CATEGORY 1

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FACIL:50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana M 05000316
AUTH.NAME AUTHOR AFFILIATION
KINGSEED,J. Indiana Michigan Power Co.
SAMPSON,J.R. Indiana Michigan Power Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 97-003-03:on 970826,determined that inadequacy of manual actions were outside plant design basis due to performance of dual train CCW outage during 1996 refueling outage. Revised outage review process.W/980123 ltr.

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

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American Electric Power
Cook Nuclear Plant
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AEP
AMERICAN
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POWER

January 23, 1998

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:

97-003-03

Sincerely,

John R. Sampson

John R. Sampson
Site Vice President

/tlm

Attachment

c: A. B. Beach
E. E. Fitzpatrick
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Records Center, INPO
NRC Resident Inspector

1/1

I222

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	Page 1 of 3
Donald C. Cook Nuclear Plant - Unit 2	50-316	

TITLE (4) Performance of Dual Train Component Cooling Water Outage During Unit 2 1996 Refueling Outage Resulted in Condition Outside Plant's Design Basis

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 --	03	01	23	98	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(3)(I)		50.73(a)(2)(iii)		73.71(b)
	20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71e
	20.2203(a)(2)(I)		20.2203(a)(4)		50.73(a)(2)(v)		OTHER
	20.2203(a)(2)(ii)		50.36(c)(1)		50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)
	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)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

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

During the Unit 2 1996 refueling outage a dual train component cooling water (CCW) outage was scheduled and performed. In performance of the dual train CCW outage, manual operator actions were credited for restoration of the Unit 2 spent fuel pool (SFP) cooling system, should the Unit 1 SFP cooling train become unavailable, to maintain the SFP within its design basis. Following evaluation of the shutdown risk review performed at the time, the crediting of these manual actions was not adequate and created the possibility of an unreviewed safety question. Based on this, it was determined that this event is reportable in accordance with 10 CFR 50.73(a)(2)(ii)(B), as a condition that was outside the design basis of the plant.

The Unit 2 1996 refueling outage planning and scheduling review activity performed in accordance with plant procedures, overlooked the reviews necessary to fully credit operator actions and the performance of an unreviewed safety question determination to support the manual actions. The outage review process has been revised to preclude recurrence.

The contingency actions for recovering spent fuel pool cooling during the Unit 2 1996 refueling outage were such that the plant was capable of restoring Unit 2 CCW within 1.5 hours, assuming no errors or environmental affects. Greater than 3 hours was available before threatening the SFP design basis. The actual dual train CCW outage configuration existed for only 8 hours and 1 minute. In addition, draining of the CCW system did not occur, thus ensuring an uncomplicated restoration. Based on this, there was no risk to the health and safety of the public.

Conditions Prior to Event

Unit 2 Mode 1, 100 percent Rated Thermal Power

Description of Event

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. Investigation of this condition concluded that the controls in place were sufficient to ensure the plant remained within its design basis relative to spent fuel pool (SFP) cooling, and based on this the associated LERs, 316/97-003-00 and -01, were subsequently retracted. Subsequent evaluation of the event has determined that the event did result in a condition outside the design basis of the plant and NRC ENS notification was made on December 24, 1997 at 1120 hours in accordance with 10 CFR 50.72(b)(1)(ii)(B).

During the Unit 2 1996 refueling outage a dual train component cooling water (CCW) outage was scheduled and performed. In performance of the dual train CCW outage, manual operator actions were credited for restoration of the Unit 2 SFP cooling system, should the Unit 1 SFP cooling train become unavailable, to maintain the SFP within its design basis. Following evaluation of the shutdown risk review performed at the time, the crediting of these manual actions was not adequate and created the possibility of an unreviewed safety question. In crediting the manual actions no consideration was given for recovery from potential credible errors in performance of manual actions, the expected time required to make such recovery actions, or the potential environmental affects on the ability to perform the manual actions.

Cause of Event

The Unit 2 1996 refueling outage planning and scheduling review activity performed in accordance with PMP-4100, "Plant Shutdown Safety and Risk Management" was inadequate such that all necessary reviews associated with the manual actions were not addressed.

Analysis of Event

This event was determined to be reportable under 10 CFR 50.73(a)(2)(ii)(B) as a condition that was outside the design basis of the plant.

The contingency actions in place during the Unit 2 1996 refueling outage for recovering spent fuel pool cooling were such that the plant was capable of restoring Unit 2 CCW within 1.5 hours, assuming no errors or environmental affects. Greater than 3 hours was available before threatening the SFP design basis. The actual dual train CCW configuration existed for only 8 hours and 1 minute. In addition, the draining of the CCW system did not occur, thus ensuring an uncomplicated restoration. Based on this, there was no risk to the health and safety of the public.

Corrective Actions

PMP-4100, "Plant Shutdown Safety and Risk Management" was revised to preclude recurrence of this type of event. Previously, the outage schedule had been evaluated for risk by only a shift technical advisor (STA). The procedure currently requires that the schedule be evaluated by a group consisting of an operation's shift manager, an outage and scheduling individual, an STA, and an engineer from the Nuclear Safety and Analysis group. The additional individuals involved in the review of outage activities will eliminate an oversight by a single reviewer.

Failed Component Identification

Not Applicable

Previous Similar Events

None