

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

01 NY I P S 2 00 - 000000 - 00 41111 05
7 8 9 14 15 25 26 30 57 CAT 58

CON'T
01 REPORT SOURCE X 05000247 091080 112880
7 8 60 61 68 69 74 75 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)
02 Teledyne Isotopes, our contracting laboratory, provided Con Edison with
03 a confirmatory telephone report on 9/10/80 that the activity of a
04 leafy green vegetation sample taken from the Indian Point site location
05 on July 23, 1980 exceeded ten (10) times the historical level at this
06 location. This event did not have any environmental consequences
07 attributable to plant operations at Indian Point.

09 SYSTEM CODE ZZ 11 CAUSE CODE X 12 CAUSE SUBCODE Z 13 COMPONENT CODE ZZZZZ 14 COMP. SUBCODE Z 15 VALVE SUBCODE Z 16
7 8 9 10 11 12 13 14 15 16 17 18 19 20
17 IER/RO REPORT NUMBER 180 21 22 23 24 26 27 28 29 30 31 32
ACTION TAKEN X 18 FUTURE ACTION X 19 EFFECT ON PLANT Z 20 SHUTDOWN METHOD Z 21 HOURS 0000 22 ATTACHMENT SUBMITTED Y 23 NRPD-4 FORM SUB. N 24 PRIME COMP. SUPPLIER Z 25 COMPONENT MANUFACTURER Z999 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)
10 Investigation revealed the probable source of contamination to be the
11 disposal of low-level material in a sink used for standard preparation
12 4 years ago. Use of this sink and the in-house program were terminated
13 in early 1977. Contaminated soil and vegetation will be placed in
14 drums and disposed of with other low-level radwaste from the plant.

15 FACILITY STATUS Z 28 POWER 100 29 OTHER STATUS N.A. 30 METHOD OF DISCOVERY D 31 DISCOVERY DESCRIPTION Notification by Contracting Lab. 32
7 8 9 10 12 13 44 45 46 80

16 ACTIVITY CONTENT Z 33 Z 34 AMOUNT OF ACTIVITY N.A. 35 LOCATION OF RELEASE N.A. 36
7 8 9 10 11 44 45 80

17 PERSONNEL EXPOSURES NUMBER 000 37 TYPE Z 38 DESCRIPTION N.A. 39
7 8 9 11 12 13 80

18 PERSONNEL INJURIES NUMBER 000 40 DESCRIPTION N.A. 41
7 8 9 11 12 80

19 LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 DESCRIPTION N.A. 43
7 8 9 11 12 80

20 PUBLICITY ISSUED N 44 DESCRIPTION N.A. 45
7 8 9 10 80

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NRC USE ONLY

Consolidated Edison Company of New York Inc.
Indian Point Nos. 1, 2&3
Docket Nos. 50-03, 50-247 & 50-286
Attachment to LER 80-010/04X-0

Update Report - Previous Report 9/22/80

This report of an anomalous measurement at an environmental sampling location on the Indian Point Station site, (a sampling location not required by the Environmental Technical Specifications) is being made as a "followup" to the telephone report made by Stephen Sadlon on September 10, 1980 to the Region I Office of Inspection and Enforcement and original Licensee Event Report (LER-80-010/04X-0), dated September 22, 1980 to the same office.

If this sample was required then section 5.6.2.2 of the Environmental Technical Specification Requirements (ETSR) for Indian Point Nos. 1,2&3 requires, in part, that if a confirmed measured level of radioactivity in any environmental medium exceeds ten (10) times the control station value, a written report be submitted within ten (10) days. In the event a control station does not exist for a particular medium, "historical" levels for the particular location can be used in place of control station values. Our procedure, NEM-A-07, "Notification, Investigation, and Reporting of Abnormal Activity in Environmental Samples", defines such "historical" values for various media and also lists the action level where NRC notification is required.

Teledyne Isotopes, Inc., our contracting laboratory, reported Cs-137 activity in a leafy green vegetation sample from a garden on site 0.25 mi. SE of the plant. The level of activity exceeded ten times "historical" levels. The sample which was collected on July 23, 1980 was found to contain $1.76 \pm 0.18 \times 10^{-6}$ uCi/gm of Cs-137 as determined by germanium-lithium, Ge (Li) analysis. The same sample was reanalyzed by Teledyne Isotopes, Inc., as requested by Con Edison. On September 10, 1980, Teledyne Isotopes Inc. reported an activity of $1.45 \pm 0.15 \times 10^{-6}$ uCi/gm of Cs-137, confirming the original result.

