(14) Pgd From Box # 4-3-1-5

ChemRisk/Shonka Research Associates, Inc., Document Request Form

#14

(This section to be completed by subcontractor requesting document)

JKLamb / 1634 Document Center

Requestor / Document Center (is requested to provide the following document)

Date of request 7/17/95 Expected receipt of document 8/11/95

Document number none Date of document 1947-1949

Title and author (if document is unnumbered)
Water Survey Analyses 1947-1949

(This section to be completed by Document Center)

Date request received 7/18/95

Date submitted to ADC 7/19/95

Date submitted to HSA Coordinator 7/18/95

(This section to be completed by HSA Coordinator)

Date submitted to CICO 7/19/95 7/31/95

Date received from CICO 7/31/95 8/3/95

Date submitted to ChemRisk/Shonka and DOE 8/9/95

(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received

Signature

ChemRisk Document No. 2124

DSF'd

WATER ANALYSIS - Work
Sheets & Graphs

This document has been approved for release
to the public by:
Gary W. Hall for A.S. Quist 8/2/95
Technical Information Officer Date
Oak Ridge K-25 Site

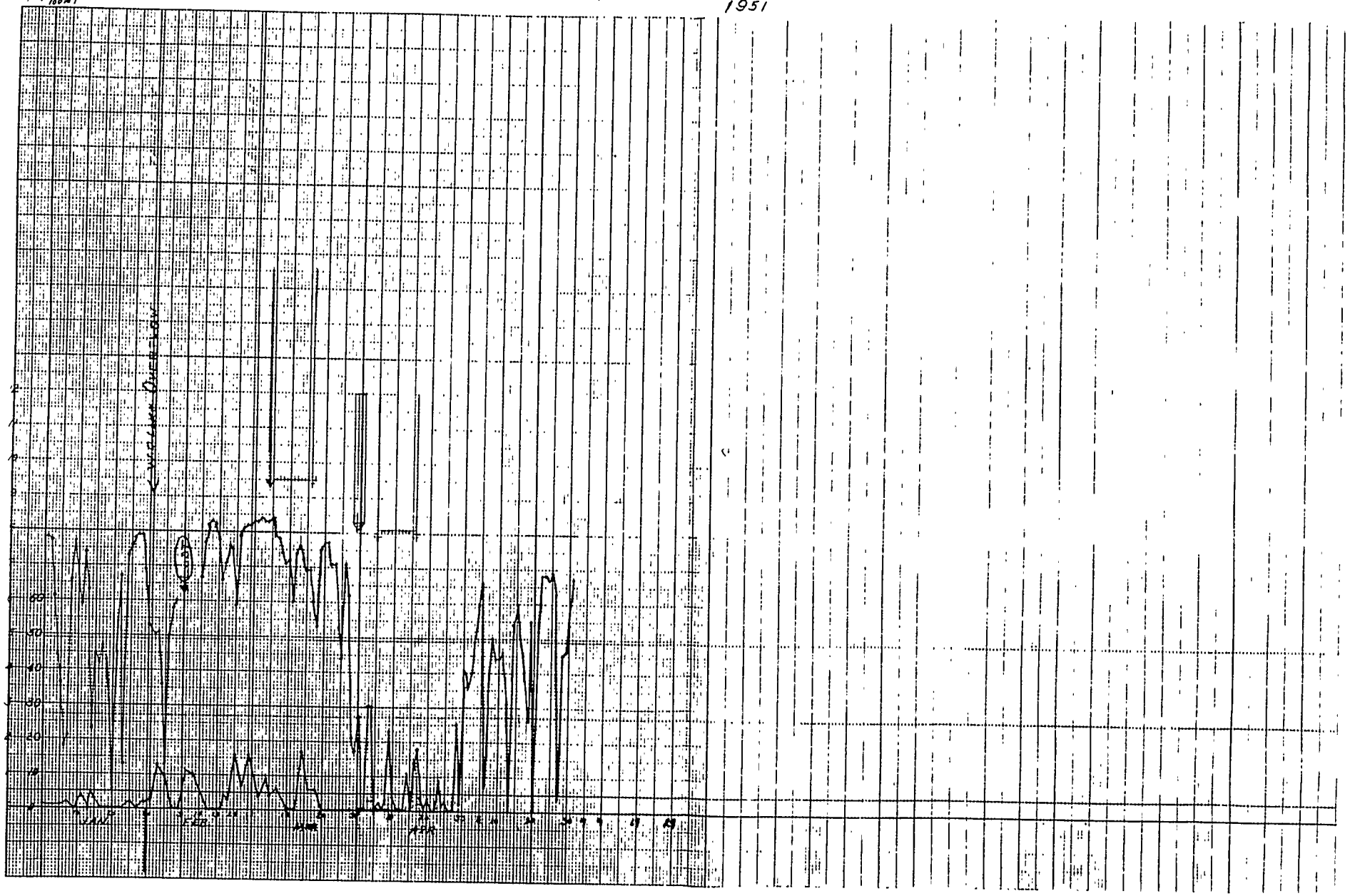
Carbide and Carbon Chemicals Corporation Operating
Contractor for the U.S. Atomic Energy Commission.

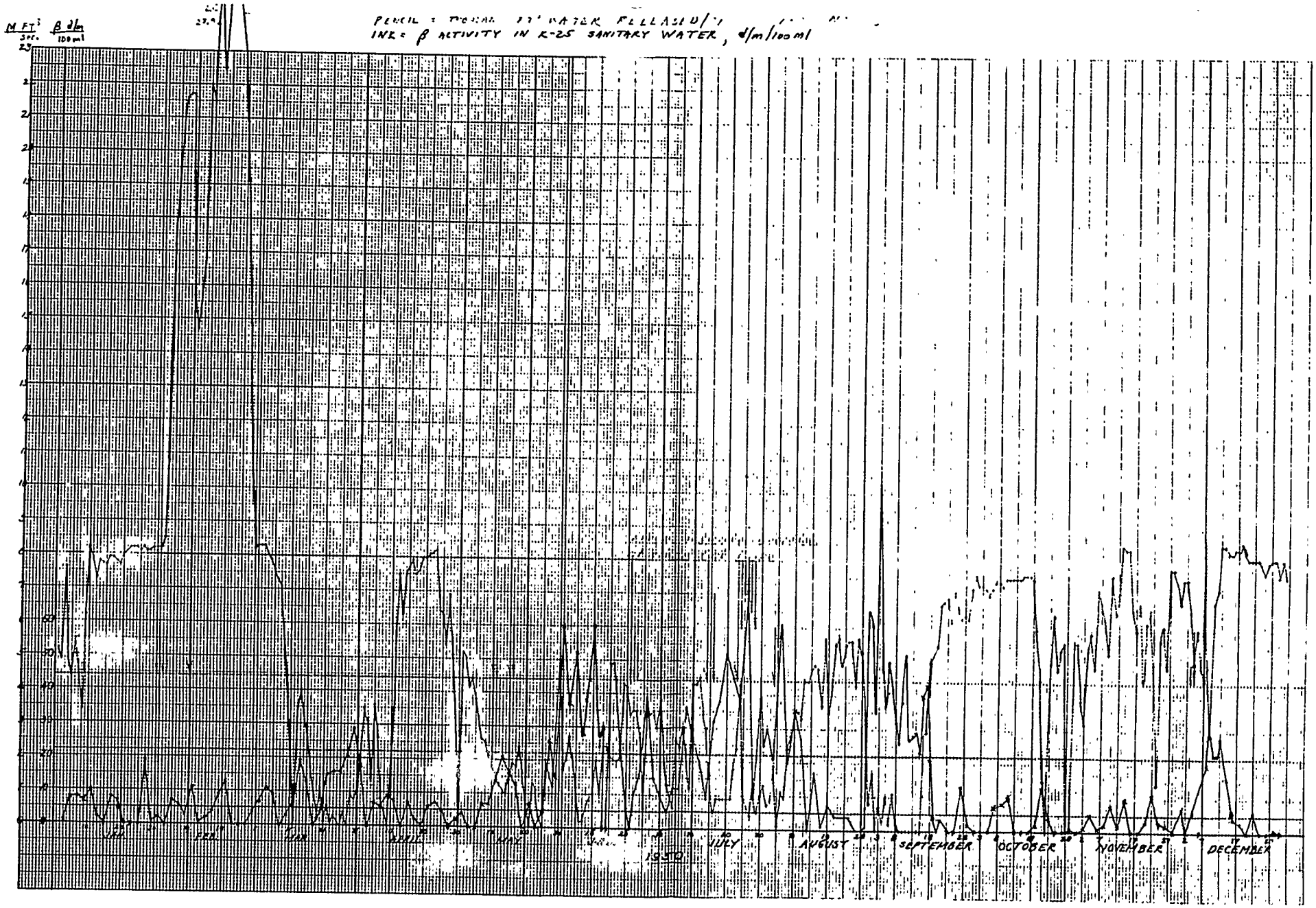
LOCATION FOR WATER AND
MUD SAMPLING PROGRAM

1-W Poplar Creek Inlet, N.E. of K-303-8
2-W Drainage from Pond S.W. of Garage Area
6-M-E Mud from Poplar Creek Opp. Blair Gate
8-M Drainage from Jones Scrap yard
9-W Clinch River W of Jones Scrap yard
10-M-E Mud from Clinch River bottom immediately below S-50 Sewer Outfall
10-W " " water " " " " "
11-M-E Mud from Poplar Creek Opposite K-27 drain (K-131)

INK = β ACTIVITY IN K-25 SANITARY WATER, d/m/100 ml

1951





M FT³/SEC.
β d/m/100 ml
PENCIL = THORIAL FT³ WATER RELEASED
INK = β ACTIVITY IN K-25 SANITARY WATER, d/m/100 ml
JAN
FEB
MAR
APRIL
MAY
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1950

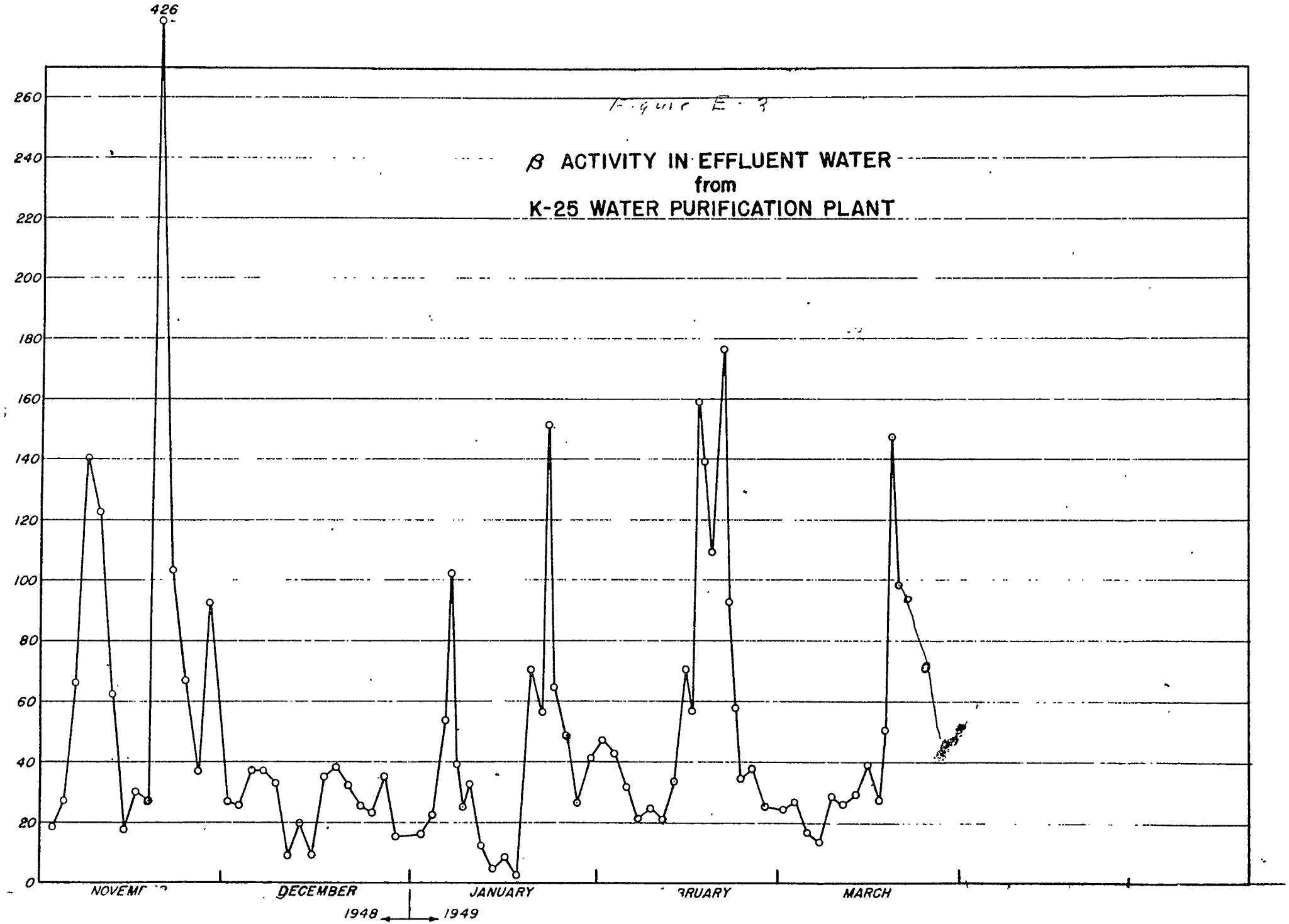
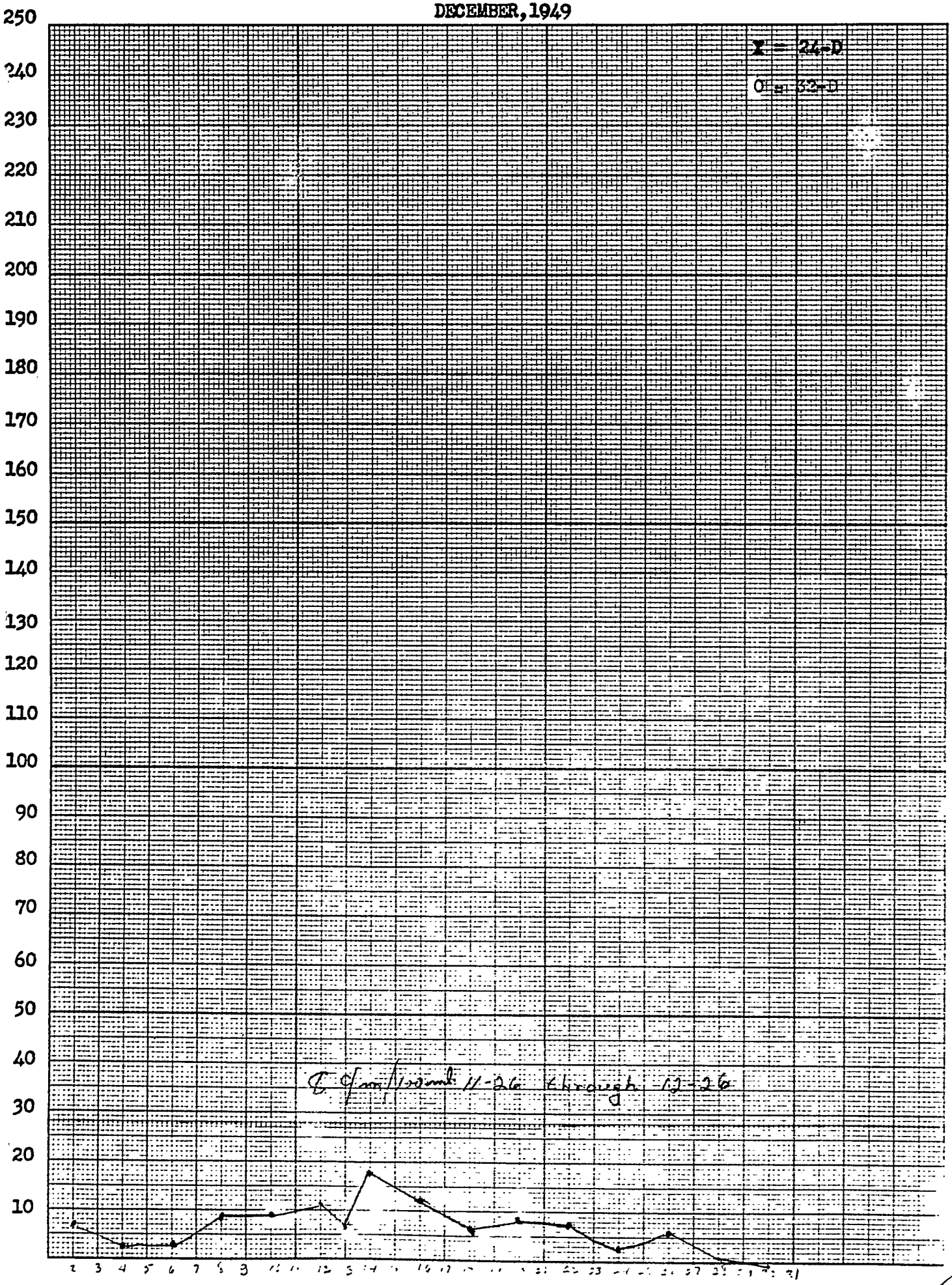


Figure E-3
β ACTIVITY IN EFFLUENT WATER
from
K-25 WATER PURIFICATION PLANT
426
260
240
220
200
180
160
140
120
100
80
60
40
20
0
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
1948
1949

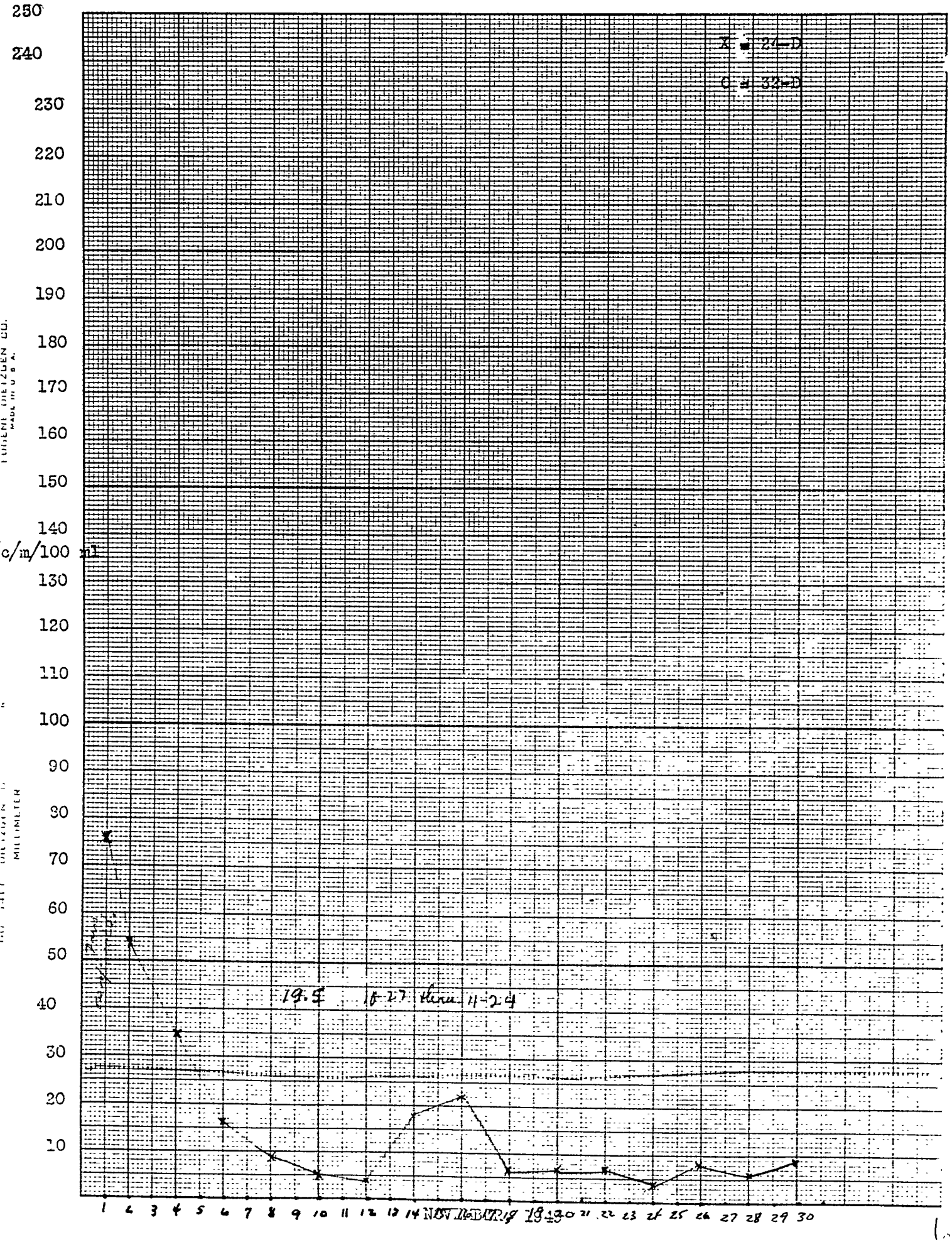
A-1515 Water Treatment Plant

Comparison of Influent (32-D) with Finished Water (24-D)

