UPDATE REPORT

PREVIOUS REPORT DATE - 11/3/82

NRC FORM 366
(12-81)
10 CFR 50

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

APPROVED BY OMB
3150-0011

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

0 1	M A P P S (2)	0 0 - 0 0 0 0 0 - 0 0 (3)	4 1 1 1 1 (4)	(5)
	LICENSEE CODE	LICENSE NUMBER	LICENSE TYPE	CAT

CON'T

0 1	REPORT SOURCE: L (6)	0 5 0 - 0 2 9 3 (7)	1 0 0 4 8 2 (8)	0 6 1 3 8 4 (9)
		DOCKET NUMBER	EVENT DATE	REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On 10/4/82, during power increase from hot shutdown, reactor water
0 3 conductivity was observed to be above T.S. limits. This event was noted after
0 4 the "A" condensate demineralizer was placed in service. At 0300, the water
0 5 was analyzed to be 20 umho/cm and 4.5 pH. A plant shutdown was initiated
0 6 and the NRC notified via ENS. The "A" unit was isolated and removed from
0 7 service. This event caused no threat to the public health and safety.
0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	C G (11)	X (12)	Z (13)	0 E M I N X (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 4 5	/	0 3	X	—	1

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

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Cause of the event has been identified as resin intrusion. Damaged laterals
1 1 were replaced in "A" Cond. Demin., and the post-strainer screen was secured.
1 2 Maximum flow through "A" Cond. Demin. was limited by procedure revision. No
1 3 similar events have occurred since implementation of the corrective action.
1 4 Similar events were previously reported in previous LER's (Ref: 82-31 and 80-43).

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	C (28)	0 2 5 (29)	N/A	A (31)	Operator Observation

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

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	N/A

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	N/A

8407020144 840613
PDR ADOCK 05000293
S PDR

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	N/A

IE22 1/1

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	N/A	

NAME OF PREPARER P. J. Hamilton PHONE (617) 746-7900

1/1 IE22

BOSTON EDISON COMPANY
PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293

Attachment to LER #82-045 - Update Report -
Previous Report Date, 11/3/82

On 10/4/82, at 0230, while increasing power from a hot shutdown, the reactor water conductivity began to increase after the "A" Condensate Demineralizer was put into service.

The Technical Specification (Section 3.6.B) limit of 10 umho/cm was exceeded and at 0300 the analysis of the water indicated 20 umho/cm at 4.5 pH. A plant shutdown was initiated and the NRC notified via ENS.

The immediate corrective action was to remove the "A" Condensate Demineralizer from service and to return the "B" unit to service. In addition, the APRM and rod block flow biased scram settings were adjusted per Procedure 9.1 to compensate for the apparent non-conservative recirculation flow versus speed indications referenced in LER 82-31.

When the conductivity was again below the 10 umho/cm limit, the plant shutdown was terminated.

On 10/5/82, while increasing power from the high conductivity event on 10/4/82, the 10 umho/cm limit was again exceeded when the conductivity increased from 7.55 umho/cm to 10.97 umho/cm. Again, a plant shutdown was initiated, the NRC notified, and compensatory measures taken. The plant shutdown was terminated when the water again was within limits.

At the time of the original LER, event cause had not been determined and an investigation to determine cause was being conducted. The following summarizes the results of the investigation and supports identification of a resin intrusion from "A" Condensate Demineralizer as probable cause.

The principal barriers for preventing resin and resin fines from entering the feedwater are the Condensate Demineralizer under laterals and post strainers. A loss of integrity of both of these barriers will more than likely result in loss of resin from the resin bed. An inspection of Condensate Demineralizer "A" on October 4, 1982 revealed that a screen on the post strainer was not secured, while a subsequent inspection of "A" Condensate Demineralizer on December 4, 1982 showed four (4) damaged laterals. The high reactor water conductivity event occurred subsequent to "A" Cond. Demin. being brought on-line and, since that date, both barriers for resin release from this Cond. Demin. had been found in need of repair. Therefore, it is reasonable to identify Condensate Demineralizer "A" as the source of the high conductivity event of October 4, 1982. It should also be noted that on November 12, 1982, an inspection of a conductivity element downstream of "A" Condensate Demineralizer (CE-1) revealed the presence of resin in that element.

To prevent a recurrence of this type of event, the Condensate Demineralizer operating procedure was revised and a maintenance program was undertaken on the Condensate Demineralizer System. All Condensate Demineralizer vessel internals were inspected and repaired as necessary. Condensate Demineralizer "A" through-flow has been procedurally limited to 2,700 gpm to lessen the stress on the vessel laterals and post strainer.

To ensure appropriate response to any similar event in the future, PNPS Procedure No. 2.4.148, "Guidance for Recognizing and Responding to Resin, Oil, Air, Glycol, Hydrocarbons, and/or Chloride Intrusions into the Reactor Vessel," has been prepared and approved for Station use. This procedure provides Operations personnel guidance in recognizing and responding to resin intrusion events.

BOSTON EDISON COMPANY
800 BOYLSTON STREET
BOSTON, MASSACHUSETTS 02199

WILLIAM D. HARRINGTON
SENIOR VICE PRESIDENT
NUCLEAR

June 13, 1984

BECo Ltr. #84-079

Dr. Thomas E. Murley
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Docket No. 50-293
License DPR-35

Dear Sir:

The attached update Licensee Event Report 82-045/03X-1, "Reactor Water Conductivity," is hereby submitted in accordance with the requirements of Pilgrim Nuclear Power Station Technical Specification 6.9.B.2.b.

If there are any questions on this subject, please do not hesitate to contact me.

Respectfully submitted,

W. D. Harrington for

PH:caw

Enclosure: LER 82-045/03X-1

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

Standard BECo LER Distribution

1/1 IE 22