NAC FORM 368 - PREVIOUS REPORT SUBMITTED MARCH 12, 1980 & APRIL 16, 1980 (7.77) UPDATED REPORT LICENSEE EVENT REPORT CONTROL BLOCK: ٦Ū IPLEASE PRINT OR TYPE ALL REQUIRED INFORMATION WIIPBH2 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 1 4 4 0 1 0 01 LICENSEE CODE CONT REPORT L 6 0 5 0 0 0 3 0 1 0 0 2 2 7 3 0 0 0 5 1 6 8 0 60 61 DOCKET NUMBER 64 69 EVENT DATE 74 75 REPORT DATE 80 0 1 (9) SOURCE EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10) During normal operation, indication of an increasing primary-to-0 2 secondary leak in the "A" SG was noted on 02-27-80. 03 The decision was made to shut the unit down at 2340 hours on 02-27-80 and the unit was 0 4 off line at 0225 hours on 02-28-80. 0 5 Chemistry results of a sample taken at 0010 hours on 02-28-80 quantified a primary-to-secondary 0 6 leak rate of 1,420 gallons per day. 0 7 This event is reportable per T.S. 15.6.9.2.A.3 and is similar to previous LER's. 8 SYSTEM CAUSE CAUSE COMP VALVE CODE CODE SUBCODE COMPONENT CODE SUBCODE SUBCODE E TEXCH C | B (11 D (3) 0 9 H (12) F (15) 2 (16) 10 12 13 20 18 19 SEQUENTIAL OCCURRENCE REVISION REPORT LERIRO EVENT YEAR REPORT NO. CODE TYPE NO. REPORT 8101 0 10 12 011 TI 2 NUMBER 27 28 30 31 32 TAKEN ACTION FFFECT METHOD TTACHMENT NPRD-4 PRIME COMP (22) COMPONENT ON PLANT HOURS SUBMITTED FORM SUB SUPPLIER MANUFACTURER 18 L 120 Y 24 (21) YI A 2 23 N 25 0 3 W111210 25 36 47 43 CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27) mary-to-secondary leak test performed on 03-01-80 revealed 10 A ori a leaking tube in the "A" SG at position R18C37. 1 1 Eddy current testing began in both SG's on 03-03-80 and was completed on 03-09-80. One degraded (413 defect) tube was found in the "B" SG and six defective [11] (>50%) tubes and 18 tubes with pluggable (40% to 49%) defects were found 14 "A" steam generator. 9 171 the FACILITY METHOD OF OTHER STATUS (30) S POWER DISCOVERY DESCRIPTION (32) 1 5 E (28) 0 9 9 20 N/A A (31) Operator observation ACTIVITY CONTENT 12 17 80 AMOUNT OF ACTIVITY (35) RELEASED OF RELEASE LOCATION OF RELEASE (36) G 3 N 3 1.47 Curies 16 Air ejector PERSONNEL EXPOSURES DESCRIPTION (39) NUMBER TYPE 0 0 0 37 2 38 N/A PERSONNEL INJURIES 13 DESCRIPTION (41) NUMBER 0 0 0 0 N/A 01 18 SLOSS OF OR DAMAGE TO FACILITY (43) 11 12 80 TYPE DESCRIPTION AT N/A 2 10 PUBLICITY DESCRIPTION (45) NAC USE CNLY LY 44 Newspaper, TV. and radio coverage 1 1 1 1 1 1 1 1 1 10 69 80 -C. W. Fay 414/277-2911 NAME OF PREPARER -0.00 PHONE: 80052807646

ATTACHMENT TO LICENSEE EVENT REPORT NO. 80-002/01T-2

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

Unit 2 was taken off line at 0225 hours on February 28, 1980 following confirmation of primary-to-secondary leakage in the "A" steam generator. The leak had begun as a slight indication about noon the previous day and gradually increased to 70 gallons per day (estimated) by 2200 hours on February 23. The decision was made to shut down at 2340 hours upon a further large increase in the air ejector radiation monitor reading. A static head leak check identified the leaking tube at position R18C37 and a subsequent eddy current inspection placed the defect at eight to ten inches above the tube end, i.e., 13 to 15 inches deep in the crevice of the tubesheet. The previously scheduled refueling outage steam generator eddy current inspection was performed during the outage. The extent of the inspection was expanded during the outage as six tubes with greater than 50% through-wall indications, in addition to the leaking tube, were discovered in the "A" steam generator. Eighteen tubes with indications between 40 and 49% were also found. The "A" steam generator hot leg program was first expanded by a 25 sample then to 100% as required by the Technical Specifications.

The 25 defective or degraded tubes in the "A" steam generator were explosively plugged on March 10, 1980. The leaking tube was mechanically plugged on the inlet side. This tube has been pulled during the April 1980 refueling outage for further examination.