An investigation, which included a review of present and past sample analyses and plant effluent releases, was initiated to determine the cause of this anomalous measurement. Plant releases during the first half of this year were consistent with those which have been observed in the past and exhibited no abnormalities which could account for the anomalous measurement. A review of leafy green vegetation analysis for the past few years showed Cs-137 activity at consistently less than minimum detectable concentration.

Possible contributory sources were investigated including precipitation, air particulates and ground, surface and drinking water (during the summer drought N.Y.C. Aqueduct drinking water, Sta. 56, was used to water the garden). A careful review of these media for the year indicated no detectable Cs-137 levels.

The garden, in which the subject vegetable was grown, is situated adjacent to the Nuclear Environmental Monitoring (NEM) Building on-site. The building sits on a hill overlooking I.P. Nos. 2 and 3 about 0.25 miles southeast of Unit 2. There is approximately 10"-12" of topsoil on top of a layer of slate. The garden and building being on top of the hill and the impermeable slate layer strongly suggests there is no contact between ground water, soil and vegetation.

As a result of the original analysis of the leafy green vegetation that led to this anomalous measurement, a number of soil and leafy green vegetation samples were taken in and around the garden to determine the presence and origin of Cs-137 activity. The following are the results of these analyses:

<u>Date Sampled</u>	<u>Location & Medium</u>	<u>Activity (uCi/gm)</u>	
		<u>Cs-134</u>	<u>Cs-137</u>
8-11-80	Soil taken 40' from garden	L.T.* 5.0E-08	2.21±0.34E-07
8-11-80	Soil taken 0.25 mi from garden	L.T. 5.0E-08	1.40±0.33E-07
8-14-80	Cabbage from the garden	L.T. 2.0E-08	2.0±0.24E-07
9-11-80	Soil from the garden	6.56±0.66E-07	1.40±0.14E-06
9-11-80	Cabbage from the garden	6.91±1.52E-08	5.69±0.57E-07
9-24-80	Special Soil from end of drainpipe	9.40±3.20E-08	1.92±0.19E-06
9-30-80	Special Water from the drain	L.T. 5.0E-06	L.T. 5.0E-06
10-24-80	½ Cabbage from garden (unwashed)	4.0±2.0E-08	1.7 ±0.2E-07
10-24-80	½ cabbage from garden (washed)	3.0±2.0E-08	1.5±0.2E-07

* (L.T. - Less than)

As part of the investigation, a section of the garden was dug up to determine topsoil depth and the role ground water might have played in the anomalous measurement. It was discovered that a section of orange ceramic conduit (used as a drain line from the building roof) was broken under the garden. Tracing this conduit system showed that the drainpipe was being fed from the building roof downcomer and an old sink in the NEM building that had been used three to four years earlier in conjunction with standard preparation operations. The drain system discharged onto the side of the hill. Repairs were effected on the broken conduit.

In order to determine if this drain system played a role in the contamination of the garden a special soil sample, from the discharge of the drain system was taken on 9-24-80. Results listed above strongly suggest that the drain system might have carried the contamination into the environment and that the broken conduit under the garden was the point of entry into the garden. On 9-30-80 two gallons of distilled water were poured into the old sink and collected at the end of the drainpipe. Analysis of this sample, results shown above, indicates any contamination that might have been in the drainpipe had by this time been washed from the drain system.

Finally, our analytical contractor advised us that all vegetation samples submitted were not washed prior to preparation and analysis. Therefore, in order to determine if contamination was internal or external on 10-24-80 a cabbage from the garden was split in half and submitted for analysis with special instruction to wash one half and not the other. Results, shown above, indicate that the washing made little difference and thus the contamination was internal and not due to external deposition.

Assuming that Cs-134 and Cs-137 concentrations were originally equal, back calculation estimates that the original deposition occurred approximately 3.8 years ago or late 1976. This was during a period when some analyses were being performed at the NEM Laboratory, including the use of liquid radioactive standards. Such liquid standards are no longer in use as a result of the cessation of in-house analysis effective May 1, 1977.

In conclusion, as a result of our investigation, we have determined that the anomalous radiation levels observed in leafy green vegetation from the garden located on-site, next to the NEM Laboratory were not the result of plant operation. Rather, it was more likely the result of past operations within the NEM Laboratory. It should be noted that all soil from the garden and from the vicinity of the discharge of the drain pipe is in the process of being dug up and drummed for disposal along with other low-level solid radwaste from the plant.