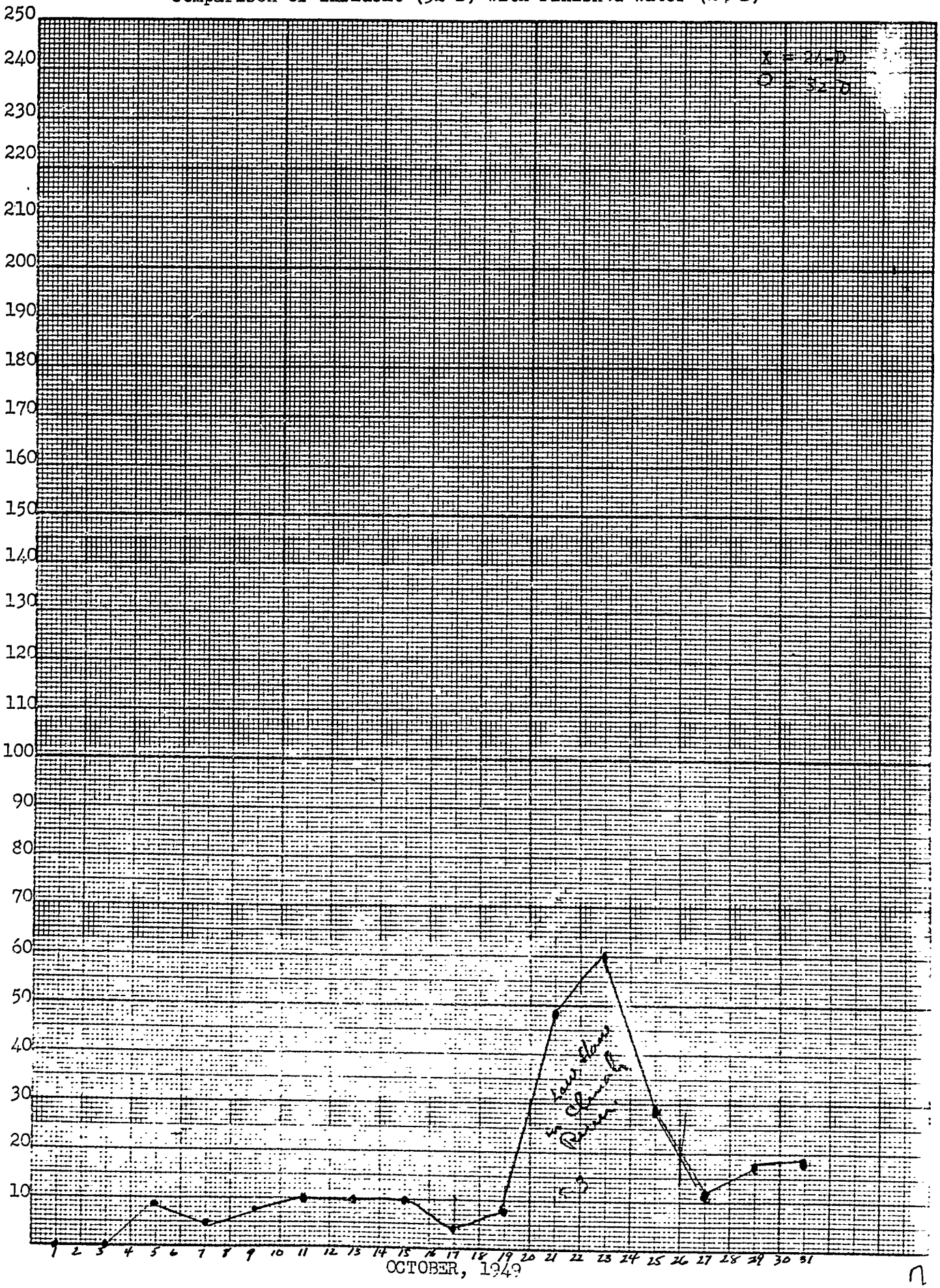
DECEMBER, 1949



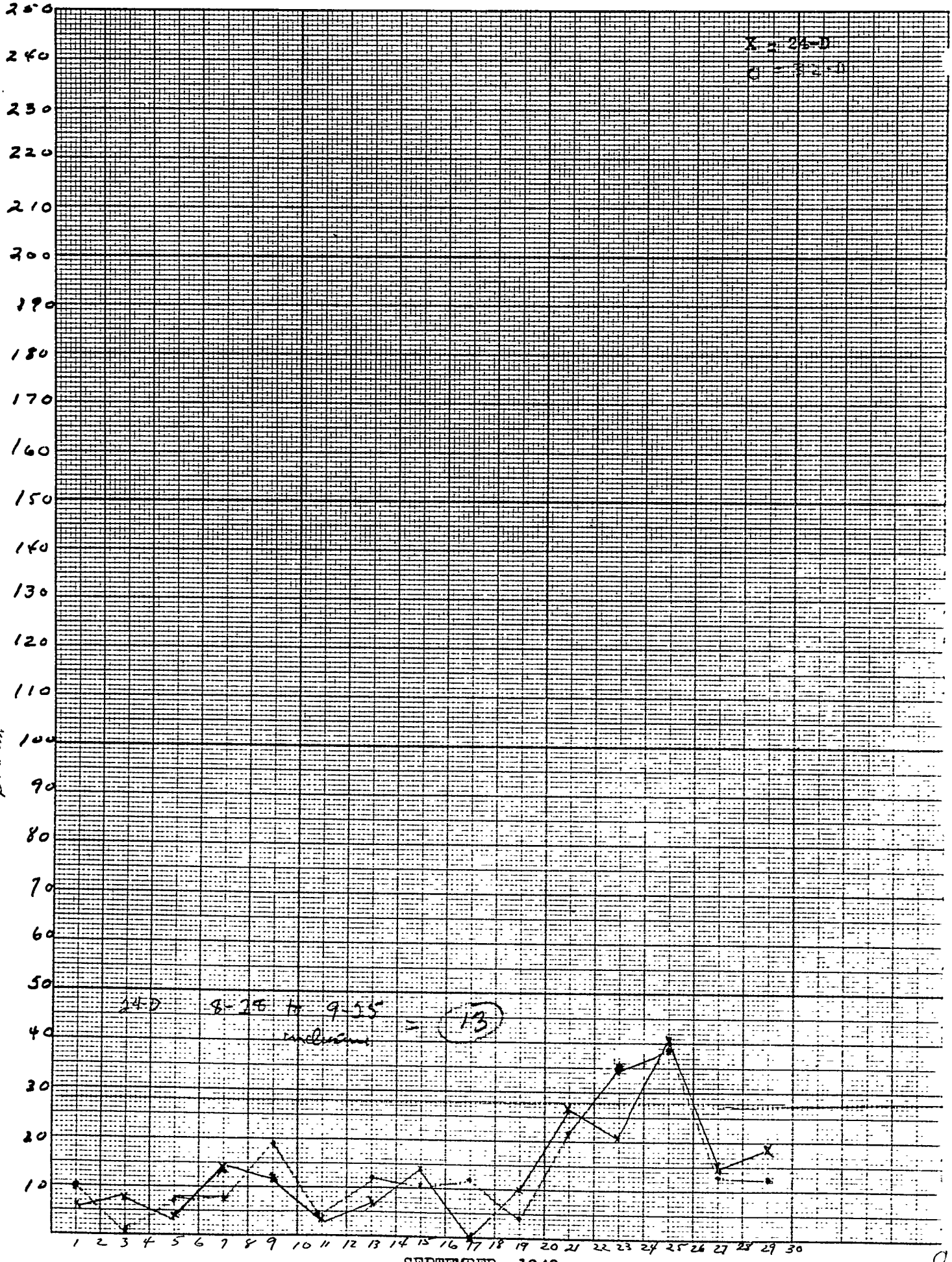
K-1515 Water Treatment Plant
Comparison of Influent (32-D) with Finished Water (24-D)



K-1515 Water Treatment Plant
Comparison of Influent (32-D) with Finished Water (24-D)

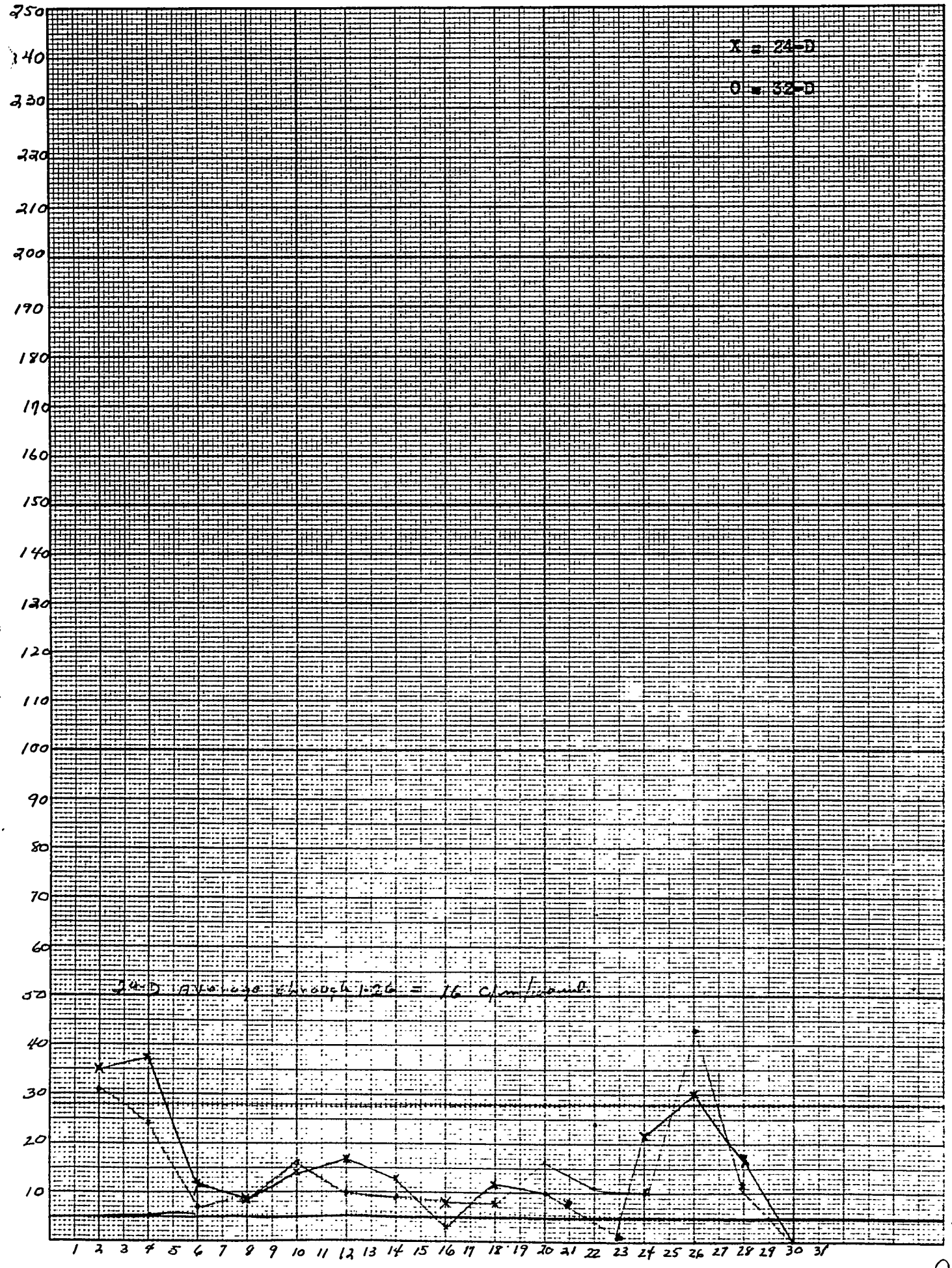


K-1515 Water Treatment Plant
Comparison of Influent(32-D) with Finished Water (24-D)



SEPTEMBER, 1949

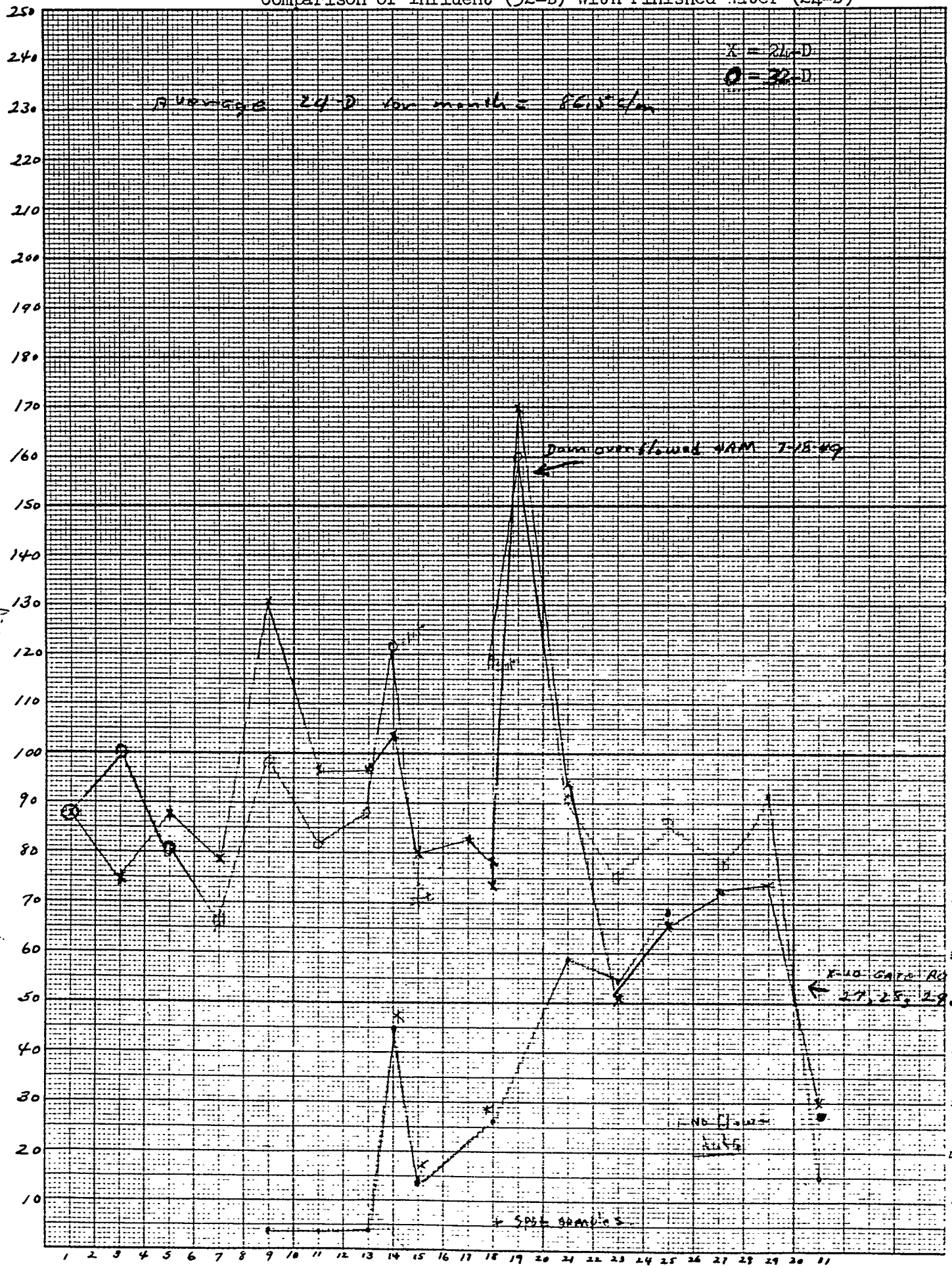
K-1515 Water Treatment Plant
Comparison of Influent (32-D) with Finished Water (24-D)



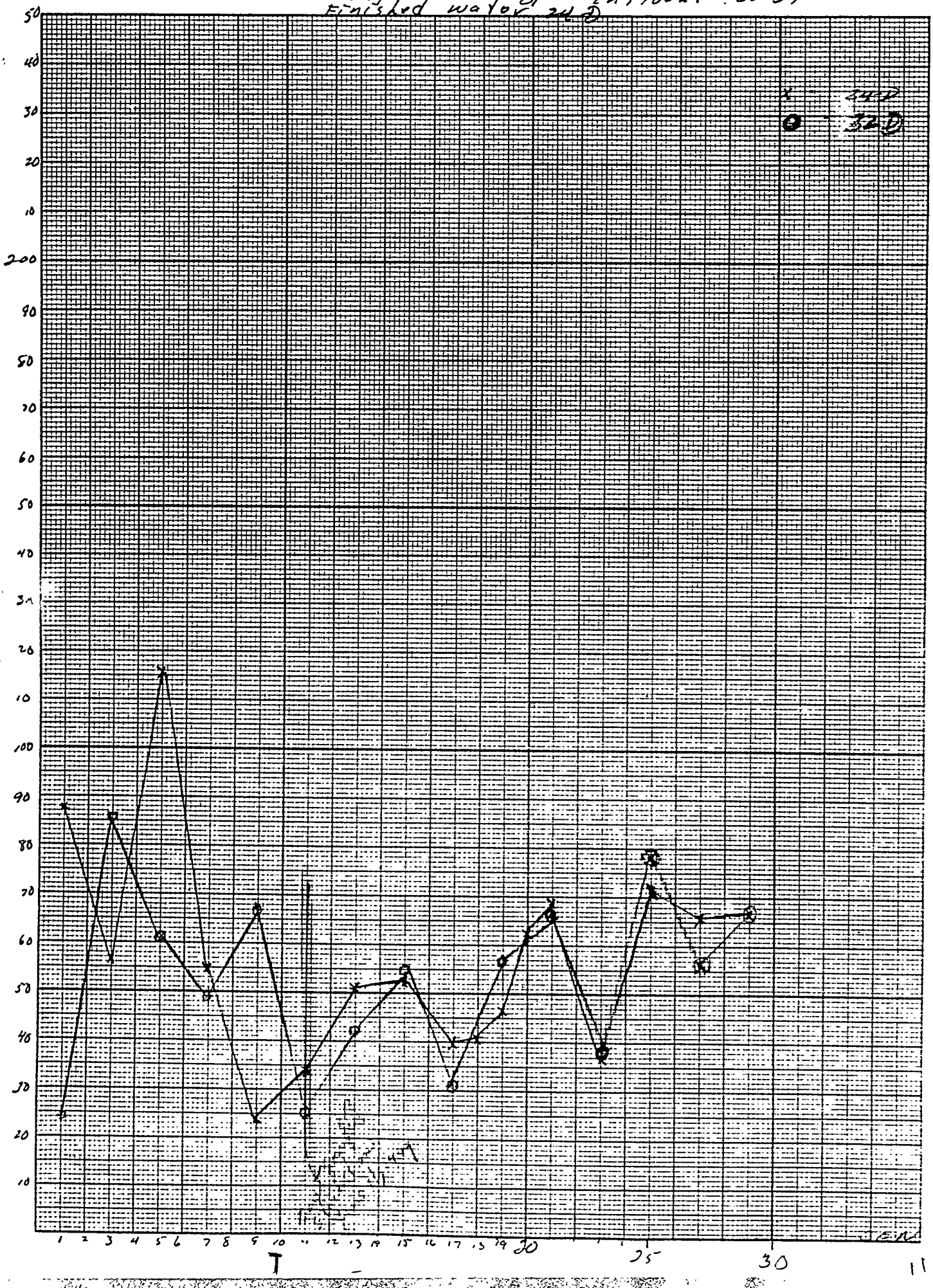
9

K-1515 Water Treatment Plant

Comparison of Influent (32-D) with Finished Water (24-D)



K-1515 water Treatment Plant
comparison of influent (32-D) with
Finished water 24-D



