

September 26, 1957
MDT-1045-57

402548

R

To: M. B. Garden
From: M. D. Thaxter

The reports below are for your information and files.

1. Record of phone call to:

C. L. Dunham
Div. Biol. & Med.
AEC, Wash. D.C.
Sterling 3-8000 (per advice of Shute and Barton)
at 1718 9/24/57

"24 hour air sample at UCRL Berkeley ending approximately 0730 Sept 24 exhibit beta-gamma emitters in excess of 6 fold background after both 1 hour and 9 hours decay. Decrease in counting rate between these determinations very little. Confirmed by sample from our Livermore lab 45 miles to the east. Based on these data we tentatively conclude unnatural radioactive pollutant. Will confirm Thursday 26th. Refer our letter NRC-266-56 dated Feb. 26, 1956 for technique."

(Above notification made in accordance with addressee's request "to wire or phone any air sampling or ground level data exceeding 5 times background." Also notified: Dan Wilkes (U.C. Public Relations Office at 1730; E. Nielsen at 1920; both 9/24/57.

2. Report of phone call at 1357 9/26/57 to:

C. L. Dunham
Div. Biol. & Med.
AEC, Wash. 25, D.C. (Sterling 3-8000)

"Confirming phone of 1718 PDT 9/24/57, Berkeley 24 hr air sample ending 0730 exhibits beta-gamma activity slightly in excess of 5 times instrument background after decay of 48 hours. Substantiated by our Livermore lab sample."

These reports were made by the writer, U.C. Radiation Laboratory, Health Chemistry Group.

MDT/cg

cc: Wade Patterson, H. Physics
Dan Wilkes, U.C. Pub. Relations
AEC-SFOO, Attn: R. W. Hughey

MDT

BEST COPY AVAILABLE

AIR SAMPLING FOR RADIOACTIVITY

BLDG. 70 ROOM 183A SITE Air Ducts
 RATE 4 CFM Reset 1737

Monday
 -300% ^{0.01} ON 0738 9/23-57
 275% ^{0.01} OFF 0735 9/24-57

ALPHA COUNT
 TIME DATE C/M

BACKGROUND 1

SAMPLE 0822 9/24 '1737 U- 146 ²⁵
 0824 9/24 '1737 F- 136 ¹⁶¹⁵
9/24/57

BETA-GAMMA COUNT
 TIME DATE C/M

BACKGROUND 23

SAMPLE 0830 9/24 '1737 U- 183 ¹⁵²
 0835 9/24 '1737 F- 132 ¹⁷⁰
1615
9/24/57

RL-429

Low count data
sample on Fri AM 9/20
of Tues 9/24

1st count (15') *2nd count (9 hrs decay)*
 < 301 185
 670 615

Sample from Mon AM 9/20
670

Don Hill
CL 4-5491
Maynard/MNR
RE 3-5957

AIR SAMPLING FOR RADIOACTIVITY

BLDG. 70 ROOM 183A SITE Air Ducts
 RATE 4 CFM Reset 1737

TIME DATE
 ON 0738 9-23-57
 OFF 0735 9-24-57

ALPHA COUNT
 TIME DATE C/M

BACKGROUND *AM-1*

SAMPLE 1608 9/24 '1737 U- 25

BETA-GAMMA COUNT
 TIME DATE C/M

BACKGROUND *AM 23*

SAMPLE 1614 9/24 '1737 U- 165

RL-429

U

U-147-144

147
144
131
131
2/272

F-135-137

MD-3855-3872

3864

BY-1-0-0-2-0-1

450 461 1000

BX
0

U-189-177

183
4366
122
4264

F-150-114

MD-3341-3475 3408

BY-25-21-22-27-21-23

23
139
12
19
18

L
E

1st cut - 18

2 - - 25

3 - - 33

4 - - 23

4/99
24
25

BV
C

1st cut - 152

2 - - 172

3 - - 170

4/49.4
165

α
②

U-4-2-2-4-4-7 6/23
F-4-0-3-6-3-0-3 7/14

α
②

U-1-4-2-1-1-1 c/10⁺²
F-1-1-1-1-0-0-0-0-2

β
0

U-147-131-133-124-129-123
F-97-73-70-90-80-92

131
6/787
6/18
18/07
23/14
c/502
48
22
18
1/4

β
0

U-113-125-107-118-117-122
F-91-71-84-82-71-89

118
c/707
10
27/21
c/1488
45
09
1/2

AIR SAMPLING FOR RADIOACTIVITY

BLDG. 70 ROOM 183A SITE Air intake
RATE 4 CFM H C rate 1737

TIME DATE
ON 0738 9-23-77
OFF 0733 9-24-77

ALPHA COUNT

TIME DATE C/M
BACKGROUND /
SAMPLE 0910 9/25 '77 37 U- 9
0927 9/25 '77 37 F- 7

BETA-GAMMA COUNT

TIME DATE C/M
BACKGROUND 24
SAMPLE 0921 9/25 '77 37 U- 131
0909 9/25 '77 37 F- 91

AIR SAMPLING FOR RADIOACTIVITY

BLDG. 70 ROOM 183A SITE Air Intake
 RATE 4 CFM HC set 1737

TIME DATE
 ON 0738 9-23-57
 OFF 0735 9-24-57

ALPHA COUNT

TIME DATE C/M

BACKGROUND 1

SAMPLE 0902 9/26 '1737 U- 4
0914 9/26 '1737 F- 3

BETA-GAMMA COUNT

TIME DATE C/M

BACKGROUND 24

SAMPLE 0912 9/26 '1737 U- 131
0901 9/26 '1737 F- 84

RL-429

AIR SAMPLING FOR RADIOACTIVITY

BLDG. 70 ROOM 183A SITE Air Intake
 RATE 4 CFM HC set 1737

TIME DATE
 ON 0738 - 9-23-57
 OFF 0735 9-24-57

ALPHA COUNT

TIME DATE C/M

BACKGROUND <1

SAMPLE 0921 9/27 '1737 U- 2
0932 9/27 '1737 F- 1

BETA-GAMMA COUNT

TIME DATE C/M

BACKGROUND 22

SAMPLE 0931 9/27 '1737 U- 118
0920 9/27 '1737 F- 81

RL-429

Uirmos air sample (outdoor):

9/20 - 24/57

48 hr β - α (9/26/57):
54

6 α

35 β - α

1565 α
 563

α
2

U-11-8-7-5-9-13
 F-7-1-8-7-6-10

α
 $\frac{6153}{44}$
 $\frac{6139}{36}$

β
0

U-107-154-135-120-137-130
 F-99-79-84-93-96-92

α
 $\frac{131}{11}$
 $\frac{131}{11}$
 $\frac{91}{543}$
 54

Outdoor air Sample HC 1737 on 0735 9/23/57 Pan. 103A) Bldg:

10.00

~~7/23/55~~ 9/23/57

0-8" raw" cfm

Reported to Acc
#1718 9/24
#1757 9/26

2

100

9

8

7

6

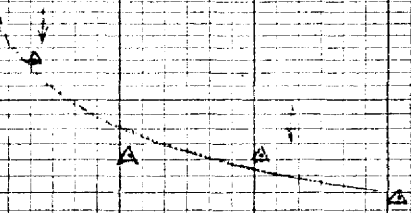
5

4

3

2

1



Instrument background

KEUFFEL & ESSER CO., N. Y. NO. 389-60
Semi-Logarithmic, 2 Cycles X 60 divisions.
MADE IN U. S. A.

9/24 9/25 9/26 9/27