

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

CONT

0	1
7	8

REPORT SOURCE

L	6	0	5	0	-	0	2	9	3	7	0	7	0	8	8	1	8	0	7	1	6	8	1	9
60	61									68	69					74		75						80
DOCKET NUMBER										EVENT DATE										REPORT DATE				

On June 3, 1981, Boston Edison received a report from Yankee Atomic Laboratory indicating a concentration of Co-60 (84.8 ± 2.5 pCi/KG) in a mussel taken from the discharge canal outfall on May 5, 1981. This concentration is in excess of 10 times the measured concentration at the station in Marshfield (5.0 pCi/kg).

Refer to Attachment for details.

SYSTEM CODE X X (11)		CAUSE CODE X (12)		CAUSE SUBCODE Z (13)		COMPONENT CODE Z Z Z Z Z (14)				COMP. SUBCODE Z (15)		VALVE SUBCODE Z (16)	
LER/RO REPORT NUMBER 17		EVENT YEAR 8 1 (21)		SEQUENTIAL REPORT NO. 0 3 0 (24)		OCCURRENCE CODE 0 4 (28)		REPORT TYPE T (30)		REVISION NO. NO. (32)			
ACTION TAKEN Z (18)		FUTURE ACTION Z (19)		EFFECT ON PLANT Z (20)		SHUTDOWN METHOD Z (21)		HOURS 0 0 0 (22)		ATTACHMENT SUBMITTED Y (23)		NPRD-4 FORM SUB. N (24)	
PRIME COMP. SUPPLIER Z (25)		COMPONENT MANUFACTURER Z 9 9 9 (26)											

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1	0	Improved analytical techniques have resulted in sensitivities for isotopes which
1	1	are below detection capabilities specified in Technical Specification 4.8.4. Com-
1	2	parisons at these low levels resulted in a ratio greater than 10 which necessitated
1	3	this report.

ACTIVITY CONTENT
RELEASED OF RELEASE AMOUNT OF ACTIVITY (35) LOCATION OF RELEASE (36)

1 6 Z (33) 7 (34) N.A. N.A.

PERSONNEL EXPOSURES									
NUMBER			TYPE		DESCRIPTION				
1	7	0	0	0	(37)	Z	(38)	N.A.	

	7	8	9	10	11	12	13	
					PERSONNEL INJURIES			
					NUMBER	(41)	DESCRIPTION	
					0	0	0	N.A.

7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100						
LOSS OF OR DAMAGE TO FACILITY (43)																																																																																																			
TYPE DESCRIPTION																																																																																																			

1 9 Z 42 N.A.
7 8 9 10
PUBICITY 45 NRC USE ONLY

ISSUED		DESCRIPTION		N.A.	
2	0	N	44		

PHONE: 617-746-7900

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

Attachment to LER 81-030/04T-0

On June 3, 1981, Boston Edison received an analysis report from the Yankee Atomic Environmental Laboratory (YAEL) which indicated that a potentially reportable concentration of Co-60 (84.8 ± 2.5) pCi/kg existed in a mussel sample collected from the Discharge Canal Outfall (indicator station) on May 5, 1981.

At this time (June 3, 1981), the Mass. Division of Fisheries (DMF) was requested to collect a mussel sample from Green Harbor in Marshfield (control station) as soon as possible. The control station sample was collected on June 4, 1981. The analysis report for the control station mussel sample was received from YAEL on July 6, 1981, and the Co-60 concentration in this sample was the Lower Limit of Detection (LLD) - 5.0 pCi/kg.

The indicator station concentration of Co-60 is in excess of 10 times the LLD of the control station in Marshfield. The Co-60 concentration in the indicator station sample is due to the operation of Pilgrim Station.

The maximum dose to an individual consuming seafood with this concentration of Co-60 (84.8 ± 2.5 pCi/kg.) for a full year would be only 2.2×10^{-3} mrem to the total body (child) and 1.7×10^{-2} mrem to the most restrictive organ (Adult, GI-LLI). The above doses were calculated as per Regulatory Guide 1.109.

Clearly, the above calculated doses are not significant when compared to the natural background dose rate of about 80 mrem/year. Therefore, it is concluded that there is no risk to the health and safety of the public.