Eight tubes which exhibited 39% defect indications were also explosively plugged as a conservative measure. Two tubes, R22C62 and R9C54, also with 39% defects, were plugged on the cold leg only. These tubes were mechanically plugged on the hot leg side during the April 1980 refueling outage.

An 860 psi hydrostatic test of the "B" steam generator revealed no leaking tubes or plugs. Approximately 700 tubes in each of the hot and cold legs of the "B" steam generator were examined and one cold leg tube was found to have a 41% defect indication. The one 41% degraded tube in the "B" steam generator was explosively plugged on March 9, 1980.

Unit 2 was placed on line at 1802 hours on March 13, 1980.

The average radioactive release rate via the Unit 2 air ejector during this event has been calculated to be 0.051% of the allowable annual release rate of 0.2 Curies per second.

This event is reportable per Technical Specification 15.6.9.2.A.3.

The approximate exposures recorded during the outage are as follows: (All exposure data are based on dosimeter information.)

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Steam Generator Manway Work	1.8	Man	Rem	
Visual Inspections	0.8			
Eddy Current Inspections	14.7			
Tube Plugging	5.9			
Health Physics Coverage	3.4			

EDDY CURRENT RESULTS FOR PLUGGED TUBES

STEAM GENERATOR "A" INLET

Tube	% Defect		Lo	ocation
R21C58	42	Top	of	tubesheet*
R10C59	39	Top		tubesheet
R20C59	41	Top	of	tubesheet
R21C59	39	Top		tubesheet
R20C61	42	Top		tubesheet
R20C63	51	Top	of	tubesheet
R21C63	56	Top		tubesheet
R10C64	42	Top	of	tubesheet
R21C64	46	Top	of	tubesheet
R19C65	51	Top		tubesheet
R18C68	39	Top		tubesheet
R12C73	43	Top		tubesheet
R34C73	43			support plate
R11C74	39	Top		tubesheet
R07C21	39	Top		tubesheet
R1 3C1 9	40	Top		tubesheet
R12C31	41	Top		tubesheet
R13C34	43	Top		tubesheet
R14C34	57	Top		tubesheet
R14C35	42	Top		tubesheet
R15C35	44	Top		tubesheet
R13C36	42	Top		tubesheet
R14C36	39	Top		tubesheet
R10C39	45	Top		tubesheet
R13C41	56	Top		tubesheet
R18C37	100			ve tube end
R28C42	45	Top	of	tubesheet
R20C43	39	Top		tubesheet
R12C44	41	Top		tubesheet
R20C47	39	Top		tubesheet
R21C57	43	Top		tubesheet
R22C57	42	Top		
R10C58	52	Top	of	tubesheet

STEAM GENERATOR "B" OUTLET

41

R07C36

15" above tubesheet

*The notation "top of tubesheet" refers to defect indications which have been separated from the tubesheet entry eddy current signal using multi-frequency techniques. The recent development of this technique, which was used for the first time on Unit 2 during this inspection, permits much better discrimination of low volume defect indications from the tubesheet signal. During previous inspections, using only 400 KHZ eddy current signals, the majority of these top of tubesheet indications were referred to as either distorted tubesheet signals or less than 20% indications. In some cases they were not characterized as abnormal signals. In only two of the tubes, R20C47 and R21C64, had previous tube defects at or near the tubesheet been consistently reported and quantified Table 1 summarizes the previous inspection reports of these tubes. EDDY CURRENT RESULTS FOR PLUGGED TUBES - STEAM GENERATOR "A" INLET

In order to establish whether the remaining defects had been present in previous inspections, the 400 KHZ eddy current tapes for all previous tube inspections, dating from as early as 1974, were reviewed and compared to the 400 KHZ signal alone from this 1980 inspection. The object of this comparison was to evaluate whether the 400 KHZ eddy current tubesheet entry signal was essentially unchanged from inspection to inspection. It was concluded from this comparison that the majority of tubesheet entry signals for those tubes having been previously inspected, were unchanged from the 1980 400 KHZ signal. From this comparison it was concluded that the majority of tubesheet entry signals for these top of tubesheet defect indications have been present but undetectable in previous eddy current inspections. Table 2 summarizes the results of this comparison.