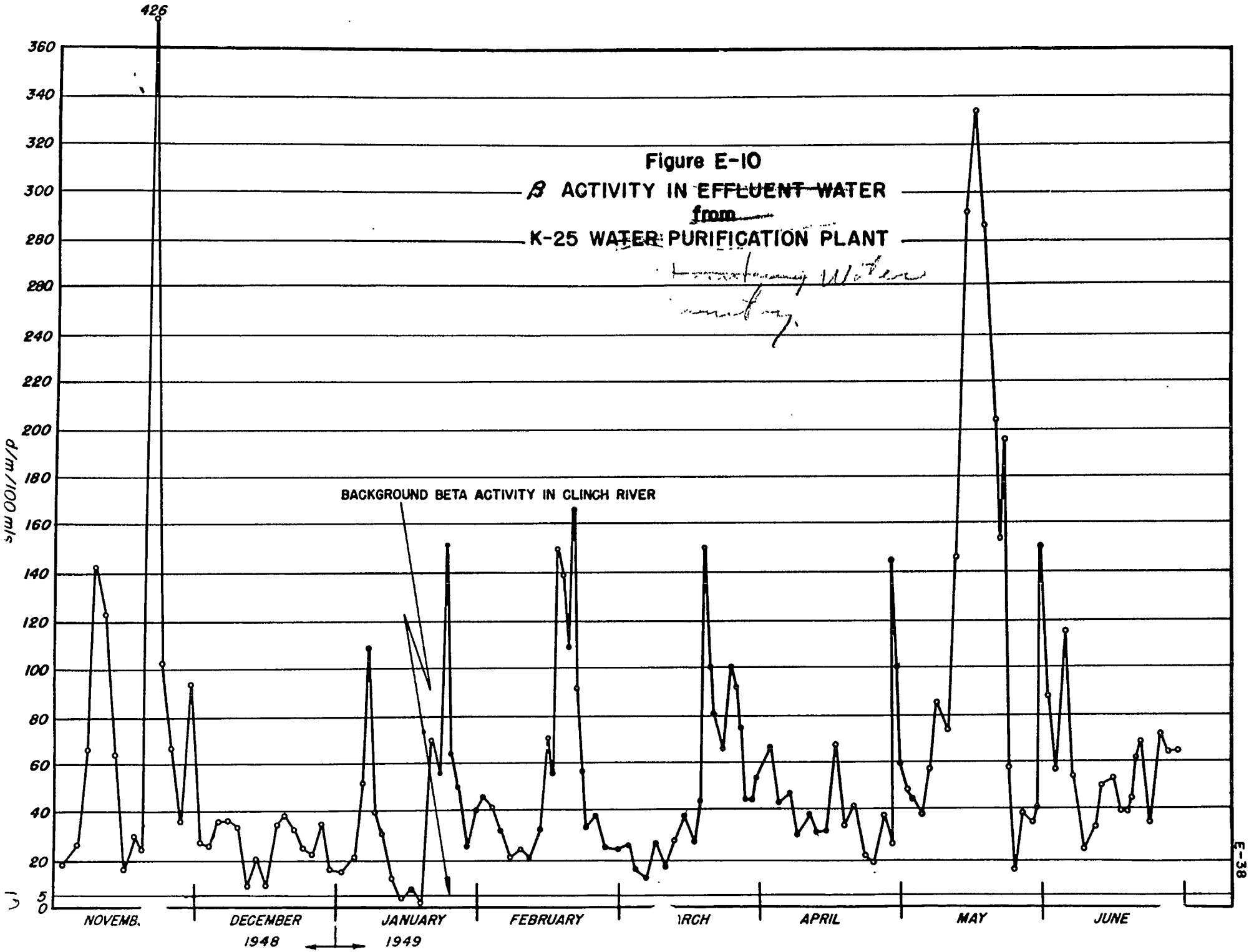


Figure E-10

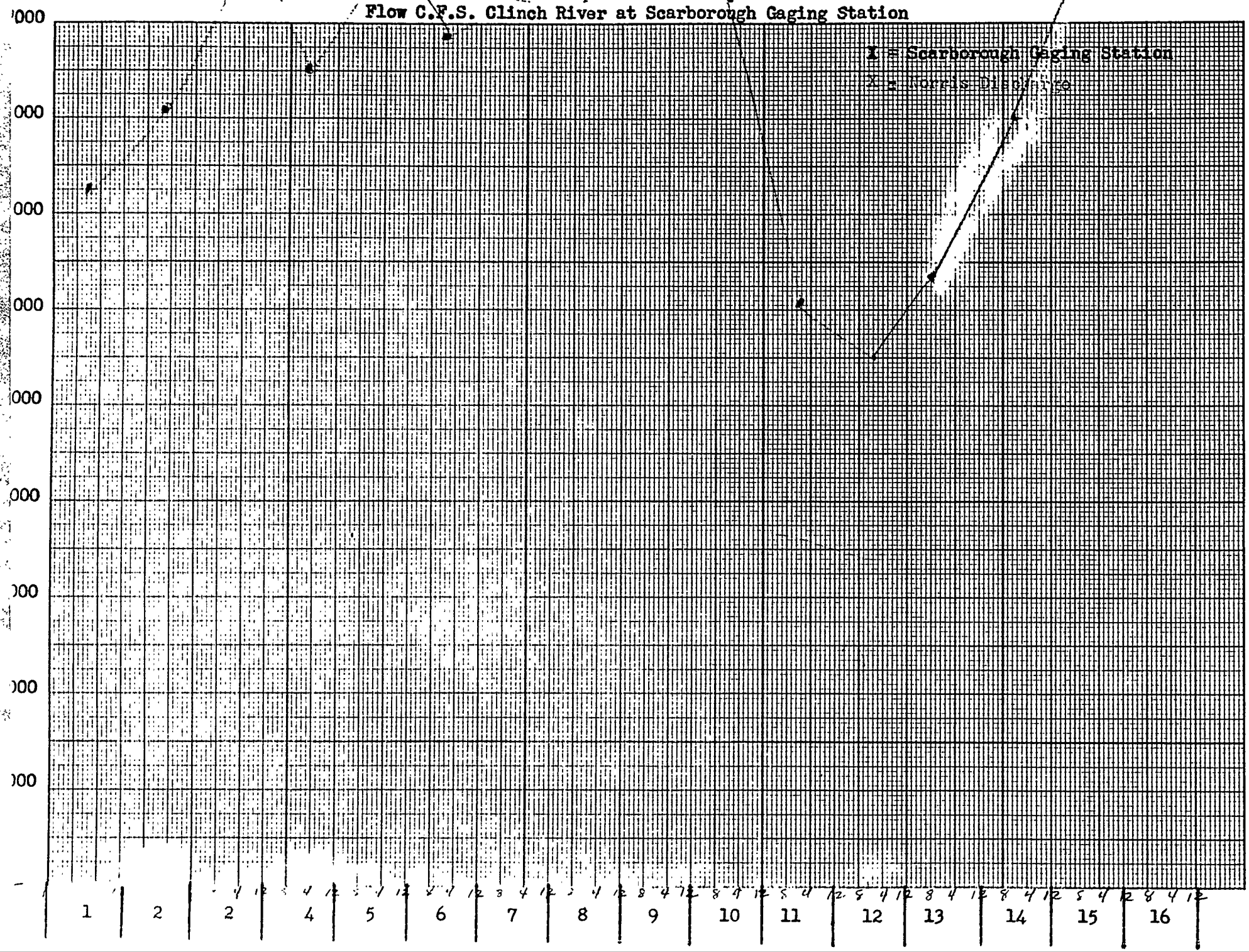
β ACTIVITY IN ~~EFFLUENT WATER~~ ~~from~~ K-25 ~~WATER~~ PURIFICATION PLANT

Laundry Water

NO 341 M DIETZGEN GRAPH PAPER
MILLIMETER
EUGENE DIETZGEN CO.
MADE IN U.S.A.

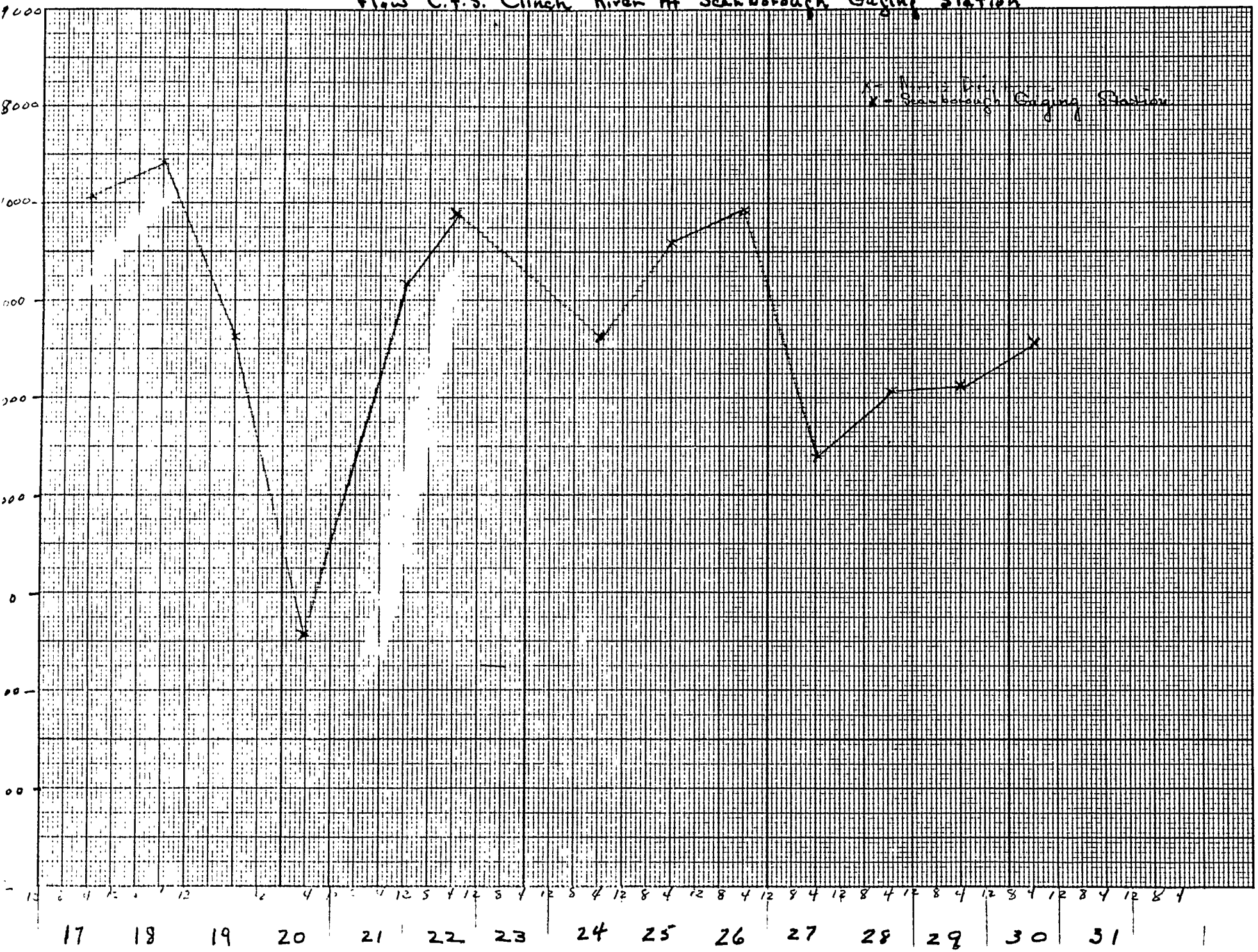
DECEMBER, 1949

Flow C.F.S. Clinch River at Scarborough Gaging Station



November, 1949

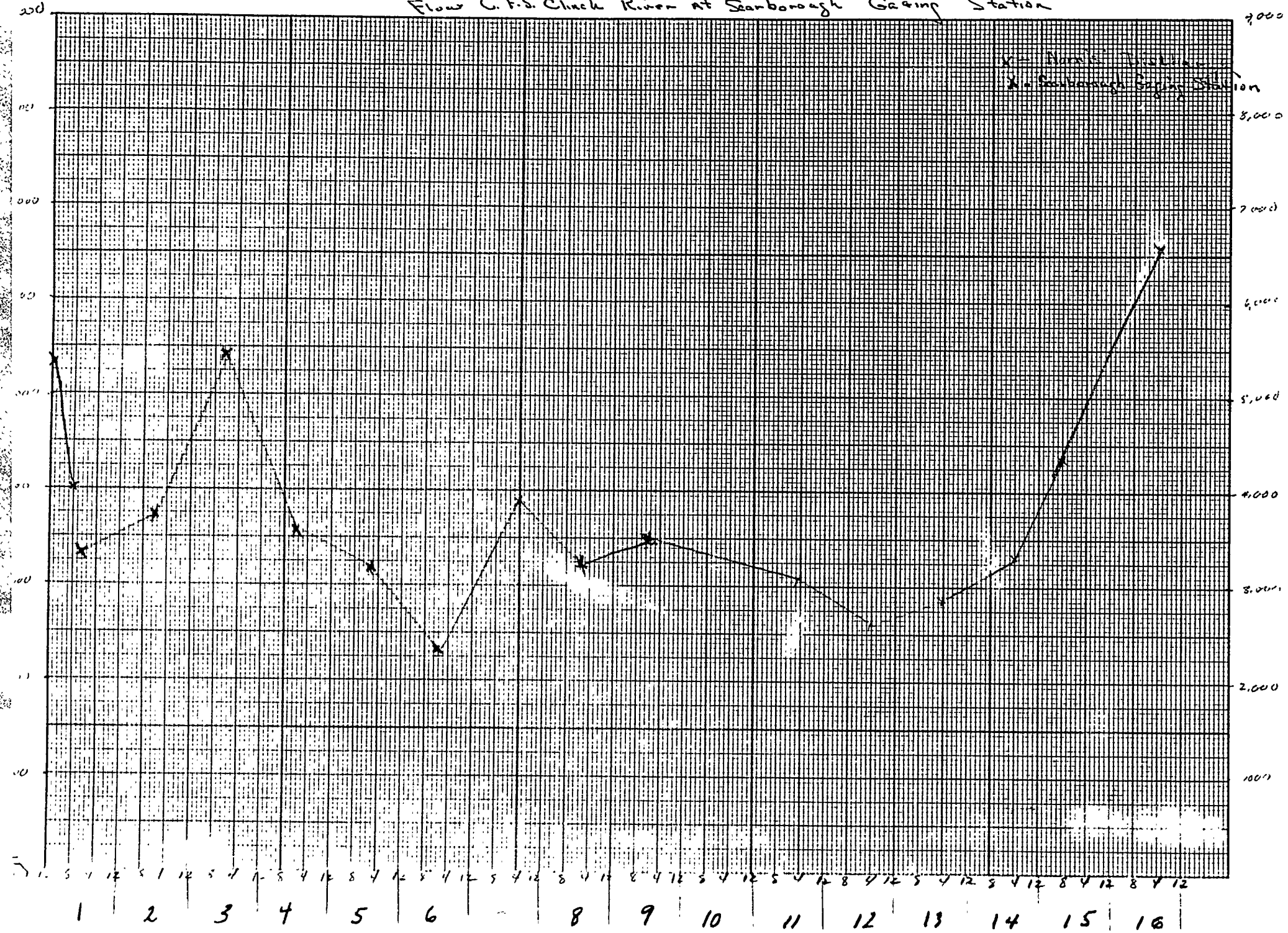
Flow C.F.S. Clinch River At Scarborough Gaging Station



NO. 341M DIETZGEN GRAPH PAPER
MILLIMETER
EUGENE DIETZGEN CO.
MADE IN U. S. A.

November, 1949

Flow C.F.S. Clinch River at Scarborough Gaging Station

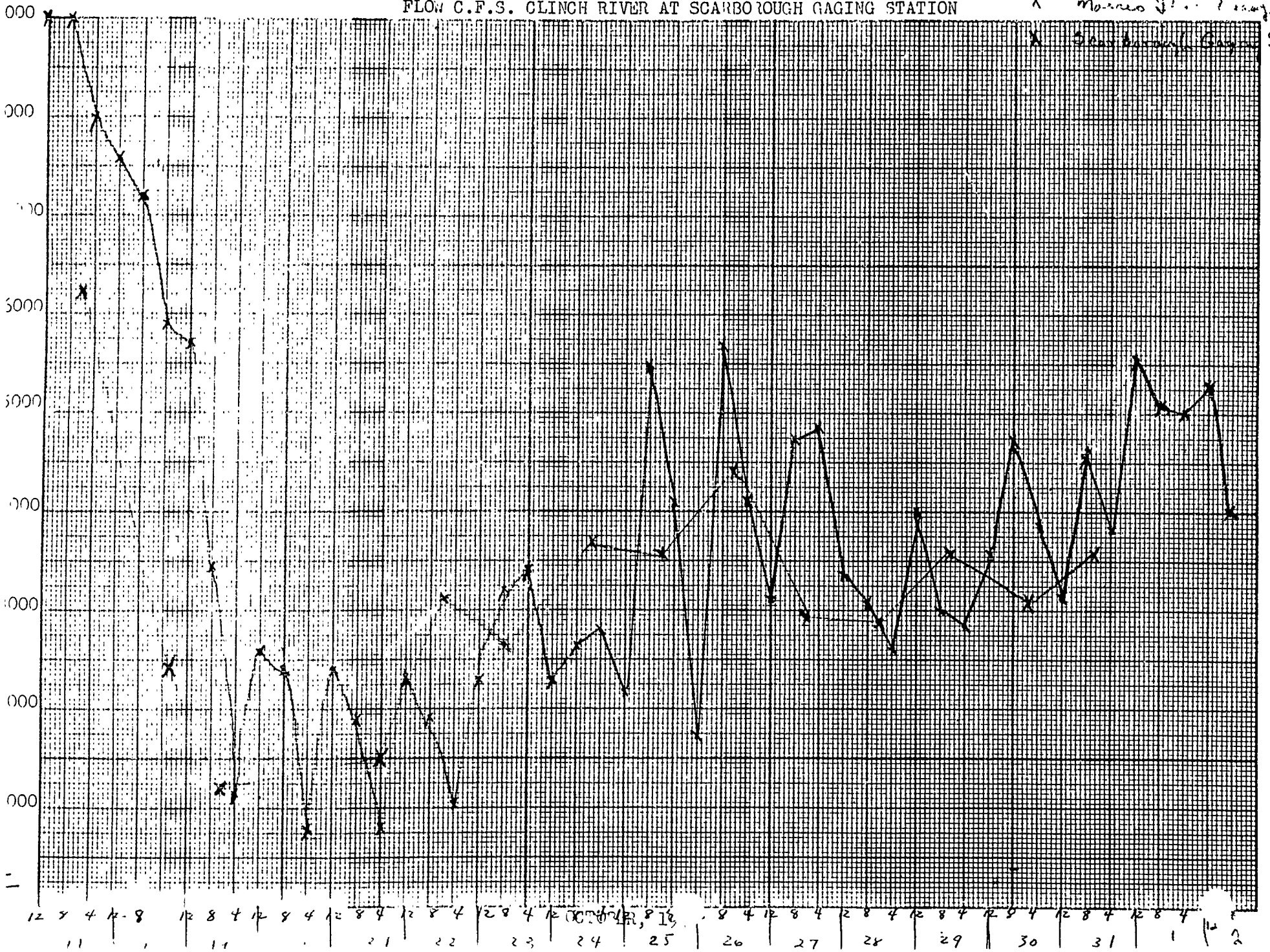


NO 340-M DIETZGEN GRAPH PAPER
MILLIMETER
EUGENE DIETZGEN CO
PRINTED IN U.S.A.

