LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01	LICENSEE CODE	W I P B H 2 (2)
01	LICENSE NUMBER	0 0 - 0 0 0 0 0 - 0 0 (3)
01	LICENSE TYPE	4 1 1 1 1 (4)
01	CAT	(5)
01	CON'T — REPORT SOURCE	L (6)
01	DOCKET NUMBER	0 5 0 0 0 3 0 1 (7)
01	EVENT DATE	0 4 1 2 8 3 (8)
01	REPORT DATE	0 4 2 6 8 3 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 Unit 2 was shut down on 03/25/83 for Refueling 9. Eddy current examina-
03 tion of the steam generator tubes was conducted from 04/07/83 to
04 04/12/83. On 04/12/83 eddy current data verified that 16 tubes in the
05 "A" steam generator and 2 tubes in the "B" steam generator had indica-
06 tions greater than the repair limit of 40%. A secondary-to-primary
07 leak check was also performed. This event is similar to others, and
08 is reportable per Technical Specification 15.6.9.2.A.3.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
09	C B (11)	E (12)	D (13)	H T E X C H (14)	F (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 3	—	0 0 2	/	0 1	X	—	1

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
B (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	N (25)	W 1 2 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Fourteen indications in the "A" SG were caused by IGA within the tube-
11 sheet. One indication in the "A" SG and all "B" SG indicacions are rem-
12 nants of phosphate wastage at the top of the tubesheet. One indication
13 occurred at the "A" SG first support plate. All tubes with degradation
14 greater than 40% will be repaired. Sludge lancing was also performed.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
15	H (28)	0 0 0 (29)	N/A	B (31)	Eddy current examination

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
16	Z (33)	Z (34)	N/A	N/A

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
17	0 0 0 (37)	Z (38)	N/A

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
18	0 0 0 (40)	N/A

8406140228 830426
PDR ADOCK 05000301
S PDR

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
19	Z (42)	N/A

IE22
1/1

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
20	Z (44)	N/A	

NAME OF PREPARER C. W. Fay PHONE: 414/277-2811

GPO 917-824

Wisconsin Electric Power Company
Point Beach Nuclear Plant Unit 2
Docket No. 50-301

On March 25, 1983, Unit 2 was shut down for its ninth refueling outage. Eddy current testing of the steam generators commenced on April 7, 1983. The eddy current inspection program consisted of the following:

1. Full length inspection of 33 tubes in the "B" steam generator which contained previous cold-leg degradation.

2. Inspection over the U-bend of 56 tubes in the "A" steam generator, and 57 tubes in the "B" steam generator with prior degradation in the hot leg.

3. Full length inspection of 126 tubes in the "A" steam generator and inspection over the U-bend of 128 tubes in the "B" steam generator to meet the requirements of the Technical Specification and Regulatory Guide 1.83 recommendations.

4. Inspection to the first support from the hot leg of essentially all readily remotely accessible tubes.

There were four tubes per steam generator that were not inspected due to fixture interference. These tubes are not located in a wastage or IGA problem area, and the overall eddy current results did not indicate the necessity to inspect the tubes.

On April 12, 1983, verification of all steam generator eddy current data for tubes with indications exceeding the plugging limit was completed. Sixteen (16) tubes in the "A" steam generator were verified to have degradation greater than 40%, which is the repair limit of Technical Specification 15.6.2.A.5. These tubes are as follows:

"A" STEAM GENERATOR

Tube	Defect	Location	Cause
R19C5	47%	#1 TSP-H/L	Cracking
R1C90	83%	4.5-8.0" ATE-H/L	Crevice Corrosion
R16C30	100%	5.5-16" ATE-H/L	Crevice Corrosion
R20C37	100%	6-15" ATE-H/L	Crevice Corrosion
R17C42	100%	3-16" ATE-H/L	Crevice Corrosion
R16C43	91%	5.5-18.5" ATE-H/L	Crevice Corrosion
R18C42	68%	16" ATE-H/L	Crevice Corrosion
R14C48	89%	12-15" ATE-H/L	Crevice Corrosion
*R17C30	81%	12.5"ATE-H/L	Crevice Corrosion

Tube	Defect	Location	Cause
*R17C34	86%	7.5" ATE-H/L	Crevice Corrosion
*R18C33	84%	6" ATE-H/L	Crevice Corrosion
*R17C39	41%	TTS-H/L	Thinning
	89%	14" ATE-H/L	Crevice Corrosion
*R19C37	88%	5" ATE-H/L	Crevice Corrosion
R18C24	89%	10-12" ATE-H/L	Crevice Corrosion
R5C21	43%	TTS-H/L	Thinning
*R26C27	81%	5.5-17.5" ATE-H/L	Crevice Corrosion

* These tubes also have undefinable indications and are included in the below list.

In addition to the defects listed above, undefinable indications were found in 14 additional tubes within the tubesheet. All the tubes containing undefinable indications are as follows:

Tube	Location	Tube	Location
R14C45	13-19.5" ATE-H/L	R16C31	9-15" ATE-H/L
R17C44	8-13" ATE-H/L	R17C30	6-14" ATE-H/L
R18C44	4.5-14" ATE-H/L	R20C36	13-18" ATE-H/L
R12C48	8-8.5" ATE-H/L	R17C34	7-16" ATE-H/L
R19C47	7-16" ATE-H/L	R18C33	6-15" ATE-H/L
R14C47	14-18" ATE-H/L	R17C39	10-17.5" ATE-H/L
R13C47	11.5-16" ATE-H/L	R17C38	6-18" ATE-H/L
R9C47	11.5-17.5" ATE-H/L	R19C37	4.5-18" ATE-H/L
R15C46	8.5-16" ATE-H/L	R17C37	3.5-7.5" ATE-H/L
R17C31	12.5-16" ATE-H/L	R26C27	5.5-17.5" ATE-H/L

ATS - Above Tubesheet
ATE - Above Tube End
TTS - Top of Tubesheet
H/L - Hot Leg
C/L - Cold Leg

Two tubes in the "B" steam generator were verified to have degradation greater than 40%. These tubes are as follows:

Tube	Defect	Location	Cause
R9C48	43%	1" ATS-C/L	Thinning
R17C28	51%	TTS-H/L	Thinning

The above tubes for both steam generators will be repaired by sleeving or plugging in accordance with Technical Specification 15.4.2.6.

