

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9604080208 DOC.DATE: 96/04/04 NOTARIZED: NO DOCKET #
 FACIL:50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana M 05000316
 AUTH.NAME AUTHOR AFFILIATION
 SCHOEPP,P. American Electric Power Co., Inc.
 BLIND,A.A. American Electric Power Co., Inc.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 96-003-00:on 960305,incorrect guidance for shutdown rod
 position indication requirements lead to condition
 prohibited by plant TS.Submitted TS change request to remove
 TS 3.1.3.3.W/960404 ltr.

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American Electric Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
616 465 5901



April 4, 1996

United States Nuclear Regulatory Commission
Document Control Desk
Rockville, Maryland 20852

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:

96-003-00

Sincerely,

A handwritten signature in cursive script, appearing to read "A. A. Blind".

A. A. Blind
Site Vice President

/clc

Attachment

c: H. J. Miller, Region III
E. E. Fitzpatrick
P. A. Barrett
R. F. Kroeger
M. A. Bailey - Ft. Wayne
S. J. Brewer
M. R. Padgett
G. Charnoff, Esq.
D. Hahn
Records Center, INPO
NRC Resident Inspector

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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)
05000 316

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TITLE (4)

Incorrect Guidance for Shutdown Rod Position Indication Requirements Leads to a Condition Prohibited by Plant Technical Specifications

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
03	05	96	96	-- 003 --	00	04	04	96	None	
									FACILITY NAME	DOCKET NUMBER
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)				
POWER LEVEL (10)	100	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)	73.71
		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)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)(B)	
		20.2203(a)(2)(v)		50.73(a)(2)(ii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Paul Schoepf, Plant Engineering Superintendent

TELEPHONE NUMBER (Include Area Code)

616/465-5901, x2408

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 March 5, 1996, engineering personnel performing a preoutage procedure review for multiple rod drop testing discovered that for all Unit 2 fuel cycles since 1983 the rod position indication system has been tested and calibrated in a manner prohibited by Technical Specification (TS) 3.1.3.3, Position Indicator Channels - Shutdown. This was due to the incorrect interpretation that the rod position indicator channel functional tests were still valid even after performance of work on the system during shutdown conditions. Work performed while shutdown had in fact invalidated previous channel functional testing prior to the next cycle's testing. This was not recognized, and led to actions being taken that were contrary to the requirements of Technical Specification 3.1.3.3:

The root cause of this event is the incorrect interpretation that the rod position indicator channel functional tests were still valid even after performance of work on the system during shutdown conditions.

Following rod position indicator channel functional testing at the start of each fuel cycle, the system was operable for the remainder of the cycle. Adequate shutdown margins were achieved and maintained in Modes 3, 4, and 5 during the channel functional testing and rod drops for each of the refueling outages during this time period. Based on this, it has been concluded that this event had no actual or potential adverse impact on the health and safety of the public.

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.

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Cook Nuclear Plant - Unit 2	0500 316	96	-- 003 --	00	2 OF 3

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

Conditions Prior to Occurrence:

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

Description of Event:

On March 5, 1996, engineering personnel performing a preoutage procedure review for multiple rod drop testing discovered that for all Unit 2 fuel cycles since 1983 the rod position indication system has been tested and calibrated in a manner prohibited by Technical Specification 3.1.3.3, Position Indicator Channels - Shutdown. This was due to the incorrect interpretation that the rod position indicator channel functional tests were still valid even after performance of work on the system during shutdown conditions. Work performed while shutdown had in fact invalidated previous channel functional testing prior to the next cycle's testing.

TS 3.1.3.3 requires at least one rod position indicator (RPI) channel to be operable for each shutdown or control rod not fully inserted during Modes 3, 4, and 5 when the reactor trip breakers are in the closed position. Operability for rod position indicator channel per TS 3.1.3.3 is demonstrated by performing a channel functional test at least once per 18 months, typically performed at the end of each refueling outage.

During refueling outages the cable for each RPI channel is removed from the reactor head and rod position indicator modules are removed from instrument racks during rod position indicator calibration. Also, rod position indicator modules have been replaced due to failure, and rod position indicator meters have been removed from the control board for calibration with all the control rods withdrawn and the unit in Mode 3. It is now recognized that these actions invalidated the channel functional test performed at the end of the previous refueling cycle, and violated TS 3.1.3.3 requirements when rods were withdrawn.

Technical Specification 3.10.5 is a Special Test Exemption for Rod Drop Testing that only requires the rod position indication system to show movement for each rod; however, it only allows single-bank rod motion.

Cause of the Event:

The root cause of this event is an incorrect interpretation of the sustained validity of the rod position indicator channel functional test results following performance of work on the system during shutdown conditions. The incorrect interpretation resulted in an erroneous assumption that a channel functional test need not be performed post-maintenance as long as the RPI showed motion when the corresponding rod was moved. Once the incorrect interpretation and erroneous assumption were in place, the special test exception requirements of Technical Specification 3.10.5 to withdraw only one bank at a time were not considered, and withdrawal of all control rods simultaneously for rod position indicator calibration evolved to an acceptable practice. The Unit 1 technical specifications do not prevent rod motion for system calibration in the same manner as the Unit 2 specifications.

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.

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

Analysis of Event:

This event is being reported in accordance with 10CFR50.73(a)(2)(i)(B) as operation prohibited by the plant's Technical Specifications.

Following rod position indicator channel functional testing at the start of each fuel cycle, the system was operable for the remainder of the cycle. During shutdown conditions, modes 3, 4, and 5, the reactor coolant system boron concentration is increased to ensure that an adequate shutdown margin is achieved and maintained in accordance with existing plant technical specifications. The calculation used to determine the required boron concentration takes into account the relative position of the shutdown and control rods. Procedural controls are in place to ensure that when rods are withdrawn that an adequate shutdown margin is maintained. Based on this, there was no actual or potential impact on the health and safety of the public.

Corrective Action:

A technical specification change request has been submitted to remove Technical Specifications 3.1.3.3, Position Indicator Channels - Shutdown, and the Special Test Exception Specification 3.10.5, Position Indicator Channels Shutdown, to achieve consistency with Unit 1 and NUREG-1431 Rev. 1, Improved Standard Technical Specifications.

In the event the technical specification change is not approved prior to the end of the current Unit 2 refueling outage, specific guidance will be provided in plant procedures on operable versus non-operable rod position indicators during shutdown conditions.

Failed Component Identification

None

Previous Similar Events

316/91-009-00, Inoperable Ice Condenser Due to Incorrect Flow Passage Inspections.