(7-77)

LICENSEE EVENT REPORT

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

0 1 | N C B E P 2 (2) | 0 0 - 0 0 0 0 0 - 0 0 (3) | 4 1 1 1 1 (4) | (5)

7 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CON'T

0 1 | REPORT SOURCE L (6) | 0 5 0 - 0 3 2 4 (7) | 0 4 1 2 8 1 (8) | 0 4 1 1 8 1 (9)

7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During normal plant operation following a unit outage that involved maintenance to

0 3 | the main condenser waterboxes, routine reactor coolant analysis revealed vessel

0 4 | conductivity > 10 μmho/cm^2. Vessel conductivity remained > 10 μmho/cm^2 for 8 hours

0 5 | with the highest recorded value at 24.8 μmho/cm^2. Following the discovery that vessel

0 6 | conductivity had exceeded specifications a manual reactor scram was then initiated.

0 7 | This event did not affectthe health or safety of the public.

0 8 | Technical Specification 3.4.4.a.2, 6.9.1.9b

7 8 9 80

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	H C (11)	E (12)	F (13)	H T E X C H (14)	D (15)	Z (16)

9 10 11 12 13 18 19 20

(17) LER/RO REPORT NUMBER: EVENT YEAR 8 1 | — | SEQUENTIAL REPORT NO. 0 4 5 | / | OCCURRENCE CODE 0 3 | REPORT TYPE L | — | REVISION NO. 0

21 22 23 24 26 27 28 29 30 31 32

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
D (18)	X (19)	A (20)	B (21)	0 0 0 8	Y (23)	Y (24)	N (25)	G 0 8 0 (26)

33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | This event resulted from excessive main condenser waterbox tube leakage that occurred

1 1 | when tube plugs to approximately 75 - 100 tubes fell out allowing circulating water

1 2 | leakage into the hotwells. The plugs were replaced with a different type plug and

1 3 | a satisfactory leak check of the tubes was performed. Vessel conductivity was

1 4 | returned to within specifications by the RWCU System.

7 8 9 80

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	F (28)	0 2 8 (29)	NA	A (31)	Operational Event

7 8 9 10 12 13 44 45 46 80

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

7 8 9 10 11 44 45 80

	PERSONNEL EXPOSURES NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

7 8 9 11 12 13 80

	PERSONNEL INJURIES NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

7 8 9 11 12 80

	LOSS OF OR DAMAGE TO FACILITY TYPE	DESCRIPTION (43)
1 9	Z (42)	NA

7 8 9 10 80

	PUBLICITY ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

7 8 9 10 68 69 80

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LER ATTACHMENT - RO # 2-81-45

Facility: BSEP Unit No. 2 Event Date: 4-12-81

This event resulted from unexpected main condenser waterbox tube leakage which occurred due to the falling out of approximately 75-100 waterbox tube plugs. These plugs had been installed on both ends of tubes known to have seawater leakage to prevent that seawater from entering the Condensate System. Prior to this event a unit maintenance outage had been performed that involved the draining of the waterboxes for required work. As a result, a large portion of the installed waterbox tube plugs apparently dried out and became loose. After completion of the outage work, the waterboxes were returned to normal service and the plugs forced out by the circulating water flow and turbulence. Following a routine unit startup, an initial reactor Condensate System conductivity spike was detected by in-plant monitoring equipment and was verified by routine Condensate System chemistry analysis. At this time vessel conductivity was measured within specifications. This initial conductivity spike was adequately dealt with by the condensate filter and polishing system. Hourly chemistry analysis of vessel and reactor feedwater appeared to indicate that the conductivity excursion was short-lived as a result of measured reactor conductivities that were steadily decreasing in numerical value at the time. However, several hours later one of the hourly coolant samples revealed that vessel conductivity had suddenly and unexpectantly exceeded specifications at a measured value of 15.5 $\mu mho/cm^2$. In response to the observed sudden conductivity spike, a manual reactor scram was initiated. Following the scram and during recovery operation, hourly vessel coolant analysis revealed conductivity peak at 24.8 $\mu mho/cm^2$. In addition, during this event a maximum chloride concentration of 5 ppm and a ph value of 6.4 - 7.4 were recorded for vessel coolant. By utilization of the RWCU System and a feed and bleed Condensate System lineup to the reactor, the vessel conductivity was then reduced to within specifications. An evaluation of the conductivity excursion experienced by the reactor was then performed by General Electric which led to the establishment of operational guidelines for the startup of the unit following this event.

An inspection of main condenser waterboxes revealed the missing waterbox tube plugs that were previously described in this report. The damaged plugs were replaced with different design plugs utilizing a brass ring and plug construction. The waterboxes were satisfactorily leak checked and were then returned to normal service. It is believed that utilization of the different design waterbox tube plugs will help alleviate the conditions that could lead to future similar events.