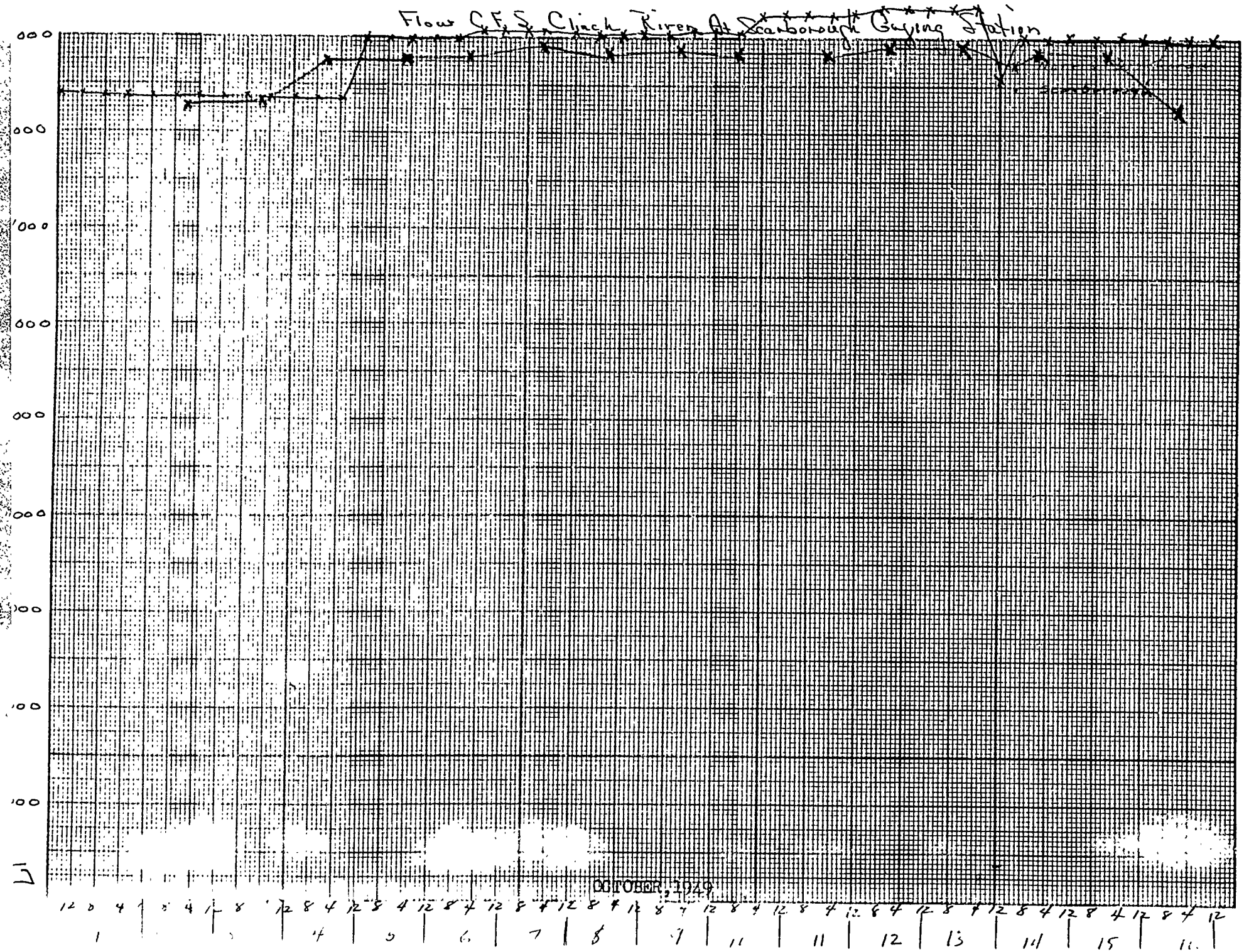
FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION

X Morris D. Pringle

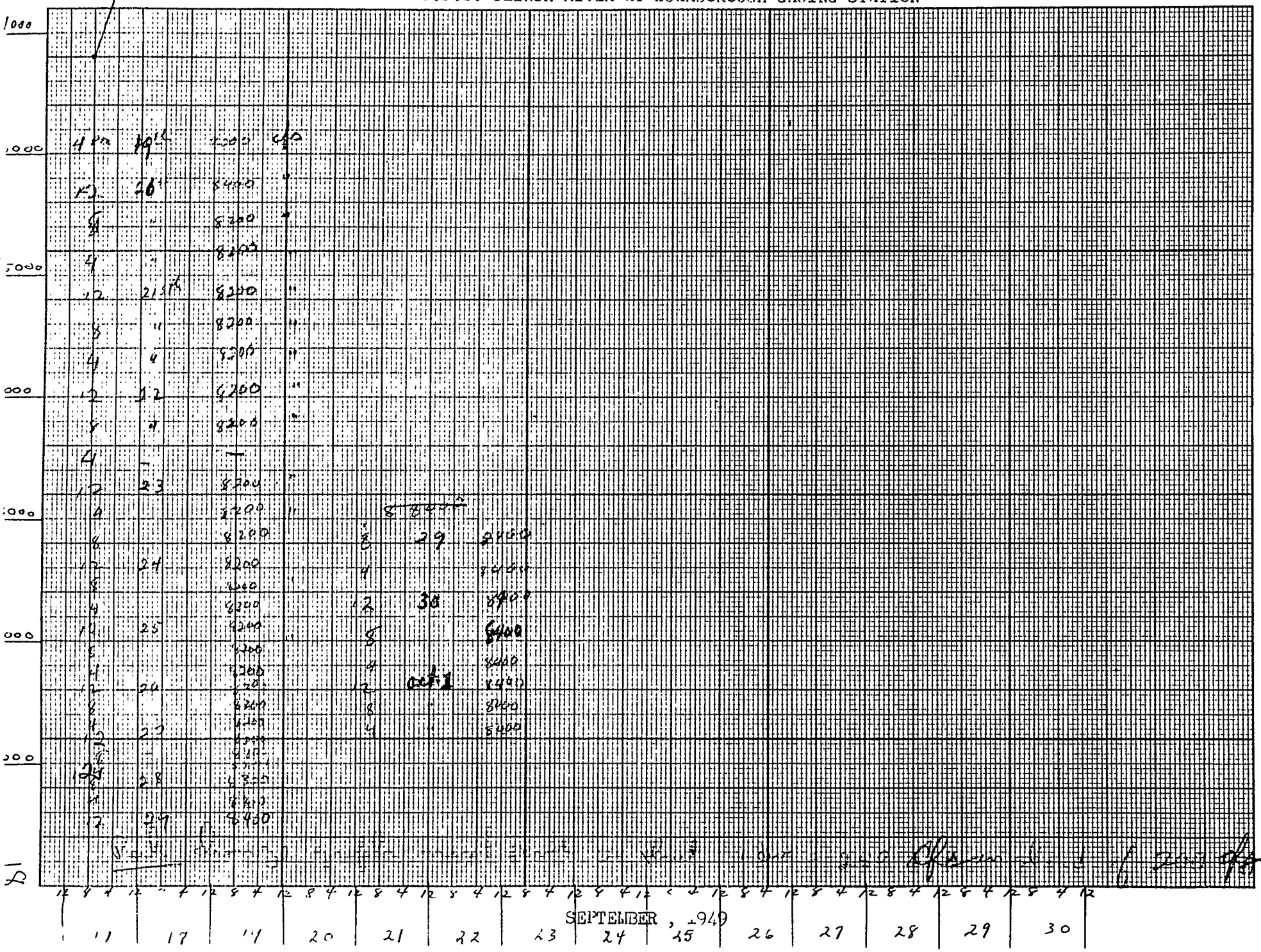
X Scarborough Gaging Station



340-M DIETZGEN GRAPH PAPER
MILLIMETER
EUGENE DIETZGEN CO.
PRINTED IN U.S.A.

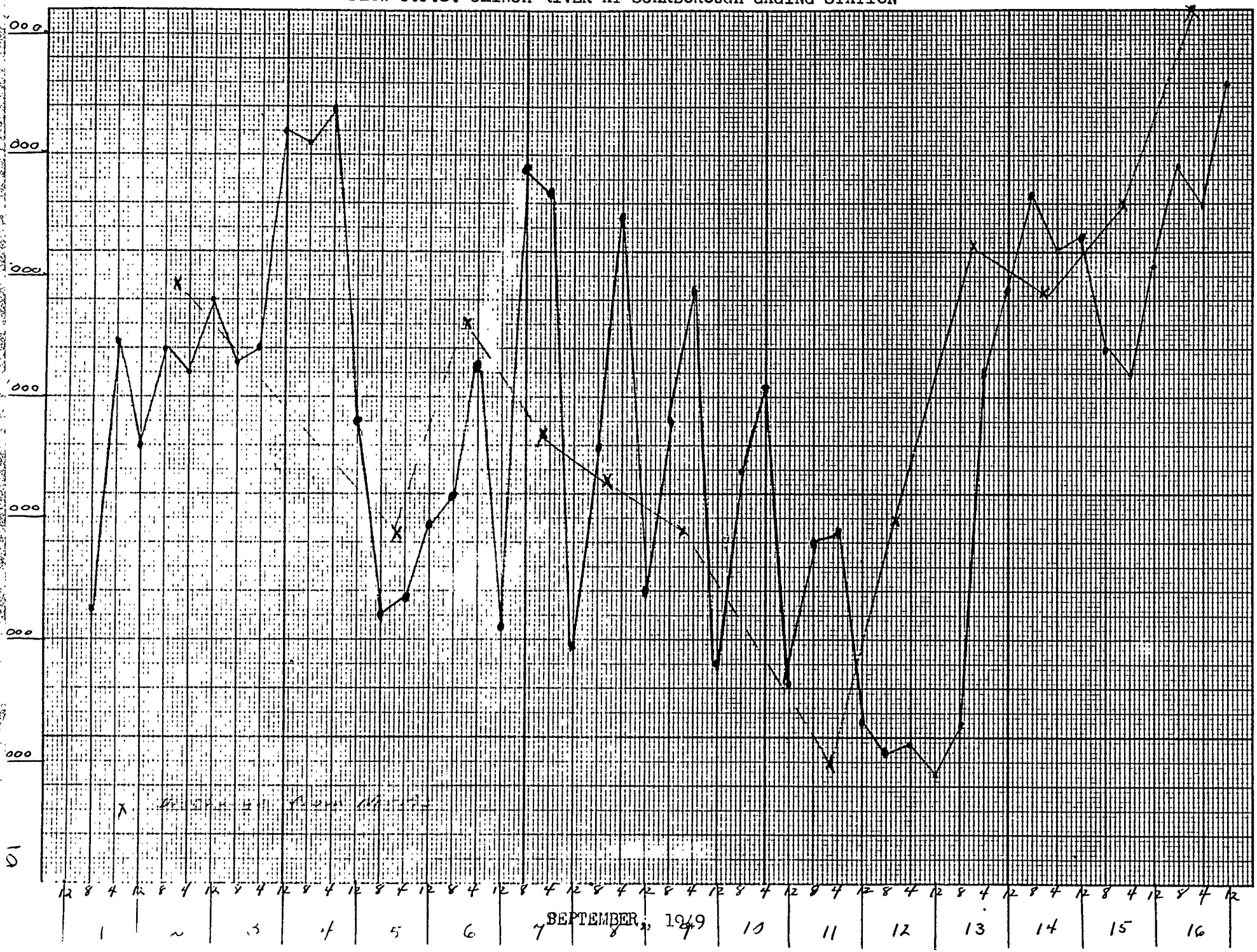


FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION



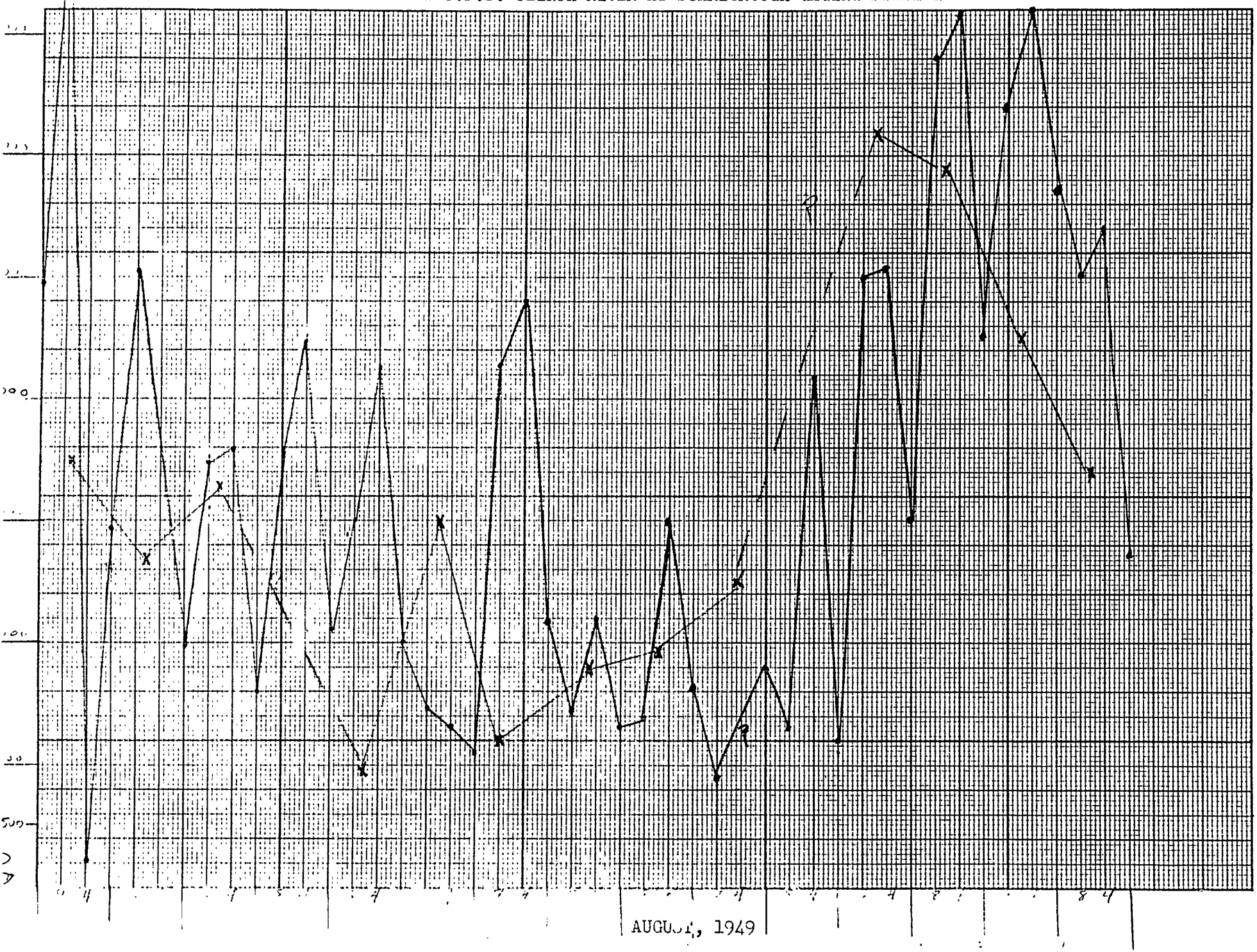
MILLIMETER
EUGENE DIETZGEN CO.
MADE IN U. S. A.

FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION



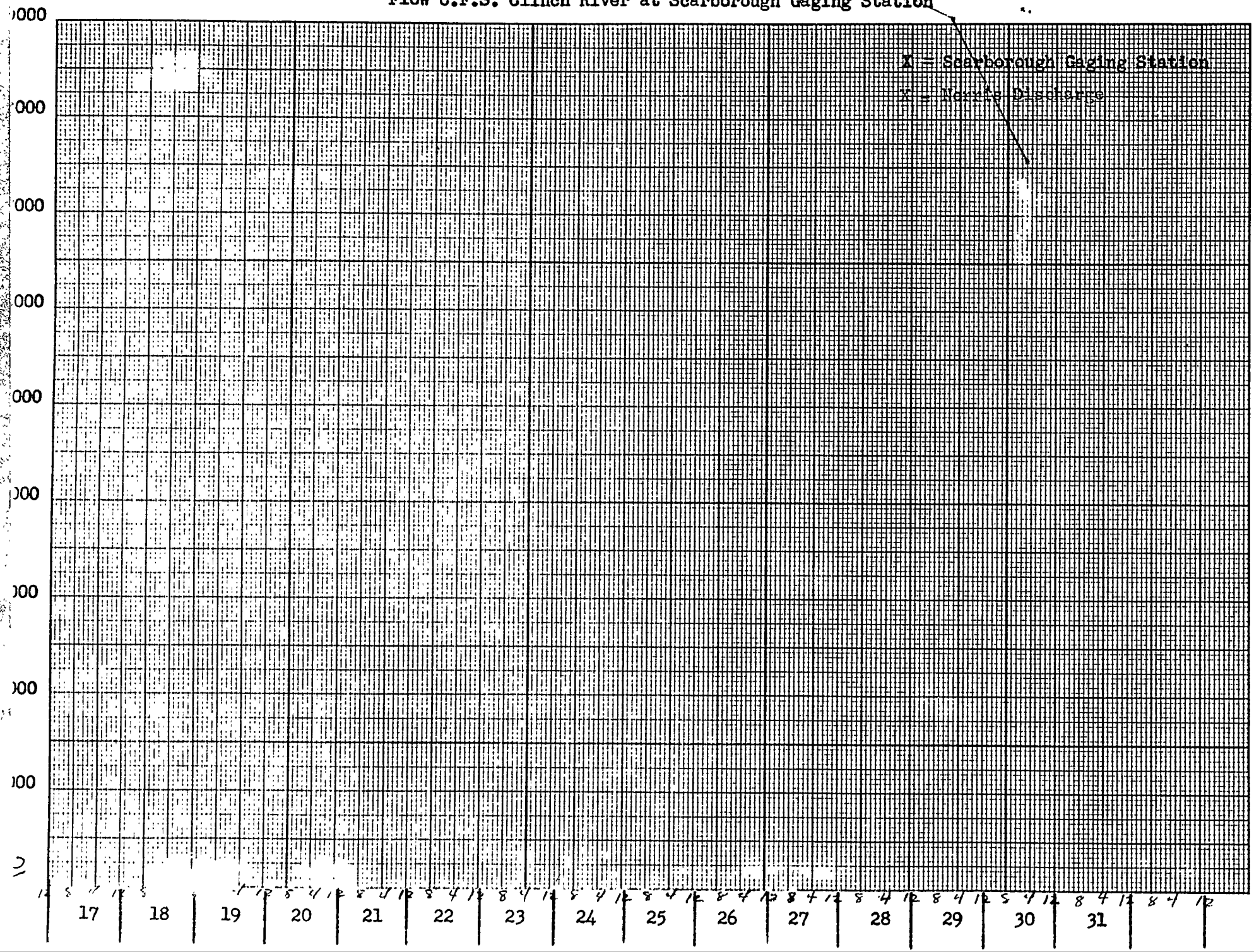
SEPTEMBER, 1949

FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION

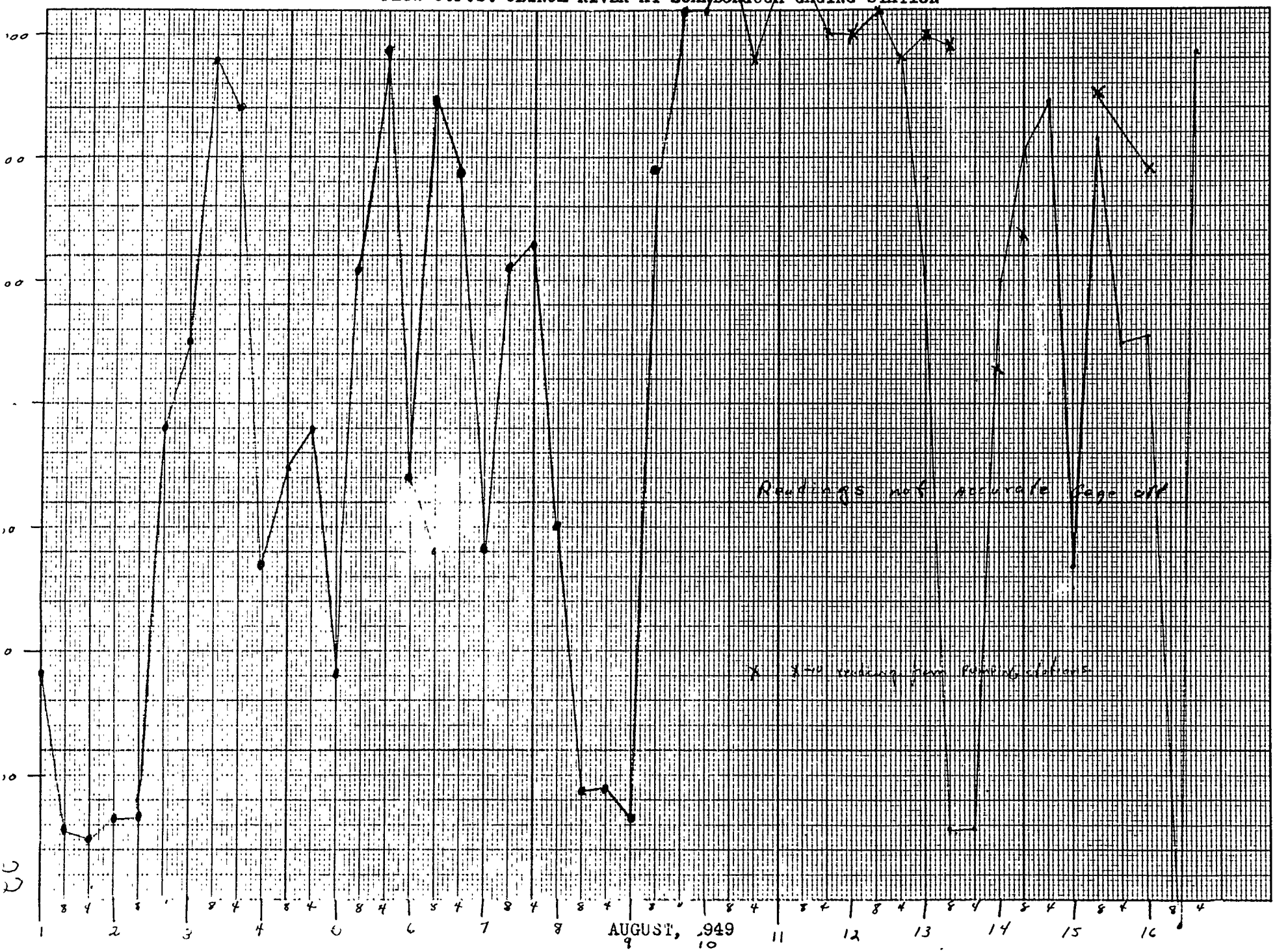


DECEMBER, 1949

Flow C.F.S. Clinch River at Scarborough Gaging Station

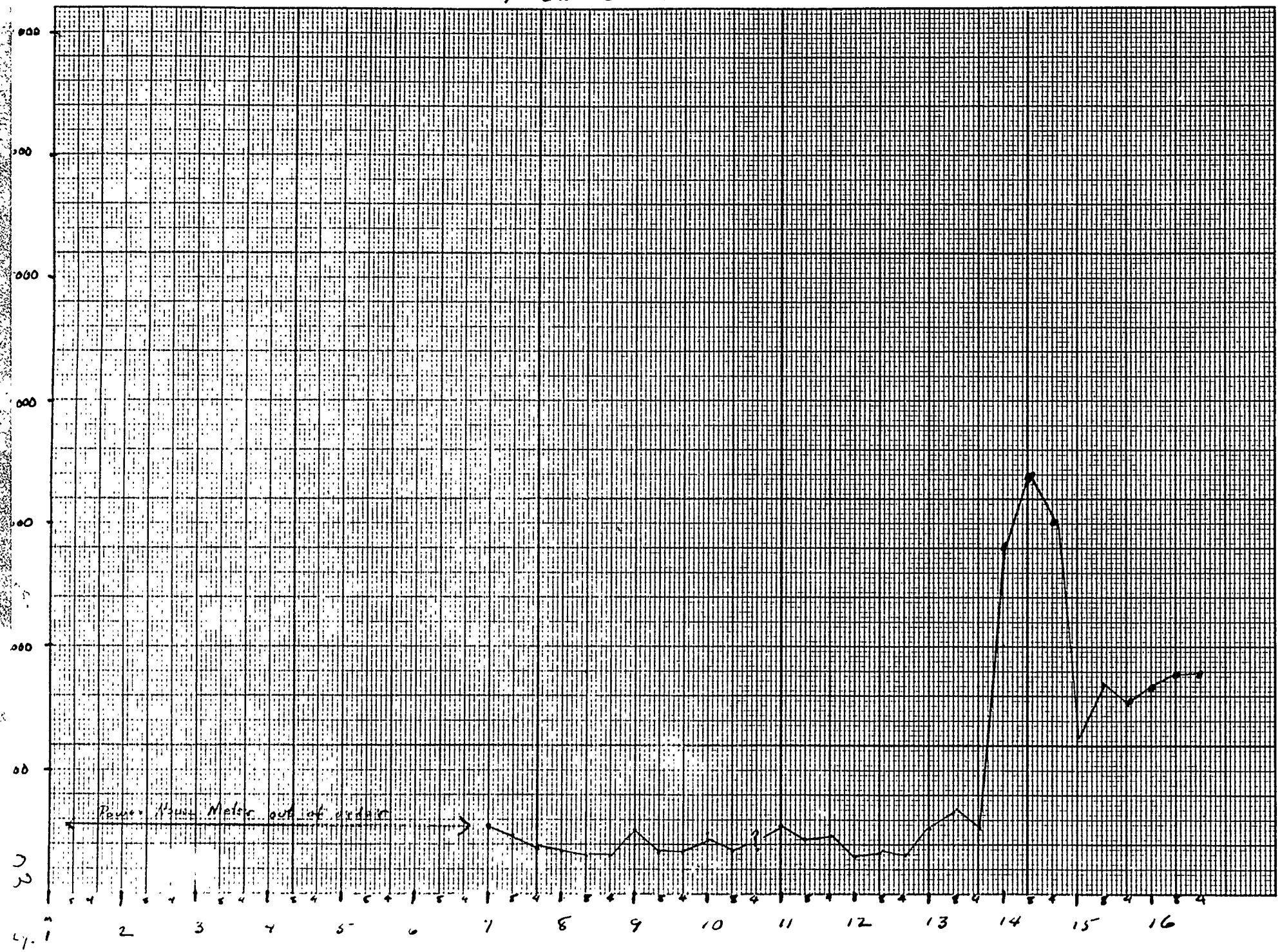


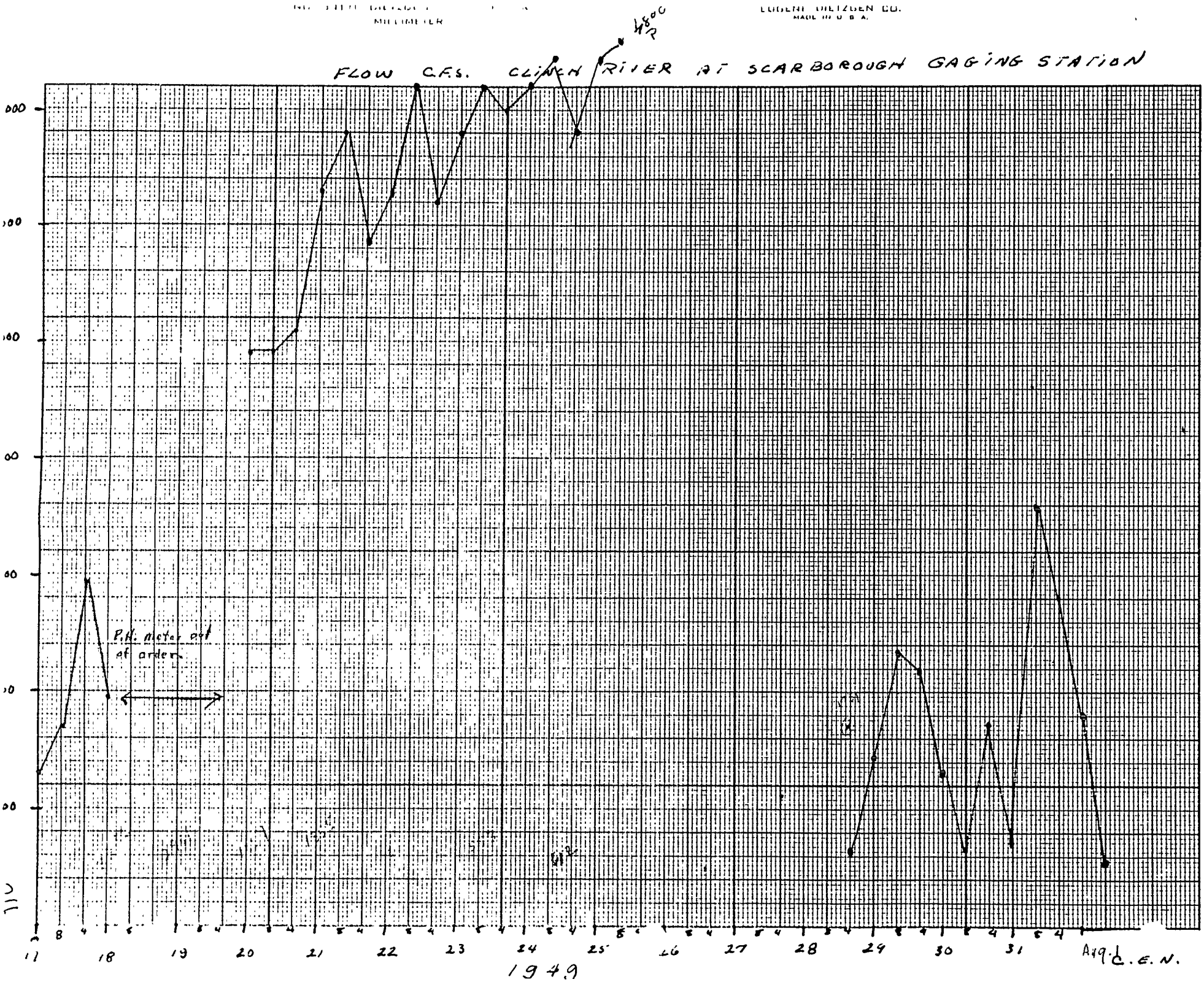
FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION



MILLIMETER
EUGENE DIETZGEN CO
MADE IN U.S.A.

FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION





FLOW C.F.S. CLINCH RIVER AT SCARBOROUGH GAGING STATION
4800 P
P.H. meter out of order
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
Aug. 1
C.E.N.
1949

No Positive Samples

CATION	Number of Samples since.		Max U PPB.	calculated. Max α activity. Natural U	20% En
1 W	Oct. 47 67	(37)	12	8.16×10^{-9}	7.7×10^{-8}
29 W	24 8-6-48	(19)	16	10.9×10^{-9}	10.2×10^{-8}
2 W	7 (11-13-47 Disc 4-7-48)	(3)	2	1.36×10^{-9}	1.3×10^{-8}
6 W	4-22-48 48	(20)	11	7.49×10^{-9}	7.05×10^{-8}
8 W	11-12-47 - 2-7-49. 15	0	0	—	—
9	15	0	0	—	—
10 W compare 21 Where	7-12-48 35	0	0	—	—
11 W	10-21-47 73	(6)	5	3.4×10^{-9}	2.9×10^{-8}
12 W.	10-20-47 40	(1)	3	2.04×10^{-9}	1.9×10^{-8}
13 W.	10-23-47 141	(2)	1	0.7×10^{-9}	$.7 \times 10^{-8}$
14 W	Oct 47 72	(30)	120	8.16×10^{-8}	7.7×10^{-7}
W.	Oct 47 38	(6)	4	2.72×10^{-9}	2.9×10
16 W.	72	0	0	0	0

tion	Number Samples	No Positive Results	Max U. PPB	Max. Calculated α activity Natural	Enriched 20%
17 W K-25 K-33	Oct 47 39	1	2	1.36×10^{-9}	1.3×10^{-8}
20 W	Oct 47 69	0	0	0	0
21 W	Oct 47 40	36	800	5.45×10^{-7}	5.14×10^{-6}
22 W.	Oct 47 72	2	1	0.7×10^{-9}	0.7×10^{-8}
23 W	Oct 47 13	0	0	0	0
W th	207	4	50	3.4×10^{-8}	2.9×10^{-7}
24 W without	95	1	2	1.36×10^{-9}	1.3×10^{-8}
25 W.	11	0	0	0	0
26 W	12	4	40	2.7×10^{-8}	2.9×10^{-7}

Fluorides

	No Analysis	No Exc	Max
10 W	63	1	.3
12 W	31	0	0
13 W.	135	3	.3
16 ~~[illegible]~~	72	0	0
20 W.	56	0	0
1 W.	25	1	.9

Amounts of Chemicals added to Raw water at K-1515 — 8-11-49 end 2 month — 3 week 2 weeks

week ending		white alum lbs	white alum ppm	lbs H_2O treated	Black Alum lbs	Black Alum ppm	Pre Cl_2 ppm
June	15	2140	11.1	192,000,000	840	4.4	1.92
	22	1924	10.9	177,000,000		4.8	2.14
	29	2398	12.2	195,000,000		4.2	2.45
July	6	2835	10.4	232,000,000		3.1	2.69
	13	2287	9.3	246,000,000		3.4	2.73
	20	4923	16.6	258,000,000		3.8	2.75
	27	4854	19.1	254,000,000		3.3	2.[illegible]
Aug	3	2270	10.0	227,000,000		3.7	2.[illegible]

$\frac{2140}{X} \times 1{,}000{,}000 = 11.1$

$X = \frac{2140 \times 1{,}000{,}000}{11.1}$

Assume there is as much U in Black as in white alum. 1/2 ppm.

June 15	.0015	lbs U.
June 22	.0014	lbs U
June 29	.0017	lbs U
July 6	.0018	lb. U.
July 13	.0016	lb U.
July 20	.0029	lb U
July 27	.0028	lb U
Aug 3	.0011	lb U
	.0148	lb. U.

2140
840
2980

$\frac{2980 \times .5}{1000{,}000}$

1924
840
2764

4923
840
5763

2398
840
3338

4854
840
5694

2835
840
3675

2287
840
3127

Line will give an estimate of water in sludge.

Set Basins drained about once each 2 months.

#1	210,000	gal.
#2	210,000	gal.
#3	235,000	gal.
	655,000	gal

655,000 x 20% = 131,000 gal of sludge

est. sludge to be 75% water. by wt.

$\frac{131,000 \times 11.2}{4}$ = 366,000 lbs mud (dry)

= 180 tons.

75 x 62.4
25 x 150

11.2 = $\frac{84}{7.45}$ lb/cu ft.

$\frac{366,000 \times 10}{1,000,000}$ = 3.6 lb. U. 11.2 lb./gal 8.34 lb/g

7.48 gal/c

assume 225,000,000 water treated in 8 weeks.

x 8

assume 2 PPB.

$\frac{1,800,000,000 \times 2}{1,000,000,000}$ = $\frac{3,600,000,000}{1,000,000,000}$

= 3.6 lbs

From this it appears that the amount of U. picked up in the river is negligible.

C.E.N.
8-11-49.

Suggest we pick up a sample of set basin from Bleasdale. also as comparison.

Dick Mo 8→ Bill Hollet Purchasing

5236 225 × 8 TCCA Sidener 89360

Assume 225,000,000 gal H_2O treated in 8 week.
average activity. 75 c/m/100 ml.

$$\frac{75}{2.16 \times 10^8} = 3.5 \times 10^{-7} \text{ NC/CC}$$

$2.25 \times 10^8 \quad 3.785 \times 10^3 \times 3.5 \times 10^{-7}$ NC.

30×10^4 NC $= 3 \times 10^5$ NC.

total activity from water.

est. 366,000 lb. mud.

assume 5000 c/m/gm

$$\frac{5,000}{3.6 \times 10^4 \times 60} = \frac{5 \times 10^3}{2.16 \times 10^4} = \frac{5 \times 10^3}{2.16 \times 10^6} = 2.3 \times 10^{-3} \text{ NC/gm}$$

$366,000 \times 454 \times 2.3 \times 10^{-3}$

$3.6 \times 10^5 \times 4.5 \times 10^2 \times 2.3 \times 10^{-3} = 37 \times 10^4$

$= 3.7 \times 10^5$ NC.

total activity from mud

WATER SURVEY LOCATIONS

Sample Number	Location	Remarks
24-D	Effluent from K-25 Water Purification Plant	Every other day including Saturday and Sunday U, Alpha, Beta. Be prepared to take daily sample in event of an emergency on telephone request from this office (F once a week). Conjunct & U, F
13-W	Clinch River five miles downstream of last K-25 effluent	Weekly U, Alpha, Beta pH and (F weekly mud once a month).
16-W	Drinking water spot check	Weekly U, Alpha, Beta, F, pH.
10-W	Clinch River immediately below S-50 Sewer outfall.	Weekly U, F Alpha (mud once a month).
12-W	Clinch River upstream of K-25.	Weekly U, F, Alpha, Beta, pH.
14-W	Sewage Disposal Plant Influent.	Weekly U only.
6-W	K-27 Ground drainage into Poplar Creek.	Weekly U only.
11-W	Poplar Creek Influent to K-25.	Weekly U, and Alpha, Beta pH.
22-W	Poplar Creek immediately before junction with Clinch River.	Weekly roving sample U, Alpha Beta pH.
1-W 29-W	Poplar Creek Inlet NE of K-303-8. Ditch at W end of holding pond.	Sample Points 1-W and 29-W to be alternated weekly U and Alpha.
20-W	Cafeteria cooking water.	Weekly U, Beta, Alpha pH.
21-M	S-50 Sewer outfall.	Monthly U only.
15-M	Sewage Disposal Plant Effluent.	Monthly U only.
17-Y-25	K-25 Recirculating Water.	Yearly, U, Alpha.
17-Y-27	K-27 Recirculating Water.	Yearly, U, Alpha.
8-M	Hot Scrap Yard Drainage into Clinch River at inlet NW of Gallaher Gate.	Monthly U, Alpha.
9-M	Clinch River West of Hot Scrap Yard.	Monthly U only.
23-M	Ground water at Sludge Pit.	Monthly U only.
25-Y	Clinch River above Elza.	Yearly U, Alpha, F.
26 & 27-M	Drainage from Labs A, B, C and D.	Monthly U, Beta, Alpha

WATER SURVEY LOCATIONS

(CONT'D)

Sample Number	Location	Remarks
13-M-E	Bottom mud from 13-W sample point Clinch River five miles downstream of K-25.	Monthly U, F, Alpha.
10-M-E	Bottom mud at 10-W sample point Clinch River below S-50 Sewer outfall.	Monthly U, F, Alpha
15-M-E	Sewage Disposal Plant Sludge.	Take one sample of each fresh batch U, Alpha.
24-M-E	Sanitary Water Plant Sludge From Settling Basins.	Monthly U, Alpha, Beta.
30-W	K-1004-J "Normally Cold" drum before dumping.	Alpha, Beta. Report results to D. M. Lang and J. C. Barton, in addition to usual distribution.

Weather Observations

Conversation with Dr. Setter at X-10 informs me that 1.42" of rain fell between 4:30 PM 3-17-49 and 8:00 AM 3-18-49. The Dam at White Oak Creek overflowed at 4:30 AM 3-18-49. started 12 hr. sampling. C.E. Newlon 3-18-49

Conversation with Cattrell at X-10. 0.8" water fell between 4:00 AM and 7:00 AM 3-25-49. at 9:00 AM Dam lacked 1½" from overflow

C. E. Newlon 3-25-49

Called Stoddard and he will sample 12 hrs starting now and go back to regular schedule 3-27-49. Cw.

4-27-49 Cattrell expects 1½" rain this evening and dam may overflow. ~~[illegible]~~

4-28-49 Notified Stoddard to take additional samples Morton reports that dam overflowed 12:00 AM [illegible] and at 3:00 AM reached 9" overflow. at 8:00 AM was 6" overflow. 2" rain fell between 6 PM + 12 PM 4-27-49.

4-29-49 Continued 24 hr sampling Sat + Sun.

5-2-49 went back to normal sampling period

LOCATION Mud from Poplar Creek Inlet N.E. of 313-8

SAMPLE NO. 1 ME

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
8/19/49	9:20 AM	7.50 mc/gm.		—	102		Calculated on basis of 1 gm. dry wt.
9/2/49	2:00 P.M.	10.00 mg/gm.		—	0		"
10/5/49	10:00 A.M.	7.50 mg/gm.		—	120		"
11/7/49	9:00 A.M.	7.5 mg/gm.		—	112		"
12/6/49	3.00 P.m.	10.00 mg/gm.		—	177		"

Poplar Creek Inlet, Northeast of K-303-8 ******* Sampling Location & Plot Reference Plan

1W

Date	Time	Uranium/ppb	Fluoride/ppm	Counts per Minute Alpha	Beta	Ph	Remarks
8/20/49	10:05 AM	2	—	—	—	—	
7/18/49	3:15 PM	1	—	—	—	—	
7/6/49	9:50 A.M.	0	—	—	—	—	
8/1/49	2:00 P.M.	8	—	—	—	—	
8/15/49	12:30 P.M.	2	—	—	—	—	
8/30/49	3:35 P.M.	1	<0.2	—	—	—	

Poplar Creek well, W. E. 8, R-3050
1W

237

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile alpha	Beta	PH	Remarks
7/12/48	3:20PM	0	–	–	–		
7/19/48	10:45AM	0	–	–	–		
7/26/48	10:47AM	0	–	–	–		
8/2/48	1:35PM	0	–	–	–		
8/9/48	10:10AM	0	–	–	–		
8/16/48	1:00PM	0	–	–	–		
8/23/48	10:40AM	0					
8/1/48	10:10AM	0	–	–	–		
9/7/48	10:30AM	0	–	–	–		
9/13/48	10:29AM	1	–	–	–		
9/20/48	9:45AM	2	–	–	–		
9/27/48	10:05AM	3	–	–	–		
10/4/48	10:20AM	3	–	–	–		
10/11/48	10:05AM	2	–	–	–		
[illegible]/48	10:00AM	0	–	–	–		
[illegible]/25/48	10:05AM	5	–	–	–		
[illegible]48	1:30PM	3	–	–	–		
11/3/48	8:55AM	3	–	–	–		
11/10/48	9:55AM	5	–	–	–		
11/19/48	12:55PM	0	–	–	–		
11/22/48	12:40PM	0	–	–	–		
11/29/48	9:35AM	0	–	–	–		
12/13/48	12:55PM	0	–	0.9 ± 1.1	–	–	
12/27/48	3:28PM	2	–	2.9 ± 1.1	–	–	
1/3/49	2:25PM	4	–	3.2 ± 1.1	–	–	
1/17/49	2:20PM	4	–	3.6 ± 1.1	–	–	
2/1/49	1:20PM	2	–	0.9 ± 1.1	–	–	
2/14/49	10:16AM	2	–	1.2 ± 1.1	–	–	
2/23/49	10:00AM	2	–	1.8 ± 1.1	–	–	
3/7/49	10:07AM	0	–	1.8 ± 1.1	–	–	
3/21/49	2:10PM	2	–	1.9 ± 1.1	–	–	
[illegible]	1:45 [illegible]	2	–	0.9 ± 1.1	–	–	
[illegible]/8/49	2:30PM	0	–	1.4 ± 1.1	–	–	
[illegible]5/49	3:45PM	5	–	–	–	–	
5/9/49	12:55PM	6	–	–	–	–	
5/23/49	3:20PM	0	–	–	–	–	
6/6/49	3:00PM	1	–				

Poplar Creek inlet, northeast of K-303-8

1W

Sampling Location & Plot Reference Plan

Date	time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
0/28/47	10:50 AM	4	---	-			
/3/47	9:50 AM	4	---	-			
/11/47	10:45 AM	12	---	-			
/17/47	9:50 AM	0	---	-			
/24/47	1:30 PM	0	---	-			
/1/47	9:30 AM	0	--	-			
/10/47	2:55 AM	12	---	-			
/16/47	10:20 AM	4	--	-			
/22/47	10:15 AM	2	-	-			
/29/47	10:35 AM	2	-	-			
/9/48	9:30 AM	4	-	-			
/12/48	10:20 AM	4	-	-			
/19/48	10:35 AM	1	-	-	-		
/28/48	1:40 PM	2	-	-	-		
/2/48	2:40 PM	2	-	-	-		
/48	9:50 AM	0	-	-	-		
48	1:20 PM	1	-	-	-		
/23/48	1:20 PM	1	-	-	-		
3/1/48	9:50 AM	0	-	-	-		
/8/48	10:45 AM	6	-	-	-		
3/15/48	9:15 AM	0	-	0.1 ± 0.5	-		
/22/48	10:10 AM	1	-	-	-		
4/1/48	1:20 PM	3	-	-	-		
4/6/48	10:30 AM	2	-	-	-		
4/12/48	10:15 AM	0	-	-	-		
4/19/48	9:20 AM	0	-	-	-		
4/26/48	9:40 AM	0	-	-	-		
5/3/48	10:40 AM	0	---	---	---		
5/10/48	10:53 AM	1	-	-	-		
5/17/48	9:15 AM	0	-	-	-		
/24/48	9:50 AM	0	-	-	-		
/1/48	9:35 AM	0	-	-	-		
/8	1:15 PM	0	-	-	-		
/48	1:15 PM	1	-	-	-		
/21/48	10:20 AM	0	-	-	-		
/28/48	15:: 7 AM	2	-	-	-		
/6/48	2:20 PM	1	-	-	-		

Drainage from road S.W. of garage area
2W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile alpha	Beta	PH
1/12/47	1:40 PM	2	---	–		
12/2/47	10:40 AM	2	–	–		
1/13/48	3:45 PM	0	–	–	–	
2/2/48	1:20 PM	0	–	–	–	
3/8/48	4:00 PM	0	–	–	–	
4/7/48	3:00 PM	1	–	–	–	
2/18/49	3:36 PM	–	–	–	14 ± 21	*

* This sample was not authorized by Health Physics Section
C. E. M. 3-29-49

LOCATION Mud from Poplar Creek opposite Blair Gate.

