

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9711260108 DOC. DATE: 97/11/17 NOTARIZED: NO DOCKET #
 FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana M 05000316
 AUTH. NAME AUTHOR AFFILIATION
 KINGSEED, J. Indiana Michigan Power Co.
 BLIND, A.A. Indiana Michigan Power Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 97-003-02: on 970826, concluded that during Unit 2 1996 refueling outage, condition existed outside design basis of plant. Investigation of condition concluded that controls in place. LERs 316/97-003-00 & -01 retracted. W/971117 ltr.

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 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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Indiana Michigan
Power Company
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106



November 17, 1997

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

Operating Licenses DPR-74
Docket No. 50-316

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:

97-003-01

Sincerely,

A. A. Blind
Site Vice President

/mbd

Attachment

c: A. B. Beach, Region III
E. E. Fitzpatrick
P. A. Barrett
S. J. Brewer
J. R. Padgett
D. Hahn
Records Center, INPO
NRC Resident Inspector

9711260108 971117
PDR ADOCK 05000316
S PDR



LICENSEE EVENT REPORT (LER)

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)
Donald C. Cook Nuclear Plant - Unit 2DOCKET NUMBER (2)
50-316

Page 1 of 2

TITLE (4)

LER Retraction - Dual Train Component Cooling Water Outage During Unit 2 Refueling Outage

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	26	97	97	-- 003 --	02	11	17	97	None	
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.73(a)(2)(iii) (Check one or more) (11)							
1			20.2201(b)			20.2203(a)(3)(i)			50.73(a)(2)(iii)	
POWER LEVEL (10)			20.2203(a)(1)			20.2203(a)(3)(ii)			50.73(a)(2)(iv)	
100			20.2203(a)(2)(i)			20.2203(a)(4)			50.73(a)(2)(v)	
			20.2203(a)(2)(ii)			50.36(c)(1)			50.73(a)(2)(vii)	
			20.2203(a)(2)(iii)			50.36(c)(2)			50.73(a)(2)(viii)(A)	
			20.2203(a)(2)(iv)			50.73(a)(2)(i)			50.73(a)(2)(viii)(B)	
			20.2203(a)(2)(v)			X 50.73(a)(2)(ii)			50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

TELEPHONE NUMBER (Include Area Code)

Mr. Jeb Kingseed, Nuclear Safety and Analysis Manager

616/697-5106

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

X

NO

EXPECTED
SUBMISSION
DATE (15)

MONTH

DAY

YEAR

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

On August 26, 1997 at 1515 hours while responding to NRC AE Design inspectors' questions, it was concluded that during the Unit 2 1996 refueling outage a condition existed that was outside the design basis of the plant. An NRC ENS notification was made at 1553 hours the same day under reporting criteria 10 CFR 50.72(b)(1)(ii)(B) as a condition outside the plant's design basis.

The NRC AE Design inspectors' questions were relative to dual train component cooling water (CCW) system outages meeting the plant design basis and the reviews conducted allowing a dual train CCW outage. The basis for the questions is that during a dual train CCW system outage, spent fuel pool (SFP) cooling must be provided by the opposite unit. Updated final safety analysis report (UFSAR) Table 9.5-2 contains a footnote that states the SFP heat exchanger is assumed to be on the non-accident unit. Under dual train CCW system outages the unit conducting the dual train CCW outage is the non-accident unit. A concern exists with the ability of the non-accident unit to meet the FSAR requirement.

Subsequent investigation of this condition concluded that controls in place were sufficient to ensure the plant remained within its design basis relative to spent fuel pool cooling. Section 9.4.1 of the FSAR states that any SFP loading scenario which meets a 160 degrees F peak bulk pool temperature and 5.74 hours to boil criteria is acceptable. The spent fuel cooling system design requirement is to maintain the SFP maximum bulk water temperature below 159.54 degrees F assuming a worse case scenario with one cooling train operational. An evaluation of the Unit 2 refueling outage and CCW system work determined that the SFP cooling system was capable of performing its intended design function. Based on this, LERs 316/97-003-00 and -01, are being retracted.

LICENSEE EVENT 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)
Cook Nuclear Plant - Unit 2	50-316	YEAR	SEQUENTIAL	REVISION	2 OF 2
		97	-- 003 --	02	

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

Conditions Prior to Event

Unit 2 was in Mode 1 at 100 percent Rated Thermal Power.

Description of Event

On August 26, 1997 at 1515 hours while responding to NRC Architect Engineer (AE) Design Inspection questions, it was concluded that during the Unit 2 1996 refueling outage a condition existed that was outside the design basis of the plant. An NRC ENS notification was made at 1553 hours the same day under reporting criteria 10 CFR 50.72(b)(1)(ii)(B) as a condition outside the plant's design basis.

The NRC AE Design inspectors' questions were relative to dual train Component Cooling Water (CCW) system outages meeting the plant design basis and the reviews conducted allowing a dual train CCW outage. The basis for the questions is that during a dual train CCW system outage, spent fuel pool (SFP) cooling must be provided by the opposite unit. The Updated Final Safety Analysis Report (UFSAR) Table 9.5-2 contains a footnote that states the SFP heat exchanger is assumed to be on the non-accident unit. Under dual train CCW system outages the unit conducting the dual train CCW outage is the non-accident unit. A concern exists with the ability of the non-accident unit to meet the UFSAR requirement.

Subsequent investigation of this condition concluded that controls were in place to ensure the plant remained within its' design basis relative to spent fuel pool cooling. The basis for this conclusion is provided in the analysis of event section below. Based on this, the interim Licensee Event Report (LER), previously submitted on September 25, 1997 as LER 316/97-003-00, is being retracted.

Analysis of Event

Section 9.4.1 of the UFSAR states that any SFP loading scenario which meets a 160 degrees Fahrenheit peak bulk pool temperature and 5.74 hours to boil criteria is acceptable. The spent fuel cooling system design requirement is to maintain the SFP maximum bulk water temperature below 159.54 degrees Fahrenheit assuming a worse case scenario with one cooling train operational. An evaluation of the Unit 2 refueling outage and CCW system work determined that the SFP cooling system was capable of performing its intended safety function.

A complete shutdown risk assessment was performed during the planning and scheduling for the Unit 2 1996 refueling outage. The design basis and licensing basis issues for the dual train CCW system outage were identified and addressed. This is evidenced by the fact that contingencies to ensure adequate cooling during this configuration were identified in the course of the shutdown risk assessment. However, the documentation of this, in support of the basis for the conclusions of the shutdown risk assessment, was not complete with respect to the licensing issues involving the spent fuel pool cooling with postulated LOCA on the at-power unit and a dual train CCW system outage on the refueling unit.

The act of having a dual train refueling CCW system outage does not represent a condition outside of design basis as long as the components can be restored in time to maintain spent fuel pool limits. During the Unit 2 1996 refueling, had a LOCA occurred in the at-power unit, there was sufficient time to restore CCW to the refueling unit's spent fuel pool heat exchanger and stay within the spent fuel pool design basis limits. The plant was capable of restoring CCW within 1.5 hours at all times and had greater than 3 hours to do so while maintaining the spent fuel pool system cooling design basis. Our evaluation demonstrates that there would be sufficient time to support several tasks during refueling that would require a dual train CCW outage in a refueling unit.