

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Kewaunee Nuclear Power Plant DOCKET NUMBER (2) 0 5 0 0 0 3 0 5 1 OF 0 2

TITLE (4) Rod Cluster Control Assembly Cladding Wear

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	4	0	1	8	4	8	4	0	0	3	0	5	0	1	8	4	N/A	0	5	0	0	0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)											
POWER LEVEL (10)	0	0	0	20.402(b)	20.406(e)	50.73(a)(2)(iv)	73.71(b)						
				20.406(a)(1)(i)	50.36(a)(1)	50.73(a)(2)(v)	73.71(c)						
				20.406(a)(1)(ii)	50.36(a)(2)	50.73(a)(2)(vii)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
				20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)							
				20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)							
				20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)
NAME Margie S. Lewis - Assistant to Nuclear Licensing Systems Superintendent
TELEPHONE NUMBER 4 1 4 4 3 3 - 1 8 3 2

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		
B	A	A	R	O	D		W	1	2	0	YES

SUPPLEMENTAL REPORT EXPECTED (14)
X YES (If yes, complete EXPECTED SUBMISSION DATE) NO
EXPECTED SUBMISSION DATE (15) 0 6 0 1 8 5

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

During the Cycle IX-X refueling shutdown, an underwater visual inspection of three rod cluster control assemblies (RCCA's) revealed apparent wear marks on the cladding of the RCCA absorber rodlets. The wear marks were found to occur at a position which correlates to the location of the guide cards used to position the rodlets in the guide housing when the RCCA's are parked in their normally full out position. The cladding wear is attributable to the design of the guide cards and is a result of vibratory interaction between the rodlets and the guide cards during long periods of steady state power operation.

Because none of the rodlets exhibited wear which exceeds the Westinghouse criteria for RCCA wear depth, the RCCA's are acceptable for operation in Cycle X. Visual inspections of the remaining RCCA's are presently planned for the Cycle X-XI refueling shutdown.

Although this event does not meet the reporting criteria of 10 CFR 50.73(a), it has been reported as an LER which may be of generic interest.

Safe, functional operation of the RCCA's is still ensured, and there is no impact on public safety or health.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1) Kewaunee Nuclear Power Plant	DOCKET NUMBER (2) 0 5 0 0 0 3 0 5 8 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 4	— 0 0 3	— 0 0 0	2	OF	0 2

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

During the Cycle IX-X refueling shutdown, Kewaunee Plant personnel visually inspected three of twenty-nine rod cluster control assemblies [RCCA's] (ROD) for evidence of cladding wear. The inspection was prompted by the recent inspections of RCCA's at other nuclear facilities which revealed cladding wear greater than expected. The RCCA's inspected include R-05, R-14, and R-20. These assemblies are of the spider mounted design which contain 16 rodlets per RCCA. The assemblies are compatible with the 14 x 14 fuel design used at the Kewaunee Plant and contain silver, indium and cadmium as an absorber material.

The inspection was performed during the last week in March, 1984, using an underwater TV camera coupled with videotape recording equipment. The results were recorded on five videotapes and revealed apparent wear marks on the surfaces of the RCCA absorber rodlets. The wear marks are about one inch in length and are located at an elevation which corresponds to the guide cards used to position the rodlets in the guide housing when the RCCA's are fully withdrawn (at 228 steps) from the core. The wear is postulated to occur as a result of the vibratory interaction (fretting) between the rodlets and the guide cards during long periods of steady state power operation. This fretting is characteristic of the design of the guide cards.

Based on a detailed review of the videotapes, Westinghouse has concluded that none of the inspected RCCA's exhibit wear in excess of the Westinghouse wear criteria and that the RCCA's are therefore acceptable for operation in the upcoming Cycle X.

Westinghouse has also suggested that by changing the normally parked position of all the RCCA's by 2-3 steps, fretting in existing areas can be minimized and the lifetime of the RCCA's could be extended. WPSC will pursue operation with the RCCA's at an alternate elevation.

Visual inspection of the remaining RCCA's is presently planned for the Cycle X-XI refueling shutdown.

Although this event does not meet the reporting criteria of 10 CFR 50.73(a), it has been reported as an LER which may be of generic interest.

The safe, functional operation of the RCCA's is still ensured, and there is no impact on public safety and health.

WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

May 1, 1984

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 84-003-00

In accordance with the requirements of 10 CFR 50.73 "Licensee Event Report System", the attached Licensee Event Report for reportable occurrence 84-003-00 is being submitted.

Very truly yours,

Charles A. Schuck for

C. W. Giesler
Vice President - Nuclear Power

MSL/jks

Attach.

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