SAMPLE NO. 6-M-E

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Beta	PH	Remarks
10/5/49	10:15 A.M.	0.40 mg/gm.		–	0	–	Results per gm per dry wt

Sampling Location: K-27 drainage into Poplar Creek
Plot Plan Reference # 6-W

Sampling Location and Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Mile Alpha	Beta	PH	Remarks
4/22/48	1:50PM	0	–	–	–	–	
4/27/48	3:00 PM	0	–	–	–		
5/7/48	10:35AM	0	–	–	–		
5/12/48	1:30AM	0	–	–	–		
5/18/48	12:35PM	0	–	–	–		
5/25/48	10:10AM	0	–	–	–		
6/2/48	4:05PM	0	–	–	–		
6/11/48	1:00PM	0	–	–	–		
6/15/48	1:37PM	0	–	–	–		
6/21/48	10:45AM	0	–	–	–		
6/28/48	1:30 PM	0	–	–	–		
7/6/48	3:30PM	0	–	–	–		
7/15/48	2:45PM	0	–	–	–		
7/21/48	2:35PM	0	–	–	–		
7/26/48	12:40PM	0	–	–	–		
[illegible]/2/48	2:00PM	11	–	–	–		
[illegible]/48	10:50 AM	0	–	–	–		
8/17/48	8:29AM	0	–	–	–		
8/23/48	10:25 AM	1					
9/1/48	12:20 PM	2	–	–	–		
9/7/48	10:40AM	4	–	–	–		
9/13/48	10:35AM	0	–	–	–		
9/20/48	9:55AM	1	–	–	–		
9/27/48	10:20AM	0	–	–	–		
10/4/48	10:45AM	2	–	–	–		
10/11/48	10:20AM	2	–	–	–		
10/18/48	10:10AM	0	–	–	–		
10/25/48	3:00PM	1	–	–	–		
11/1/48	2:43PM	0	–	–	–		
11/3/48	9:15AM	0	–	–	–		
11/10/48	10:25AM	2	–	–	–		
11/16/48	1:15 PM	2	–	–	–		
[illegible]/48	12:55PM	5	–	–	–		
[illegible]/48	9:45 AM	1	–	–	–		
12/6/48	3:30 PM	0	–	–	–	–	
12/13/48	1:30 PM	10	–	–	–	–	
12/20/48	1:05PM	0	–	–	–	–	

K-27 drainage into pipeline
6W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	PH	Remarks
12/27/48	3:40PM	1	–	–	–	–	
1/3/49	3:00 PM	3	–	–	–	–	
1/10/49	3:35PM	0	–	–	–	–	
1/17/49	2:30PM	2	–	–	–	–	
1/24/49	1:35PM	2	–	–	–	–	
2/1/49	10:45AM	1	–	–	–	–	
2/7/49	1:40PM	0	–	–	–	–	
2/14/49	10:30AM	0	–	–	–	–	
2/21/49	10:22AM	0	–	–	–		
3/1/49	1:25PM	1	–	–	–	–	
3/10/49	12:50PM	3	–	–	–	–	Sample taken 5 hrs. after Heavy Rain
3/18/49	8:45AM	0	–	–	–	–	
3/22/49	1:55PM	1	–	–	–	–	Sample taken 6 hrs after a rain
3/31/49	9:25AM	1	–	–	–	–	
4/5/49	9:30AM	2	–	–	–	–	Rain preceed. & during sample pt.
4/11/49	4:05PM	3	–	–	–	–	Rain immediately before sample taken
4/2/49	10:20AM	1	–	–	–	–	"
4/27/49	1:30 PM	2	–	–	–	–	After Heavy rain
5/10/49	9:00AM	1	–	–	–	–	Taken immediately after a rain
5/24/49	4:00PM	1	–	–	–	–	After rain
6/16/49	10:30 AM	2	–	–	–	–	After a rain
6/28/49	9:00AM	1	–	–	–	–	

K-131 Drainage into Poplar Creek

6 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mls. alpha	Beta	PH	Remarks
0/21/47	1:20 PM	16	--	-			
0/28/47	2:30 PM	16	---	-			
/3/47	2:30 PM	16	---	-			
1/11/47	1:30 PM	2	---	-			
1/17/47	1:15 PM	4	---	-			
1/25/47	2:00 PM	4	---	-			
2/3/47	2:45 PM	8	---	-			
2/9/47	12:45 PM	8	---	-			
2/19/47	9:30 AM	4	--	-			
2/26/47	12:40 PM	6	-	-			
1/2/48	1:00 PM	8	-	-			
1/8/48	1:30 PM	8	-	-			
1/14/48	10:00 AM	4	-	-	-		
1/19/48	11:00 AM	130	-	-	-		
1[illegible]/48	1:15 PM	6	-	-	-		
[illegible]48 2/1[illegible]	3:00 PM	16	-	-	-		
[illegible]48 2/1[illegible]	1:30 PM	1	-	-	-		
2/19/48	9:00 AM	0	-	-	-		
2/23/48	3:00 PM	0	-	-	-		
3/2/48	12:20 PM	0	-	-	-		
3/8/48	3:30 PM	0	-	-	-		
3/15/48	1:10 PM	0	-	-	-		
3/15/48	1:15 PM	0	-	-	-		
/22/48	1:40 PM	0	-	-	-		
3/30/48	1:00 PM	0	-	-	-		
4/6/48	10:45 AM	1	-	-	-		
4/12/48	4:00 PM	0	-	-	-		

Drainage from Jones Scrap Yard
8M

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPM	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	pH	Remarks
10/18/48	1:10 PM	0	–	0.0 ± 1.1	–		
1/3/48	9:30 AM	0		0.5 ± 1.1			
1/18/49	9:50 AM	0	–	0.1 ± 1.1	–		
2/7/49	2:35 PM	0	–	0.1 ± 1.1	–		
3/18/49	9:00 AM	1	–	0.6 ± 1.1	–		Sample was taken 4 hrs after a rain
4/11/49	1:45 PM	0	–	0.2 ± 1.1	–		
5/24/49	3:00 PM	0	–	–	–	–	Sample taken approx. 2 hrs after rain
6/10/49	9:30 AM	0	–	–	–		Taken after a rain
7/13/49	9:15 AM	0	–	–	–		Results based on 1 mg/gm dry wt
8/3/49	9:25 AM	0	–	2.4 ± 1.1	40 ± 21		Sample taken after a rain.

Clinch River west of Jones scrap yard

9W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile Alpha	Beta	PH	
1/12/47	3:35PM	0	---	-			
2/2/47	10:00AM	0	-	-			
1/20/48	10:00AM	0	-	-	-		
2/16/48	2:45PM	0	-	-	-		
3/10/48	4:00PM	0	-	-	-		
4/1/48	10:30AM	0	-	-	-		
5/3/48	8:50AM	0	-	-	-		
6/2/48	10:20AM	0	-	-	-		
1/26/47	9:30AM	0	-	-	-		
7/10/48	10:05AM	0	-	-	-		
10/18/48	1:17PM	0	-	0.0±1.1	-		
10/11/48	10:30AM	0	-	0.1±1.1	-		
12/8/48	1:00PM	0	-	-	-		
1/18/49	9:55AM	0	-	-	-		
2/[illegible]/49	2:45PM	0	-	-	-		
[illegible]/18/49	9:10AM	0	-	-	-		Sample was taken 4 hrs after a [illegible]
[illegible]/49	1:55PM	1	-	-	-		
5/24/49	3:15PM	0	-	-	-		Sample taken approx 2 hrs. after rain
6/16/49	9:30AM	0	-	-	-		Taken after rain

Mud from Clinch River bottom at sampling position 10-W
10 ME

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min Per 100 mile Alpha	Beta	PH	
/25/48	1:30 PM	None detected	—	—	—		
/23/48	2:00 PM	Could not collect sample. River water level approx. ten feet above normal.					
/30/48	3:00 PM	No sample taken. Clinch R. above normal sampling level.					
/7/48	4:00 PM	"	"	"	"	"	
/13/48	2:30 PM	1000	61	0±1	—		
/18/48	1:30 PM	1500	61	1±2	—		
/25/48	9:00 AM	1000	56	2±3	—		
/1/48	12:00 PM	500	28.8	1±2	—		
/9/48	12:45 PM	300	64.1	1	—		
/21/48	1:10 PM	1,300	81.4	2	—		
/28/48	1:15 PM	400	93.6	0.5	—		
/14/48	2:30 PM	300	59.8	2	—		
/26/48	1:35 PM	1,000	49.2	0.0	—		
/12/48	2:00 PM	1,000	78.4	31±5	—		
4/15/48	1:35 PM	440	95	2.5±0.3	—		
/..../49	3:15 PM	0.4	38.0	1.8±0.3	—		
2/9/49	1:54 PM	0.5 ug/g.	54.8	3.6	—		
3/16/49	1:40 PM	0.06 ug/g	60.0	2.6±0.5 c/m/g	—		
4/19/49	1:40 PM	0.38 ug/gm	85.7	3.0±0.3			Results [illegible] on gram [illegible]
5/13/49	1:00 PM	0.59 ug/gm	—	7.4±0.8	55.8		Results per gm. dry wt.
6/9/49	12:35 PM	0.5 micrograms per gm.		6.9±0.5	2.9		"

Clinch River immediately below S-50 Sewer Outfall
10W

Date	Time	Uranium/PAB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
3/28/49	3:40PM	0	<0.2	0.0 ± 1.1	–	–	
4/4/49	10:00PM	0	<0.2	0.1 ± 1.1	–	–	
4/11/49	10:20AM	1	<0.2	0.2 ± 1.1	–	–	
4/18/49	12:35PM	0	<0.2	0.0 ± 1.1	–	–	
4/25/49	2:45 PM	0	<0.2	0.0 ± 1.6	–	–	
5/2/49	1:05PM	0	–	–	59 ± 24	–	
5/9/49	10:20AM	0	–	–	95 ± 38	–	
5/17/49	12:35PM	1	–	–	287 ± 115	–	
5/23/49	2:15PM	0	–	–	36 ± 29	–	
5/1-30/49	weekly Composite	–	<0.2	0.3 ± 1.6	–	–	
6/1/49	4:00PM	1	–	–	102		
6/6/49	12:52 PM	0	–	–	75 ± 43	–	
6/13/49	1:15 PM	0	–	–	42 ± 21	–	
6/20/49	10:50 AM	0	–	–	49 ± 29	–	
6/27/49	1:20 PM	0	–	–	54 ± 30	–	
6-6/30	Comp.	–	<0.2	0.6 ± 1.1	–	–	
7/18/49 ~~6/49~~	1:30 P.M.	0	–	–	–	–	
7/5/49	12:45PM	0	–	–	–	–	
7/11/49	1:00 P.M.	1	–	–	–	–	
7/25/49	1:30 P.M.	0	–	–	–	–	
8/1/49	1:40 P.M.	0	–	–	–	–	
8/8/49	12:45 P.M.	0	–	–	–	–	
8/15/49	10:40 A.M.	0	–	–	–	–	
8/22/49	1:18 P.M.	2	–	–	–	–	
8/30/49	3:15 P.M.	0	–	–	–	–	
10-M							
9/6/49	10:30 A.M.	0	–	–	–	7.6	Immed. at S-50 Sewer Outfall
10/4/49	1:00 P.M.	0	–	–	–	–	
11-28-49	9:00 A.M.	0	–	–	–	–	

Clinch River immediately above 3-00 sewer outfall
10W

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
7/12/48	2:00 PM	0	<0.2	0.5 ± 1.1	–		
7/19/48	3:15 PM	0	<0.2	0.3 ± 1.1	–		
7/26/48	1:35 PM	0	<0.2	0.3 ± 1.1	–		
8/2/48	2:35 PM	0	<0.2	1.1 ± 1.1	–		
/9/48	1:00 PM	0	0.2	1.4 ± 1.1	–		
/16/48	1:40 PM	0	<0.2	0.4 ± 1.1	–		
/23/48	9:30 AM	0	<0.2	0.2 ± 1.1			
9/1/48	8:55 AM	0	<0.2	0.0 ± 1.1	–		
/7/48	9:15 AM	0	<0.2	0.1 ± 1.1	–		
/14/48	8:22 AM	0	<0.2	0.2 ± 1.1	–		
/20/48	10:20 AM	0	<0.2	0.0 ± 1.1	–		
9/27/48	10:50 AM	0	<0.2	0.3 ± 1.1	–		
10/4/48	12:35 PM	0	<0.2	0.1 ± 1.1	–		
10/11/48	10:44 AM	0	<0.2	0.1 ± 1.1	–		
0/13/48	9:05 AM	0	<0.2	0.1 ± 1.1	–		
10/18/48	10:35 AM	0	<0.2	0.0 ± 1.1	–		
10/25/48	2:20 PM	0	<0.2	0.1 ± 1.1	–		
11/1/48	3:00 PM	0	<0.2	0.2 ± 1.1	–		
11/10/48	10:42 AM	0	<0.2	0.0 ± 1.1	–		
11/17/48	9:20 AM	0	<0.2	0.1 ± 1.1	–		
11/29/48	10:35 AM	0	<0.2	0.5 ± 1.1	–		
1/22/48	1:20 PM	0	<0.2	0.4 ± 1.1	–		
2/6/48	3:00 PM	0	<0.2	0.0 ± 1.1	–	–	
2/13/48	8:45 AM	0	<0.2	0.0 ± 1.1	–	–	
2/20/48	9:41 AM	0	<0.2	0.2 ± 1.1	–	–	
12/27/48	1:15 PM	0	<0.2	0.0 ± 1.1	–	–	
1/3/49	12:45 PM	0	<0.2	0.3 ± 1.1	–	–	
/10/49	1:35 PM	0	<0.2	0.7 ± 1.1	–	–	
1/17/49	12:50 PM	0	<0.2	0.0 ± 1.1	–	–	
/24/49	1:00 PM	0	<0.2	0.0 ± 1.1	–	–	
2/1/49	9:30 AM	0	<0.2	0.0 ± 1.1	–	–	
2/14/49	1:30 PM	0	<0.2		–	–	
2/21/49	1:05 PM	0	<0.2	0.0 ± 1.1	–	–	
/1/49	12:50 PM	0	<0.2	0.0 ± 1.1	–	–	
3/7/49	12:00 PM	0	<0.2	0.2 ± 1.1	–	–	
3/14/49	1:00 PM	2	<0.2	0.0 ± 1.1	–	–	
/21/49	1:25 PM	1	<0.2	0.0 ± 1.1			

48

Sampling Location: Clinch River immediately below S-50 Sewer Outfall
Plot Plan Ref. No: 10 W

Sampling Location and Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Mile Alpha	Beta	PH	Remarks
10/20/47	3:15 PM	0	< 0.2	1			
10/28/47	3:40 PM	2	< 0.2	1			
11/3/47	12:50 PM	0	< 0.2	1			
11/11/47	3:00 PM	2	< 0.2	1			
11/18/47	11:00 AM	0	< 0.2	1			
11/24/47	1:05 PM	0	< 0.2	2			
12/1/47	3:45 PM	0	< 0.2	1			
12/10/47	2:45 PM	0	< 0.2	2			
12/16/47	1:30 PM	0	< 0.2	0.8 ± 0.7			
12/22/47	3:45 PM	0	< 0.2	0.2 ± 0.6			
12/29/47	1:35 PM	0	< 0.2	0.7 ± 0.7			
1/5/48	3:45 PM	0	< 0.2	0.0			
1/14/48	11:00 AM	0	0.3	0.5 ± 0.6			
1/19/48	1:00 PM	0	< 0.2	0.6 ± 0.6			
1/[illegible]/48	12:55 PM	0	< 0.2	0.1 ± 0.5	-		
2/3/48	3:00 PM	1	< 0.2	0.9 ± 0.6	-		
2/9/48	2:00 PM	0	-	0.3 ± 0.5	-		
2/16/48	3:00 PM	0	-	0.0 ± 0.5	-		
2/23/48	1:10 PM	0	< 0.2	0.0 ± 0.5	-		
3/2/48	1:30 PM	0	-	0.1 ± 0.5	-		
3/9/48	3:25 PM	0	-	0.1 ± 0.5	-		
3/17/48	3:00 PM	0	-	0.3 ± 0.5	-		
3/24/48	9:50 AM	0	-	0.2 ± 0.5	-		
4/1/48	12:55 PM	0	-	1.4 ± 0.7	-		
4/5/48	1:20 PM	0	-	0.5 ± 0.5	-		
4/12/48	2:15 PM	0	-	0.2 ± 0.5	-		
4/20/48	10:30 AM	0	< 0.2	0.2 ± 0.5	-		
4/27/48	10:15 AM	0	0.2	0.2 ± 0.5	-		
5/3/48	9:10 AM	0	< 0.2	0.0 ± 0.5	---		
5/10/48	9:45 AM	0	< 0.2	0.3 ± 0.5	-		
5/25/48	9:00 AM	0	< 0.2	0.0 ± 0.5	-		
6/1/48	12:00 N	0	< 0.2	0.4 ± 0.5	-		
6/9/48	12:52 PM	0	< 0.2	0.0 ± 0.5	-		
6/14/48	2:25 PM	0	< 0.2	0.2 ± 0.5	-		
6/21/48	12:59 PM	0	0.2	0.2 ± 0.5	-		
6/28/48	1:15 PM	0	< 0.2	0.1 ± 0.5	-		
7/6/48	10:15 AM	0	< 0.2	0.5 ± 1.1	-		

LOCATION Mud from Poplar Creek Opposite K-27 Drain (K-131)

SAMPLE NO. 11-M-E

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
10-11-49	10:05 A.M.	0.75 mg/gm	—	—	0		Per gram per dry weight

Poplar Creek influent @ K-25 .