The following table summarizes the number of indications found during the 1983 inspection. Also, for comparison purposes, the number of indications found in each category during the 1982 inspection is provided.

Indication	"A" Steam Generator		"B" Steam Generator	
	1982	1983	1982	1983
Hot Leg Thinning	414	469	149	232
Cold Leg Thinning	0	2	32	33
Indications at Support Plates	5	5	0	0
Crevice Corrosion	8	27	0	0
Distorted Tubesheet Signals	101	132	49	121

It should be noted that the eddy current program performed in 1982 was not the same as the 1983 program. The extent of the eddy current inspection programs for 1982 and 1983 is summarized below:

Tubes Inspected

	"A" Steam Generator		"B" Steam Generator	
	1982	1983	1982	1983
To First Support	1304	2982	1311	2997
Over U-Bend	565	0	250	185
Full Length	0	182	31	33

Some restrictions at the first tube support plate were encountered during the inspection. The majority of the restrictions in the periphery were present during previous inspections. The "A" steam generator contained substantially more restrictions than the "B" steam generator; thus, it was decided to gauge the restrictions in the peripheral tubes of "A". All of these restrictions passed a .650 diameter probe. Some restrictions at the first support were also encountered in the central region of the "A" steam generator. These restrictions were not considered to be an indication of a problem since a larger diameter probe than usual was used in this area. The large diameter probe was used to provide gauging information for sleeving.

An 800 psid secondary-to-primary leakage check was performed on both steam generators on April 9, 1983. The 800 psid secondary-to-primary leakage check was performed visually with the aid of remote video equipment. The specific conditions identified during the leakage checks are noted below.

"A" Steam Generator
Hot Leg

R27C82 (explosive plug)	Wet
R31C52 (explosive plug)	Wet
R32C15 (explosive plug)	Wet
R17C42 Tube	10-12 drops per minute
R16C30 Tube	10-15 drops per minute
R20C37 Tube	Wet

"B" Steam Generator
Hot Leg

R26C84 (explosive plug)	Wet
R28C72 Tube	Wet
R7C83 Tube	Wet
R30C81 Tube	Wet

It is intended that all the explosive plugs noted above will be repaired this outage. In addition, R40C25, an explosive plug in the "A" steam generator hot leg, will also be repaired since it was noted during previous outages as a potential leaker.

The wet unplugged tubes in the "A" steam generator each showed 100% eddy current indications within the tubesheet. The wet unplugged tubes in the "B" steam generator were inspected over the U-bend and no detectable degradation was found. These tubes will be checked again during the leak check performed after sleeving.

All tubes having degradation greater than 40% will be repaired by sleeving or plugging prior to startup in accordance with Technical Specification 15.4.2.6.

Based on the results of the eddy current and comparisons with previous inspections, there has been no real progression of wastage at the top of the tubesheet or denting at the supports. However, corrosion within the tubesheet crevice is occurring.

The indications within the tubesheet area are believed to be the results of intergranular attack caused by caustic corrosion. The indications at the top of the tubesheet, or above, are believed to be remnants of phosphate wastage, as evidenced by the fact that they were noted during previous outages. The eddy current indications of wastage are not significantly greater than the plugging limit and, for the most part, the difference in comparison to previous outages is within the expected range of scatter for small volume indications which are masked by a tubesheet signal.

In an attempt to reduce corrosion, the steam generators have been sludge-lanced. In addition, to eliminate the concern with crevice corrosion and wastage at the top of the tubesheet, a major sleeving effort is planned for this outage. The planned sleeving program will cover 590 of the 628 indications found this outage in the "A" steam generator hot leg, and 325 of the 353 indications found in the "B" steam generator hot leg.

This event is reportable in accordance with Technical Specification 15.6.9.2.A.3.

The Resident Inspector has been notified of this event.

Wisconsin Electric POWER COMPANY
231 WEST MICHIGAN, MILWAUKEE, WISCONSIN 53201

DmB
~~JACKTO~~

March 30, 1984

Mr. J. G. Keppler, Regional Administrator
Office of Inspection & Enforcement,
Region III
U. S. NUCLEAR REGULATORY COMMISSION
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

DOCKET NO. 50-301
LICENSEE EVENT REPORT 83-002/01X-1
POINT BEACH NUCLEAR PLANT, UNIT 2

Enclosed is Licensee Event Report No. 83-002/01X-1 (a revised report) which provides a description of an event reportable according to Technical Specification 15.6.9.2.A.3, "Abnormal degradation discovered in fuel cladding, reactor coolant pressure boundary, or primary containment." The revision corrects a typographical error which is in the list of defective tubes in the "A" steam generator (R18C43 changed to R18C42).

Very truly yours,

C. W. Fay

C. W. Fay — Vice President-Nuclear Power

Enclosure

Copy to NRC Resident Inspector

IE22
1/1