a)(2)(viii)	
POWER LEVEL (10)			20.2203(a)(1)				20.2203(a)(3)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)	
00			20.2203(a)(2)(i)				20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71	
			20.2203(a)(2)(ii)				20.2203(a)(4)		50.73(a)(2)(iv)	OTHER	
			20.2203(a)(2)(iii)				50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A	
			20.2203(a)(2)(iv)				50.36(c)(2)		50.73(a)(2)(vii)		

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Mr. Larry Weber, Operations Manager

TELEPHONE NUMBER (Include Area Code)

616/465-5901, x2443

## 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)

YES (If Yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/> NO
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EXPECTED  
SUBMISSION  
DATE (15)

MONTH DAY YEAR

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

On August 18, 1998, while reviewing the Component Cooling Water (CCW) system configuration during the performance of a surveillance test, Operations personnel discovered that both trains of CCW may become inoperable under specific circumstances when the system is aligned to the test configuration. The surveillance directs the closure of the pump discharge header cross-tie valve and heat exchanger outlet valve for the CCW train that is not being tested, making the train inoperable by isolating its discharge flow path to the safeguard headers. Operations personnel concluded that if the surveillance was being performed post-maintenance to restore a pump to operable status, both trains of CCW would then be inoperable while in the test configuration. This would constitute an unplanned entry into Technical Specification (TS) 3.0.3 while the units were in Modes 1 through 4. This LER is submitted in accordance with 10CFR50.73(a)(2)(i)(B), for a condition or operation that is prohibited by the plant's Technical Specifications.

The root cause of this condition is failure to perform an adequate 10CFR50.59 safety evaluation when the surveillance procedures were revised several years ago. The plant operating procedures, including the surveillance test procedures, will be reviewed and revised as necessary to ensure the valve alignment fulfills the operability requirements of the system for the TS required modes of operation. Changes have been made since then to the 10CFR50.59 program to improve the quality of safety evaluations.

The safety significance of this event was evaluated and found to be minimal, as condition would only occur when aligning the system to test an inoperable pump. The normal operating configuration of the CCW system provides the necessary discharge path required to meet the design basis. The health and safety of the public were never jeopardized.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER(2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER	
		98	--	041	--	00

Cook Nuclear Plant Unit 1

50-315

2 of 3

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

**Conditions Prior to Event**

Unit 1 was in Mode 5, Cold Shutdown

Unit 2 was in Mode 5, Cold Shutdown

**Description of Event**

On August 18, 1998, while reviewing the Component Cooling Water (CCW) system configuration during the performance of surveillance 1/2 OHP 4030 STP.020, "Component Cooling Water Loop Surveillance Tests," Operations personnel discovered that under certain conditions both CCW trains could be inoperable at the same time while performing the surveillance. This would occur only when the surveillance is performed to restore an inoperable train, while the system is aligned in the test configuration.

1/2 OHP 4030 STP.020 directs the closure of the pump discharge header cross-tie valve and the heat exchanger outlet valve for the CCW train that is not being tested, making the train inoperable by isolating the discharge flow path to the safeguard headers. Because the surveillance is being run post-maintenance to restore an inoperable CCW pump to operable status, the valve alignment would result in both trains of CCW being inoperable at the same time.

**Cause of Event**

The root cause of this condition is the failure to perform an adequate 10CFR50.59 safety evaluation. In early 1992 the surveillance procedures were changed to maintain the crosstie valve closed after pump shutoff, due to leak-by of the heat exchanger outlet valves, as the leak-by had the potential to invalidate the test results. A 10 CFR 50.59 review was performed, but the potential for entry into TS 3.0.3 was not identified. Additionally, it was not recognized that isolating the pump from all of its discharge paths even momentarily, as had been the case before the 1992 revision to maintain the crosstie valve closed, would make the pump inoperable.

At the time the procedures were revised, the 10CFR50.59 safety evaluation program did not provide adequate guidance or tools for personnel reviewing potential changes. This resulted in a 10CFR50.59 review that was not well documented, particularly in those aspects, which interfaced with the design basis.

**Analysis of Event**

This LER is submitted in accordance with 10CFR50.73(a)(2)(i)(B), a condition or operation that is prohibited by the plant's Technical Specifications. After review of the condition and the guidance provided by NUREG-1022, Revision 1, a determination was made that there were instances where unplanned entries were made into TS 3.0.3.

The design basis of the CCW system includes providing cooling to the safeguard loads. During a Safety Injection, the CCW pump receives a start signal and the heat exchanger outlet valve opens to provide cooling to the safeguards header. Some of the miscellaneous header cooling loads are automatically isolated to maximize the support for the safety-related components.

During a Loss of Off-site Power, the CCW pumps receive a load shed signal to trip the pump and are then sequenced to load onto the safeguard buses, to supply the miscellaneous header for Reactor Coolant Pump seal cooling. The CCW system does not receive any other automatic signals, such as automatic valve motion.

The valve lineup required by the surveillance to prove post-maintenance operability of the pump which had been taken out of service would have placed the CCW system in a configuration that required operator action to re-align the non-test pump to discharge to the header. It was not recognized that this configuration made both pumps inoperable and constituted an entry into TS 3.0.3.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER(2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER	
		98	—	041	— 00	

Cook Nuclear Plant Unit 1

50-315

3 of 3

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

## ANALYSIS OF EVENT (cont'd)

Adequate flow conditions are established on the pump in test prior to isolating the heat exchanger discharge isolation valve for the opposite pump, therefore the time that two trains of CCW would be inoperable would have been minimal. If an automatic pump start would have occurred, the operators would have terminated the surveillance procedure and restored the CCW system to the operable alignment as soon as possible. The Emergency Operating Procedures do require verification that the CCW system is operable.

As the time that the system is in this configuration is short, manual re-alignment could be expected of the operator performing the surveillance, and the normal operating configuration of the CCW system provides the necessary discharge path required to meet the design basis, the safety significance of this event is considered minimal.

Corrective Actions

The plant operating procedures, including the surveillance test procedures, will be reviewed and revised as necessary to ensure the valve alignment fulfills the operability requirements of the system for the TS required modes of operation.

There have been improvements in the 10CFR50.59 review process which include the defining of the design basis, additional training of 10CFR 50.59 reviewers, enhanced standards, and process improvement. The UFSAR, design basis documents, utility correspondence, commitment database and other tools are now available as computer based resources. Additionally, increased emphasis has been placed on performance of high quality safety evaluations and maintenance of the design basis.

Failed Component Identification

Not applicable

Previous Similar Events

315/95-004-00