11W

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 ml alpha	Beta	PH	Remarks
1/21/49	12:30PM	0	—	0.1±1.1	0±21	6.9	
1/29/49	9:25AM	0	—	0.2±1.1	0±21	7.2	
2/4/49	1:30PM	0	—	0.6±1.1	0±21	7.1	
2/18/49	2:12PM	0	—	0.4±1.1	2±29	—	
3-17/49	Composite	0	<0.2	0.0±1.6	0±29	7.6	
3-6/27	Comp.	0	<0.2	0.0±1.1	3±29	7.1	

Poplar Creek influent to K-25
11W

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
/6/48	10:40AM	0	–	0.5 ± 0.6	0.0		
/12/48	10:10 AM	0	–	0.7 ± 1.1	0 ± 2		
/19/48	12:45AM	0	–	0.2 ± 1.1	2 ± 2		
/26/48	10:35 AM	0	–	0.4 ± 1.1	0 ± 2		
/2/48	1:25 PM	0	–	0.0 ± 1.1	0 ± 2		
/9/48	10:00 AM	0	–	0.4 ± 1.1	0 ± 2		
/16/48	12:50 PM	0	–	0.4 ± 1.1	–		
/23/48	10:35AM	0		0.4 ± 1.1	2 ± 11		
/1/48	10:00 AM	0	–	0.2 ± 1.1	1 ± 11		
/7/48	10:25AM	1	–	0.1 ± 1.1	5 ± 11		
/13/48	10:21AM	0	–	0.3 ± 1.1	6 ± 8		
/20/48	9:35 AM	0	–	0.3 ± 1.1	6 ± 11		
/27/48	10:00AM	0	–	0.3 ± 1.1	1 ± 8		
/4/48	10:15AM	0	–	0.3 ± 1.6	24 ± 8		
/11/48	9:55AM	0	–	0.0 ± 1.1	8 ± 8		
10/18/48	8:50AM	0	–	0.1 ± 1.1	0 ± 11		
/48	10:00AM	0	–	0.1 ± 1.1	0 ± 11		
/1/48	1:15 PM	0	–	0.7 ± 1.1	4 ± 8		
/10/48	9:50 AM	0	–	0.6 ± 1.1	–		
/17/48	10:00AM	0	–	0.1 ± 1.1	11 ± 11		
/22/48	1:35 PM	0	–	0.0 ± 1.1	1 ± 8		
/29/48	9:30 AM	0	–	0.2 ± 1.1	0 ± 8		
/6/48	1:20 PM	0	–	0.1 ± 1.1	15 ± 8	7.4	
2/13/48	12:30 PM	0	–	0.2 ± 1.1	0 ± 8	7.7	
/20/48	12:25 PM	0	–	0.2 ± 1.1	0 ± 21	7.0	
/27/48	9:40 AM	0	–	0.2 ± 1.1	8 ± 21	7.5	
/3/49	2:10 PM	0	–	0.3 ± 1.1	4 ± 21	7.3	
/10/49	10:07 AM	0	–	0.3 ± 1.1	4 ± 21	8.1	
/17/49	2:10 PM	0	–	0.2 ± 1.1	0 ± 21	8.6	
/24/49	9:55AM	0	–	0.0 ± 1.1	0 ± 21	7.5	
/1/49	1:10 PM	0	–	0.2 ± 1.1	0 ± 21	7.0	
/7/49	9:50 AM	0	–	0.3 ± 1.1	0 ± 21	7.4	
/49	10:05 AM	0	–	0.1 ± 1.1	6 ± 21	7.6	
9	10:10 AM	0	–	0.1 ± 1.1	0 ± 21	7.4	
/1/49	10:00 AM	0	–	0.1 ± 1.1	1 ± 21	7.1	
/7/49	9:55AM	0	–	0.0 ± 1.1	0 ± 21	7.4	
/14/49	10:20 AM	0	–	0.1 ± 1.1	3 ± 21	6.5	

ampling Location: Poplar Creek influent to K-25
lot Plan Ref. No: 11 W

SAMPLING LOCATION AND PLOT REFERENCE PLAN

te	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Ml. Alpha	Beta	PH	Remarks
1/21/47	10:00 AM	4	<0.2	1			
1/28/47	10:35 AM	2	<0.2	1			
1/3/47	9:45 AM	2	<0.2	2			
1/11/47	10:45 AM	2	0.2	3			
1/17/47	9:45 AM	0	<0.2	2			
1/24/47	1:20 PM	0	<0.2	<0.5			
2/1/47	9:45 AM	0	<0.2	1			
2/9/47	10:15 AM	0	<0.2	1			
2/16/47	10:10 AM	0	<0.2	0.8 ± 0.7			
2/22/47	10:10 AM	0	<0.2	0.7 ± 0.7			
2/29/47	10:30 AM	0	<0.2	1.6 ± 0.8			
1/5/48	9:45 AM	0	<0.2	0.0 ± 0.5			
1/12/48	10:10 AM	0	0.2	2.7 ± 0.8			
1/19/48	10:00 AM	5	<0.2	0.2 ± 0.5			
1/ /48	1:30 PM	0	<0.2	0.9 ± 0.6		–	
2/2/48	3:00 PM	0	<0.2	0.0 ± 0.5		–	
2/9/48	9:45 AM	0	–	0.1 ± 0.5		–	
2/16/48	1:10 PM	0	–	0.1 ± 0.5		–	
2/23/48	1:20 PM	0	<0.2	0.2 ± 0.5		–	
3/1/48	9:35 AM	0	<0.2	0.3 ± 0.5		–	
3/8/48	10:30 AM	0	–	0.5 ± 0.6		–	
/15/48	9:05 AM	0	–	0.2 ± 0.5		–	
3/22/48	10:35 AM	0	–	0.5 ± 0.5		–	
4/1/48	9:30 AM	0	<0.2	0.2 ± 0.5		–	
4/5/48	12:00 AM	0	–	0.0 ± 0.5		–	
4/12/48	10:00 AM	0	–	0.8 ± 0.6		–	
4/19/48	10:00 AM	0	–	0.1 ± 0.5		0.0	
4/26/48	9:15 AM	0	–	0.4 ± 0.5		0.0	
5/3/48	10:45 AM	0	---	0.5 ± 0.5		0.0	
5/10/48	10:05 AM	0	–	0.4 ± 0.5		0.0 ± 2.7	
5/17/48	9:25 AM	0	–	0.0 ± 0.5		0.0 ± 3.0	
5/ /48	10:05 AM	0	–	0.1 ± 0.5		0.0 ± 3.0	
6/4/48	12:30 PM	0	–	0.2 ± 0.5		3 ± 3	
6/7/48	3:10 PM	0	–	0.5 ± 0.6		0 ± 3	
/14/48	10:30 AM	0	–	0.2 ± 0.5		0 ± 3	
21/48	10:10 AM	0	–	0.0 ± 0.5		1 ± 3	
/28/48	10:21 AM	0	–	0.5 ± 0.5		0 ± 3	

Clinch River upstream from K-25

12W

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
1/1/49	9:15AM	0	<0.2	0.1±1.1	101±40	7.9	
1/14/49	1:15PM	0	<0.2	0.1±1.1	80±32	7.9	
1/21/49	10:35AM	0	<0.2	0.1±1.1	83±33	7.8	
2/1/49	12:35PM	0	<0.2	0.0±1.1	42±21	7.7	
2/9/49	10:25AM	0	<0.2	0.1±1.1	49±21	8.1	
2/14/49	12:50PM	2	<0.2	0.0±1.1	64±26	7.6	
2/21/49	1:10PM	1	<0.2	0.3±1.1	114±44	7.4	
2/28/49	3:30PM	1	<0.2	0.4±1.1	261±65	8.0	
4/4/49	12:50PM	1	<0.2	0.0±1.1	96±39	7.9	
4/11/49	1:30AM	1	<0.2	0.2±1.1	74±30	7.8	
4/18/49	12:30PM	0	<0.2	0.1±1.1	77±31	7.8	
4/25/49	2:35PM	0	<0.2	0.2±1.1	40±29	7.7	
5/2/49	12:45PM	0	—	0.2±1.1	59±24	8.4	
5/9/49	10:15AM	0	—	0.2±1.1	224±90	7.8	
5/17/49	9:00AM	1	—	0.2±1.1	279±112	7.8	
5/23/49	9:25AM	0	—	0.0±1.1	11±21	7.4	
5/16 to 5/30/49	Weekly Composite	—	<0.2	—	—	—	
6/1/49	9:55AM	0	—	0.0±1.1	62±25	7.8	
6/6/49	1:05PM	0	—	0.0±1.6	63±25	7.9	
6/13/49	9:35AM	0	—	0.0±1.1	41±21	7.8	
6/20/49	10:30AM	0	—	0.3±1.1	42±21	[illegible]	
6/27/49	1:45P.M.	0	—	0.6±1.1	58±23	8.1	
6/30/49	[illegible]	—	<0.2	—	—	—	
7/5/49	12:30 P.M.	—	—	0.5±1.1	49±20	8.2	
7/11/49	10:00A.M.	—	—	0.0±1.1	69±27	7.8	
7/20/49	10:30AM	—	—	0.3±1.1	267	7.4	
7/25/49	10:10AM	—	—	0.5±1.1	72±41	7.7	
8/1/49	1:30PM	—	—	0.39±1.1	—	7.9	
8/8/49	12:30 P.M.	—	—	0.19±1.1	—	7.9	
8/15/49	10:15A.M.	—	—	0.23±1.1	—	7.7	
8/23/49	10:20 A.M.	—	—	0.2±1.1	—	8.0	
8/29/49	9:50 A.M.	—	—	0.1±1.1	—	7.7	

Sampling Location: Clinch River Upstream from K-25
Plot Plan Ref. No: 12 W

Sampling Location and Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Mile Alpha	Beta	PH	Remarks
10/20/47	2:25PM	0	0.2	1			
10/28/47	3:35 PM	0	<0.2	1			
11/3/47	12:20 PM	0	<0.2	2			
11/11/47	1:00 PM	0	<0.2	2			
11/17/47	10:40 AM	0	<0.2	1			
1/24/47	12:40PM	0	<0.2	2			
2/1/47	3:45PM	0	<0.2	<0.5			
2/10/47	1:13 PM	0	<0.2	<0.5			
2/16/47	10:35AM	0	<0.3	0.7 ± 0.7			
2/23/47	3:05PM	0	<0.2	1.0 ± 0.7			
12/29/47	12:50PM	0	<0.2	0.3 ± 0.7			
1/5/48	10:30AM	0	<0.2	0.7 ± 0.7			
1/12/48	11:00AM	0	<0.2	0.8 ± 0.6	-		
1/19/48	1:15 PM	0	<0.2	0.0 ± 0.5			
1/[illegible]/48	12:30 PM	0	<0.2	2.0 ± 0.7	-		
2/2/48	1:45 PM	0	<0.2	0.1 ± 0.5	-		
2/9/48	1:10 PM	0	-	0.1 ± 0.5	-		
2/16/48	2:30PM	0	-	0.1 ± 0.5	-		
2/23/48	12:40PM	0	<0.2	0.0 ± 0.5	-		
3/1/48	10:25AM	0	<0.2	0.6 ± 0.6	-		
3/8/48	1:15PM	0	-	0.6 ± 0.6	-		
3/15/48	9:45AM	3	-	2.3 ± 0.7	-		
3/22/48	10:50AM	0	-	0.6 ± 0.6	-		
4/1/48	10:20AM	0	<0.2	0.2 ± 0.5	-		
4/5/48	12:45 PM	0	-	0.0 ± 0.5	-		
4/12/48	12:15PM	0	-	0.1 ± 0.5	-		
12/1/48	1:30 PM	0	<0.2	0.0 ± 1.1	23 ± 1.1	7.7	
12/7/48	3:40PM	0	<0.2	0.1 ± 1.1	169 ± 8	7.6	
12/13/48	12:50PM	0	<0.2	0.3 ± 1.1	18 ± 8	7.9	
12/20/48	9:25AM	0	<0.2	0.1 ± 1.1	168 ± 67	7.8	
12/28/48	1:00 PM	0	<0.2	0.2 ± 1.1	35 ± 21	8.0	
1/3/49	12:30 PM	0	<0.2	0.2 ± 1.1	-	7.9	
11/6/49	9:40AM	-	-	-	47 ± 21	-	
11/7/49	8:30 AM	-	-	-	70 ± 40	-	
1/10/49	1:20 PM	0	<0.2	0.0 ± 1.1	12 ± 21	8.1	
1/18/49	9:40AM	0	<0.2	0.0 ± 1.1	35 ± 21	7.9	
1/24/49	12:40 PM	0	<0.2	0.1 ± 1.1	40 ± 21	8.0	

UPSTREAM CLINCH RIVER μg/g				OPPOSITE K-27 DRAIN μg/g		N.E. K-303-8 (1300 EXIT) μg/g		POWERHOUSE EFFLUENT μg/g				WATER AT POWER-HOUSE EFFLUENT α/β		α (ppb)/β		~~I-ME~~ 11-ME	1-ME	
DATE	13ME	α	β	DATE	11ME	DATE	1ME	DATE	22ME	α	β	DATE	22W	DATE	22W	β	β	
7/11/49	0.25			—	—	—	—	7/12/49	0.71			6/27-7/1	0	5/27-5/26	0/10			
8/17/49	0.15			—	—	8/19/49	7.50	8/19/49	0.69			7/5-7/8	0	5/31-6/3	0/65			
9/1/49	0.13			—	—	9/7/49	10.00	9/7/49	2.50			7/11-7/15	1	6/5-6/9	0/35			
10/3/49	0.18			10/11/49	0.75	10/5/49	7.50	10/7/49	3.00			7/18-7/22	1	6/12-6/16	0/43			
11/1/49	0.29			11/49	—	11/7/49	7.50	11/7/49	2.50			7/25-7/29	0	6/19-6/23	0/27			
12/5/49	0.25			12/49	—	12/6/49	10.00	12/5/49	5.00			8/1-8/5	0	6/26-6/30	0/5			
1/5/50	0.60	4.3±0.5	450	1/50	—	1/9/50	7.50	1/9/50	2.50		183	8/8-8/12	0	$\bar{X}$ =	0		134	1/50
2/1/50	0.25	3.7±0.3	250	2/50	—	2/7/50	7.50	2/13/50	2.50		252	8/15-8/19	0				312	2/7
3/6/50	0.50	2.4±0.4	292	3/50	—	3/6/50	12.50	3/6/50	1.50		276	8/22-8/26	0	7/5-7/8	0/30		290	3/6
4/3/50	0.39	3.8±0.4	175	4/10/50	1.00	4/5/50	12.50	4/5/50	1.25		112	11/28-12/2	0	7/10-7/14	0/16	4/10 59	209	4/5
5/1/50	0.18	1.9±0.2	53	5/50	—	5/1/50	12.50	5/1/50	1.88		47	12/5-12/9	0	7/17-7/21	0/41		216	5/1
6/5/50	0.25	3.9±0.3	28	6/12/50	0.50	6/5/50	3.75	6/5/50	0.63 (avg 2.05)		82	12/12-12/16	1	7/24-7/28	0/46	85	92	6/15
	3.42/12 =	0.29		2.25/3 =	0.75	98.75/11	= 8.98	24.66/12	2.06			12/19-12/23	0	7/31-8/4	0/41			
												12/27-12/30	0	8/7-8/11	0/82			
7/5/50	0.25	2.7	39			~~7/5/50~~	~~3.75~~	7/5/50	0.63		50	1/3-1/6/50	0/2	8/14-8/18	0/0		113	7/5
7/11/50	0.25		—	7/11/50	1.50	7/5/50	5.00	7/11/50	1.88	(0.63 μg/g -		1/9-1/13	1/11	8/21-8/25	0/2			
8/7/50	0.25	4.1	76	8/8/50	1.38	8/8/50	3.75	8/7/50	1.75	at mouth) —	142	1/16-1/20	0/0	8/28-9/1	0/0	82	80	[illegible]
9/5/50	0.35	2.4	60	—	—	9/5/50	5.00	9/5/50	1.50		229	1/23-1/27	0/16	9/5-9/8	0/51		76	9/5
10/2/50	0.17	4.5	40	10/3/50	0.50	10/2/50	7.50	10/4/50	2.00	—	128	1/30-2/3/50	0/1	9/11-9/15	0/26	73	94	[illegible]
11/1/50	0.40	1.1	88	—	—	11/1/50	0.78	11/1/50	1.00	—	100	2/6-2/10/50	0/10	9/18-9/22	0/4		45	[illegible]
12/5/50	0.13 (Final Report 0.15)	2.7	11	12/5/50	0.75	12/5/50	1.25	12/5/50	5.83		138	2/13-2/17	0/6	[illegible]	0/[illegible]	58	76	12/5/[illegible]
~~[illegible]~~						1/2/51		1/2/51	1.88		157	2/20-2/24	0/0	[illegible]	0/6		169	1/2
[illegible]-2-51	0.22	4.9±1.4	130									2/27-3/3	0/8	[illegible]				
												3/6-3/10	0/9	[illegible]				
												3/13-3/17	0/25	[illegible]				
												3/20-3/24	0/35	10/30-11/3	0/9			
												3/27-3/31	0/30	11/6-11/10	0/4			
												4/3-4/7	0/6	11/13-11/17	0/0			
												4/10-4/14	0/5	11/20-11/24	0/6			
												4/17-4/21	0/5	11/27-12/1	0/2			
												4/24-4/28	0/5	12-4-12/8	0/22			
												5/1-5/5	0/0	12/11-12/12	0/17			
												5/8-5/12	0/15	12/18-12/22	0/5			
												5/15-5/19	0/0					

Replaced by H3 & H3ME

Mud from Clinch River Bottom at Sampling Position 13-W

13 ME

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min per 100 mile Alpha	Beta	PH
3/24/48	3:30 PM	None Detected	-	-	-	
4/20/48	2:10 PM	500	65.6	0.5	---	
4/30/48	9:45 AM	750	67.0	0.3	---	
5/6/48	10:00 AM	1000	62	1±1	-	
5/11/48	9:35 AM	800	57	1±1	-	
5/17/48	2:30 PM	1500	40	0±1	-	
5/24/48	2:55 PM	800	74	0±1	-	
6/1/48	1:10 PM	400	28.2	2±3	-	
6/7/48	2:05 pm	500	48.8	2	-	
6/15/48	2:56 PM	1,300	55.1	2	-	
6/21/48	9:40 AM	500	52.0	2	-	
6/28/48	9:46 AM	400	95.8	1.0	-	
7/15/48	3:30 PM	500	49.6	0.1	-	
8/2/48	12:45 PM	1500	57.4	4.0±0.7	-	
9/[illegible]/48	2:00 PM	5000	45.8	4.3±0.7	-	
[illegible]/14/48	3:00 PM	0	61.4	9.0±1.5	-	
[illegible]/48	9:27 AM	160	42.6	6.1±1.0	-	
12/15/48	1:00 PM	290	59.4	3.3±0.4	-	
1/11/49	2:45 PM	0.2	41.2	1.8±0.3	-	
2/9/49	1:00 PM	0.6 ug/g	41.2	6.8±1.1	-	
3/16/49	12:59 PM	0.15 ug/g	—	3.0±0.5 c/m/g		Results [illegible] on one gram [illegible]
4/14/49	12:50 PM	0.18 ug/gm	42.2	2.8	-	"
5/12/49	10:30 AM	0.4 ug/gm	-	3.9±0.4	83.7	Results per gram dry weight
6/9/49	10:37 AM	0.354 micrograms per gm.		0.0	0.0	"
7/11/49	10:30 AM	0.25 mg/gm.	-	4.6±0.4	58	Results per gram dry weight
8/17/49	9:00 AM	0.146	-	20.0±1.6	0	
9/1/49	1:30 P.M.	0.13 mg/gm.	-	3.6	93	1 mile downstream of last K-25 effl.
10/3/49	12:45 P.M.	0.18 mg/gm.	-	1.9±0.2	55	

Clinch River 1 mile downstream of last K-25 effluent, Mud.

11-1-49	1:[illegible] P.M.	0.29 Micrograms/gm		4.1±0.3	9	Results per gram [illegible]
12-5-49	10:10 a.m.	0.25 mg/gm		1.8±0.2	177	" " " "

Clinch River, effluent from K-25
13-N

Date	Time	Uranium/PPB		Fluoride/PPM	Counts per min per 100 mile alpha	Beta	PH	Remarks
3/7/49	9:30 AM	0		<0.2	0.0 ± 1.1	47 ± 21	7.5	
1/14/49	9:55 AM	1	171	<0.2	0.2 ± 1.1	44 ± 21	7.7	
1/21/49	10:00 AM	0		<0.2	0.1 ± 1.1	141 ± 56	7.1	
1/28/49	10:30 AM	0		<0.2	0.7 ± 1.1	62 ± 25	8.0	
[illegible]	9:35 AM	1		<0.2	0.0 ± 1.1	53 ± 21	7.8	
2/18/49	10:21 AM	0		<0.2	0.0 ± 1.1	31 ± 21	7.8	
2/25/49		0		<0.2	0.0 ± 1.1	26 ± 29	7.8	
3/2/49	10:30 AM	0		–	0.2 ± 1.1	59 ± 24	8.2	
3/9/49	9:35 AM	0		–	0.4 ± 1.1	53 ± 21	7.6	
3/16/49	10:25 AM	2		–	0.5 ± 1.1	278 ± 111	8.3	
3/23/49	10:10 AM	0		–	0.2 ± 1.1	146 ± 58	7.6	
3/1-3/49	weekly composite	–		<0.2	–	–	–	
5/31/49	1:15 AM	1		–	0.2 ± 1.1	121	8.2	
6/6/49	9:40 AM	1		–	0.4 ± 1.6	84 ± 34	8.4	
6/13/49	9:00 AM	0		–	0.1 ± 1.1	32 ± 21	8.2	
[illegible]/20	9:30 AM	0		–	0.5 ± 1.1	44 ± 21	8.1	
[illegible]/49	10:35 AM	1		–	0.5 ± 1.1	53 ± 21	8.2	
6/6-6/30	Comp.	–		<0.2	–	–	–	
7/18/49	10:33 AM	0		–	–	–	9.4	
7/5/49	10:45 AM	0		–	–	–	8.3	
7/11/49	10:30 AM	1		–	–	–	8.2	
7/25/49	10:00 AM	0		–	–	–	7.4	
8/1/49	9:00 AM	0		–	–	–	8.4	
8/8/49	9:50 AM	0		–	–	–	8.1	
8/15/49	9:50 A.M.	0		–	–	6 ± 21	7.8	
8/22/49	10:00 A.M.	0		–	–	–	7.9	
8/29/49	10:15 A.M.	0		–	–	–	8.0	~~[illegible]~~

13-M

9-6-49	10:30 AM	0		–	–	–	7.6	One mile downstream of last K-25 Effluent
10-3-49	12:45 P.M.	0		–	–	–	7.7	
11-1-49	1:00 P.M.	0		–	–	–	7.8	