		TABLE	1		
PI	REVIO	USLY REPO	JRTED	STEAM	
GENERATOR	EDDY	CURRENT	INSPE	CTION	RESULTS
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UNIT	6.	A	INL	E I.
		Conception of the local division of the	Statements and the statements	

- WC	COL.	1980	1979	1978	1977	1976	1974
13	19	40 - TTS	NI	NI	NI	NI	NI
7	21	39 - TTS	NI	NI	NI	NI	NI
:2	31	41 - TTS	NI		DTS		
13	34	43 - TTS	NI		DTS		
14	34	57 - TTS	NI		DTS		
14	35	42 - TTS	NI		DTS		
15	35	44 - TTS	NI		DTS	DTS	
13	36	42 - TTS	NI	NI	<20-TTS	<20-TTS	<20-TTS
14	36	39 - TTS	NI		DTS		
14 10	39	45 - TTS		NI	NI		
13	41	56 - TTS	NI	NI	DTS	DTS	
28	42	45 - TTS	NI	NI	NI	<20-1/2"ATS	<20-1/2"ATS
20	43	39 - TTS	COPPER		DTS	<20-1/2"ATS	23-1/2"ATS
12	44	41 - TTS	NI		<20-TTS	<20-TTS	
20	47	39 - TTS	30-1/2"ATS	31-1/2"ATS	30-1/2"ATS	31-1/2"ATS	23-1/2"ATS
9	54	39 - TTS	NI	NI	DTS	<20-1/2"ATS	<20-1/2"ATS
21	57	43 - TTS	NI		<20-TTS	<20-TTS	
22	57	42 - TTS	NI		DTS	NI	
10	58	52 - TTS	NI		DTS	DTS	
21	58	42 - TTS	NI	NI	<20-1/2"ATS	<20-1/2"ATS	<20-TTS
10	59	39 - TTS	NI		<20-1/2"ATS	<20-1/2"ATS	<20-1/2"ATS
20	59	41 - TTS	NI		<20-TTS	<20-TTS	<20-TTS
21	59	39 - TTS	NI	NI	DTS	DTS	
20	61	42 - TTS	NI		DTS	DTS	
22	62	39 - TTS	NI		DTS	DTS	
20	63	51 - TTS	NI		DTS	DTS	<20-TTS
21	63	56 - TTS	NI		<20-TTS	<20-TTS	
10	64	42 - TTS	NI	NI	DTS	 20 TTC	NI NI
21	64	46 - TTS	30-TTS	COPPER	21-TTS	22-TTS	NI
19	65	51 - TTS	NI		DTS	NI NI	NI
13	68	39 - TIS	N1	NI	NI	NI NI	NI
12	73	43 - TTS	NI	NI	NI		NI
34	73	43 -#1TSP	NI	NI	NI	NI	NI
11	74	39 - TTS	NI	NI	NI	NI	INI

TTS = Top of Tubesheet NI = Not Inspected ATS = Above Tubesheet

TSP = Tube Support Plate
DTS = Distorted Tubesheet Signal
-- = Inspected with No Signal Comment

TABLE 2

COMPARISON OF PREVIOUS EDDY CURRENT SIGNAL

The following table presents the results of the visual comparison of previously recorded 400 KHZ tubesheet entry signals to the 1980 inspection 400 KHZ tubesheet entry signal for the listed tubes from the "A" steam generator inlet. Tubes R7C21, R13C19, R18C68, R12C73, R34C73 and R11C74 were not inspected prior to 1980.

NY - Net freeded

	NI = Not	inspected	S =	Signal same as 19	980	
ROW	COLUMN	1979	1978	1977	1976	1974
12	31	NI	SMALL CHANGE	ALMOST	ALMOST	SAME AS 1976
13	34	NI	S	S	S	CHANGE
4	34	NI	POSSIBLE CHANGE	S	ALMOST NORMAL	SAME AS 1976
4	35	NI	POSSIBLE C	HANGE S	S	S
5	35	NI	SOME CHANGE	SAME AS 1978	S	CHANGE
3	36	NI	NI	S	S	S
4	36	NI	POSSIBLE CHANGE	SAME AS 1978	S	S
0	39	POSSIBLE CHANGE	NI	NI	SAME AS 1979	CHANGED
3	41	NI	NI	CHANGED	SAME AS 1977	SAME AS 1977
28	42	NI	NI	NI	S	S
0	43	S	S	S	S	SMALL CHANGE
2	44	NI	POSSIBLE CHANGE	S	S	SMALL CHANGE
20	47	S	S	S	S	S
9	54	NI	NI	SMALL CHANGE	SAME AS 1977	CHANGED
22	57	NI	S	S	NI	S
0	58	NI	CHANGED	SOME CHANGE TO 1978	SAME AS 1977	SAME AS 1977
1	53	NI	NI	S	S	S
U	59	NI	CHANGE	SAME AS 1978	SAME AS 1977	SAME AS 1977
20	59	NI	S	S	S	S
	59	NI	NI	S	S	S.MALL CHANGE
0	61	NI	S	S	CHANGE	S
2	62	NI	S	S	S	S
0	63	NI	POSSIBLE CHANGE	S	S	S
1	63	NI	POSSIBLE CHANGE	S	S	S
0	64	NI	NI	S	CHANGE	NI
1	64	S	S	S	CHANGE	NI
9	65	NI	S	S	NI	NI
21	57	NI	S	S	S	S