Clinch River, effluent from R-20
13W

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mils Alpha	Beta	PH	Remarks
/28/48	9:45AM	0	0.2	0.1±0.5	–		
/6/48	1:00PM	0	<0.2	0.2±1.1	–		
/12/48	9:40AM	0	<0.2	0.1±1.1	–		
/19/48	10:15AM	0	<0.2	0.1±1.1	–		
/26/48	10:13AM	0	<0.2	0.2±1.1	–		
/2/48	12:40PM	0	<0.2	0.0±1.1	–		
/9/48	9:35AM	0	<0.2	0.1±1.1	–		
/16/48	12:30PM	0	<0.2	0.5±1.1	–		
/23/48	3:40PM	0	<0.2	0.0±1.1			
/1/48	9:45AM	0	<0.2	0.0±1.1	–		
/7/48	10:05AM	0	<0.2	0.0±1.1	–		
/13/48	10:05AM	0	<0.2	0.1±1.1	–		
/20/48	9:20AM	0	<0.2	0.5±1.1	–		
/27/48	9:40AM	0	<0.2	0.3±1.1	–		
/48	9:55AM	0	<0.2	0.0±1.1	–		
/11/48	9:40AM	0	<0.2	0.0±1.1			
/48	8:40AM	0	<0.2	0.0±1.1	–		
0/18/48	9:40AM	0	<0.2	0.0±1.1	–		
0/25/48	9:40AM	0	<0.2	0.2±1.1	–		
/1/48	1:00PM	0	<0.2	0.4±1.1	–		
/8/48	3:30PM	1	<0.2	0.6±1.1	–		
/16/48	9:00AM	0	<0.2	0.1±1.1	–		
1/22/48	10:30AM	0	0.2	0.3±1.1	–		
/29/48	9:15AM	0	0.2	0.3±1.1	–		
/6/48	9:50AM	0	<0.2	0.1±1.1	–	–	
2/13/48	10:22AM	0	<0.2	0.0±1.1	–	–	
2/20/48	10:30AM	0	0.3	0.0±1.1	60±24	7.8	
/27/48	9:20AM	0	<0.2	0.1±1.1	12±21	7.9	
/3/49	9:45AM	0	<0.2	0.0±1.1	1±21	8.0	
/10/49	9:35AM	0	<0.2	0.0±1.1	10±21	7	
/17/49	10:35AM	0	<0.2	0.0±1.1	11±21	7.8	
/49	9:32AM	0	<0.2	0.0±1.1	10±21	7.6	
/49	12:50PM	0	<0.2	0.1±1.1	4±21	7.5	
	9:35AM	0	<0.2	0.5±1.1	11±21	7.8	
/14/49	9:50AM	0	<0.2	0.2±1.1	100±40	8.1	
/21/49	9:47AM	0	0.3	0.1±1.1	64±26	7.8	
3/1/49	9:32AM	0	<0.2	0.1±1.1	18±21	7.5	

Clinch River, effluent from K-25
13W

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile Alpha	Beta	Ph
3/31/48	10:30AM	0	–	0.6 ± 0.6	–	
4/1/48	9:00AM	0	–	0.1 ± 0.5	–	
4/2/48	10:10AM	0	–	0.1 ± 0.5	–	
4/5/48	9:00AM	0	<0.2	0.4 ± 0.6	–	
4/6/48	9:05AM	0	–	1.6 ± 0.7	–	
4/7/48	9:20AM	0	–	0.2 ± 0.5	–	
4/8/48	10:30AM	0	–	0.2 ± 0.5	–	
4/9/48	1:00PM	0	–	0.3 ± 0.5	–	
4/12/48	9:30AM	0	–	0.3 ± 0.5	–	
4/13/48	8:40AM	0	–	0.5 ± 0.6	–	
4/14/48	12:20PM	0	–	0.0 ± 0.5	4.1	
4/15/48	8:30AM	0	<0.2	0.6 ± 0.6	–	
4/20/48	2:15PM	0	<0.2	0.3 ± 0.5	–	
/26/48	3:00PM	0	<0.2	0.7 ± 0.6	–	
5/6/48	10:00AM	0	<0.2	0.2 ± 0.5	–	
/48	9:35AM	0	<0.2	0.1 ± 0.5	–	
-. 1/48	2:20PM	0	<0.2	0.0 ± 0.5	–	
5/24/48	2:55PM	0	<0.2	0.5 ± 0.6	–	
6/1/48	1:10PM	0	<0.2	0.3 ± 0.5	–	
6/7/48	2:05PM	1	<0.2	0.0 ± 0.5	–	
/15/48	2:55PM	0	<0.2	0.2 ± 0.5	–	
/21/48	9:40AM	0	<0.2	0.3 ± 0.5	–	

Remarks:

Clinch River, effluent from K-25
13W

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH
2/9/48	9:30AM	0	<0.2	0.3 ± 0.5	–	
2/10/48	10:20AM	0	–	0.7 ± 0.6	–	
2/11/48	9:05AM	0	–	0.5 ± 0.6	–	
2/12/48	9:45AM	0	–	0.7 ± 0.6	–	
2/13/48	9:50AM	0	–	0.1 ± 0.5	–	
2/16/48	10:10AM	0	–	0.2 ± 0.5	–	
2/17/48	10:50AM	0	–	0.1 ± 0.5	–	
2/18/48	10:30AM	0	–	0.2 ± 0.5	–	
2/19/48	8:50AM	0	0.2	0.0 ± 0.5	–	
2/20/48	9:30AM	0	–	0.2 ± 0.5	–	
2/23/48	9:45AM	0	<0.2	0.1 ± 0.5	–	
2/24/48	9:00AM	0	–	0.4 ± 0.5	–	
2/25/48	10:35AM	0	–	0.2 ± 0.5	–	
2/26/48	1:30 PM	0	–	0.3 ± 0.5	–	
[illegible]/48	9:45 AM	0	<0.2	0.3 ± 0.5	–	
[illegible]/48	9:15AM	0	<0.2	0.5 ± 0.6	–	
[illegible]/48	10:20AM	0	<0.2	0.2 ± 0.5	–	
3/3/48	9:30AM	0	–	0.2 ± 0.5	–	
3/4/48	12:00PM	0	0.3	0.2 ± 0.6	–	
3/5/48	9:30AM	0	–	0.3 ± 0.5	–	
3/8/48	10:20AM	0	–	0.1 ± 0.5	–	
[illegible]/9/48	9:35AM	0	<0.2	0.6 ± 0.6	–	
3/10/48	9:00AM	0	–	0.5 ± 0.6	–	
3/11/48	10:05AM	0	–	0.2 ± 0.5	–	
[illegible]/12/48	1:35PM	0	–	0.2 ± 0.5	–	
3/15/48	8:45AM	0	<0.2	0.9 ± 0.6	–	
3/16/48	12:20 PM	0	–	1.2 ± 0.6	–	
3/17/48	9:00AM	0	–	1.7 ± 0.7	–	
3/18/48	9:30AM	0	<0.2	0.4 ± 0.6	–	
3/19/48	9:20AM	0	–	0.9 ± 0.6	–	
3/22/48	8:45AM	0	–	0.4 ± 0.6	0.2	
[illegible]/48	10:40AM	0	–	0.8 ± 0.6	–	
[illegible]	8:40AM	0	<0.2	0.8 ± 0.6	–	
[illegible]	9:50AM	0	–	0.9 ± 0.6	0.0	
[illegible]	8:40AM	0	–	0.4 ± 0.5	–	
[illegible]	8:35AM	0	–	0.2 ± 0.5	–	
3/30/48	[illegible]	0	[illegible]	[illegible]		

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Clinch River, effluent from K-25

13W

Sampling Location + Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile Alpha	Beta	PH
12/16/47	9:50 AM	0	<0.2	0.2 ± 0.8		
12/17/47	2:50 PM	0	<0.2	0.6 ± 0.7		
12/18/47	10:25 AM	0	<0.2	1.4 ± 0.9		
12/19/47	9:30 AM	0	<0.2	1.5 ± 0.6		
12/22/47	9:50 AM	0	<0.2	1.3 ± 0.9		
12/23/47	9:00 AM	0	<0.2	0.5 ± 0.7		
12/24/47	2:00 PM	0	<0.2	1.3 ± 0.7		
12/26/47	10:00 AM	0	<0.2	0.5 ± 0.7		
12/29/47	10:00 AM	0	<0.2	0.4 ± 0.7		
12/30/47	10:00 AM	0	<0.2	0.4 ± 0.7		
12/31/47	10:05 AM	0	<0.2	0.2 ± 0.6		
1/2/48	9:15 AM	0	<0.2	0.0 ± 0.5		
1/5/48	9:15 AM	0	<0.2	0.2 ± 0.7		
1/6/48	9:15 AM	0	<0.2	0.1 ± 0.5		
1/8/48	10:30 AM	0	<0.2	0.4 ± 0.6		
[illegible]/48	1:00 PM	0	<0.2	0.5 ± 0.6		
[illegible]/48	9:00 AM	0	<0.2	0.2 ± 0.5		
1/12/48	9:50 AM	0	<0.2	1.9 ± 0.7		
1/13/48	9:00 AM	0	<0.2	0.8 ± 0.6		
1/14/48	10:30 AM	0	<0.2	0.7 ± 0.6		
1/15/48	1:00 PM	0	<0.2	0.2 ± 0.5	–	
1/16/48	9:40 AM	0	<0.2	0.5 ± 0.5	–	
1/19/48	9:30 AM	0	<0.2	3.3 ± 0.8	–	
1/20/48	9:15 AM	0	<0.2	0.4 ± 0.5	–	
1/21/48	9:50 AM	0	<0.2	0.0 ± 0.5	–	
1/22/48	10:20 AM	0	<0.2	0.0 ± 0.5	–	
1/23/48	10:30 AM	0	<0.2	0.1 ± 0.5	–	
1/26/48	10:10 AM	0	<0.2	1.2 ± 0.6	–	
1/27/48	9:05 AM	0	<0.2	0.3 ± 0.5	–	
1/28/48	11:00 AM	0	<0.2	0.3 ± 0.5	–	
1/29/48	9:00 AM	0	<0.2	0.7 ± 0.6	–	
1-1-48	9:00 AM	0	<0.2	0.1 ± 0.5	–	
	10:40 AM	0	<0.2	0.6 ± 0.5	–	
[illegible]/48	10:00 AM	0	<0.2	0.3 ± 0.5	–	
2/4/48	1:45 PM	0	<0.2	0.0 ± 0.5	–	
2/5/48	10:30 AM	0	0.3	0.5 ± 0.5	–	
2/6/48	9:25 AM	0	<0.2	0.5 ± 0.5		

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Sampling Location:
Clinch River effluent from K-25
Plot Plan Ref. No: 13 W

SAMPLING LOCATION AND PLOT REFERENCE PLAN

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Ml. Alpha	Beta	PH	Remarks
0/23/47	12:35 PM	0	< 0.2	1			
0/24/47	8:30 AM	0	0.2	1			
0/27/47	1:15 PM	0	<0.2	<0.5			
0/28/47	10:20 AM	0	<0.2	<0.5			
0/29/47	8:45 AM	0	< 0.2	1			
0/30/47	9:30 AM	0	<0.2	2			
0/31/47	10:05 AM	0	<0.2	1			
1/3/47	9:30 AM	0	<0.2	2			
1/4/47	9:29 AM	0	<0.2	1			
1/5/47	9:15 AM	0	<0.2	<0.5			
1/6/47	1:50 PM	0	<0.2	1			
1/7/47	11:00 AM	0	0.2	1			
1/10/47	9:30 AM	0	0.3	1			
1/11/47	10:05 AM	0	<0.2	3			
1/ 47	8:44 AM	0	<0.2	2			
3/47	10:30 AM	0	<0.2	1			
1/ 47	8:45 AM	0	<0.2	2			
1/17/47	9:20 AM	0	<0.2	1			
1/18/47	12:40 PM	0	<0.2	1			
1/19/47	10:15 AM	0	<0.2	2			
1/20/47	10:15 AM	0	<0.2	1			
1/21/47	8:50 AM	0	<0.2	1			
1/24/47	10:30 AM	0	<0.2	1			
1/25/47	8:45 AM	0	<0.2	2			
1/26/47	8:45 AM	0	<0.2	1			
1/28/47	9:30 AM	0	<0.2	1			
2/1/47	8:20 AM	0	<0.2	<0.5			
2/2/47	8:40 AM	0	<0.2	1			
2/3/47	9:00 AM	0	<0.2	<0.5			
2/4/47	9:10 AM	0	<0.2	1			
2/5/47	8:45 AM	0	<0.2	1			
2/ 7	3:00 PM	0	<0.2	1			
	10:00 AM	0	<0.2	1			
7/ 47	9:40 AM	0	<0.2	1			
2/11/47	9:50 AM	0	<0.2	2			
2/12/47		0	<0.2	0.5 ± 0.7			
2/15/47	8:45 AM	0	<0.2	2.3 ± 0.8			

Influent to Sewage Disposal Plant
~~14W~~ 14M

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mils Alpha	Beta	Gm	Remarks
4/28/49	1:45PM	4	–	–	–	–	
4/4/49	2:00AM	1	–	–	–	–	
4/11/49	2:20PM	2	–	–	–	–	
4/18/49	1:25PM	1	–	–	–	–	
4/25/49	3:30PM	1	–	–	–	–	
5/2/49	2:45PM	1	–	–	–	–	
5/9/49	10:40AM	1	–	–	–	–	
5/17/49	1:00PM	1	–	–	–	–	
5/22/49	2:35PM	1	–	–	–	–	
5/31/49	3:00PM	2	–	–	–	–	
6/6/49	10:20AM	1	–	–	–	–	
6/13/49	1:40PM	1	–	–	–	–	
6/20/49	11:00AM	0	–	–	–	–	
6/27/49	2:05PM	1	–	–	–	–	
7/5-7/27	Comp.	1	–	–	–	–	
8/1-8/30	Comp.	2	–	–	–	–	
9/5-9/26	Comp.	1	–	–	–	–	
mo! Comp. of weekly Samples		0	–	–	–	–	

Injection to Sewage Disposal Plant

14W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. per 100 mile alpha	Beta	PH	Remarks
7/6/48	1:55PM	0	—	—	—		
7/12/48	3:30PM	4	—	—	—		
7/19/48	3:35PM	0	—	—	—		
7/26/48	12:45PM	0	—	—	—		
8/2/48	2:07PM	0	—	—	—		
8/9/48	12:25PM	0	—	—	—		
8/16/48	1:10PM	0	—	—	—		
8/23/48	10:05AM	0					
9/1/48	12:15PM	0	—	—	—		
9/7/48	10:45AM	2	—	—	—		
9/13/48	10:45AM	0	—	—	—		
9/20/48	10:00AM	1	—	—	—		
9/27/48	10:25AM	3	—	—	—		
10/4/48	10:30AM	1	—	—	—		
[illegible] '48	10:25AM	6	—	—	—		
[illegible]/18/48	10:20AM	2	—	—	—		
[illegible] 48	2:49PM	0	—	—	—		
11/10/48	10:15AM	2	—	—	—		
11/17/48	10:10AM	1	—	—	—		
11/29/48	9:50AM	0	—	—	—		
11/22/48	1:00PM	1	—	—	—		
12/6/48	3:20PM	3	—	—	—		
12/13/48	10:00AM	0	—	—	—		
12/20/48	1:00PM	0	—	—	—	—	
12/27/48	1:45PM	0	—	—	—	—	
1/3/49	1:10PM	0	—	—	—	—	
1/10/49	3:40PM	0	—	—	—	—	
1/17/49	1:20PM	0	—	—	—	—	
1/24/49	10:20AM	1	—	—	—	—	
2/1/49	10:35AM	2	—	—	—	—	
2/7/49	10:25AM	4	—	—	—	—	
2/[illegible]/49	10:35AM	3	—	—	—	—	
[illegible]/1/49	10:25AM	7	—	—	—	—	
[illegible]	1:35PM	1	—	—	—	—	
3/7/49	2:10PM	0	—	—	—	—	
3/23/49	2:10PM	1	—	—	—	—	
11/7-11/28/49	[illegible]	0	—	—	—	—	

ampling Location: Influent to Sewage Disposal Plant
lot Plan Ref. No: 14 ~~E~~ M

Sampling Location and Plot Reference Plan

ate	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Mile Alpha	Beta	PH	Remarks
/22/47	9:35AM	120	--	-			
/29/47	9:05 AM	0	---	---			
/3/47	10:10 AM	2	---	-			
/11/47	12:25 PM	2	---	-			
/17/47	10:15AM	2	---	-			
12/4/47	3:30 PM	0	---	-			
/1/47	10:05 AM	1	---	-			
/10/47	10:15 AM	12	---	-			
/16/47	1:15 PM	4	---	-			
2/22/47	10:30 AM	1	-	-			
/29/47	11:00 AM	4	-	-			
/5/48	10:15 AM	6	-	-			
/12/48	10:35AM	12	-	-	-		
/19/48	12:40 PM	0	-	-	-		
/26/48	2:00 PM	0	-	-	-		
	1:40 PM	0	-	-	-		
/1/48	10:00 AM	0	-	-	-		
/17/48	10:08 AM	2	-	-	-		
/23/48	10:15 AM	0	-	-	-		
3/1/48	10:05 AM	0	-	-	-		
/8/48	1:00 PM	0	-	-	-		
/15/48	9:25 AM	0	-	-	-		
/23/48	2:00 PM	0	-	-	-		
4/2/48	12:35 PM	0	-	-	-		
/6/48	12:25 PM	0	-	-	-		
4/13/48	10:10 AM	0	-	-	-		
/20/48	1:20 PM	0	-	-	-		
/27/48	12:50 PM	0	---	---	---		
/3/48	1:10 PM	0	---	---	---		
/12/48	2:00 PM	0	-	-	-		
5/17/48	2:55 PM	0	-	-	-		
/25/48	10:15 PM	0	-	-	-		
/1/48	10:02 AM	0	-	-	-		
/8	3:20 PM	0	-	-	-		
/15/48	2:00 PM	0	-	-	-		
/21/48	10:30 AM	0	-	-	-		
/28/48	10:30 AM	1	-				

66

Sludge from Sewage Disposal Plant at sampling position 15-W

15-E

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per min Per 100 mile Alpha	Beta	PH
/25/48	1:45 PM	None Detected	-	-	-	
/22/48	2:00 PM	60,000	---	---	---	
5/12/48	2:10 PM	100,000	-	-	-	
/18/48	10:55 AM	45,000	-	260	-	
/26/48	12:46 PM	40,000	-	-	-	
/23/48	10:10 AM	50,000	-	347 ± 59	-	
/8/48	2:35 PM	50,000	-	328 ± 56	-	
19/49	2:30 PM	28.2 ug/g.	-	228.3 ± 38.8	-	
/29/49	9:35 AM	50 mg/gm.	-		1692	?
		~~Taken approx. 1 hr. after heavy rain~~				?

Date	Time	Uranium/PPB	Fluoride/PPM	Counts/min/100 mile Alpha	Beta	PH
15 M-E	Sludge from Sewage Disposal					
-13-49	9:00 A.M.	39.00 mg/gm		—	1111	

Effluent from sewage disposal plant
15 W

Date	Time	Uranium/PPM	Fluoride/PPM	Counts per min. per 100 miles Alpha	Beta	PH	Remarks
/28/49	1:50 PM	3	–	–	–		
/20/49	1:30 PM	0	–	–	–		
/3/49	3:00 PM	1	–	–	–	–	
/6-6/30	Comp.	5	–	14.5 ± .61	46 ± 2.9	–	
/5-7/27/49	Comp.	1	–	–	–	–	

Effluent from Sewage Disposal Plant
15 W

Sampling Location & Plot Reference Plan

Date	time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile alpha	Beta	PH	Remarks
-/47	9:40 AM	2	—	—			
/29/47	9:05AM	2	---	---			
13/47	10:10 AM	2	---	—			
11/47	12:25 PM	0	---	—			
17/47	10:20 AM	0	---	—			
/24/47	3:40 PM	0	---	—			
2/1/47	10:05 AM	0	---	—			
2/10/47	10:15 AM	0	---	—			
2/16/47	11:15PM	4	--	—			
2/22/47	10:30 AM	0	—	—			
2/29/47	11:00 AM	0	—	—			
1/5/48	10:15AM	0	—	—			
/12/48	10:35AM	0	—	—	—		
/19/48	12:40PM	0	—	—	—		
/29/48	2:15 PM	0	—	—	—		
21 48	1:40PM	0	—	—	—		
8	10:00AM	0	—	—	—		
/48	10:00AM	0	—	—	—		
/23/48	10:15AM	0	—	—	—		
3/1/48	10:05AM	0	—	—	—		
3/8/48	1:00PM	0	—	—	—		
3/15/48	9:30AM	0	—	—	—		
2/20/48	1:20PM	0	—	—	—		
4/27/48	12:50PM	0	---	---	---		
5/3/48	1:15PM	0	---	---	---		
5/12/48	2:00PM	0	—	—	—		
5/17/48	2:55PM	0	—	—	—		
5/25/48	10:20AM	0	—	—	—		
5/1/48	10:05AM	0	—	—	—		
/7/48	3:21PM	0	—	—	—		
/15/48	2:00PM	0	—	—	—		
5/21/48	10:30 AM	3	—	—	—		
12 48	10:31AM	0	—	—	—		
12	12:45PM	0	—	—	—		
48	10:00 AM	0	—	—	—		
2/21/48	2:00 PM	0	--	—	—		
/18/49	2:20PM	3	—	—	—		
2/23/49	9:00AM	0	—	—			

Bottom of slope between K-[illegible] and K-27

15 ME-X

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile			Remarks
				Alpha	Beta	PH	
19/48	11:15AM	6,300	—	—	—		

	16-W	16-W Composites	30-W	Sewage Disposal Plant Influent 14-W Composites	Drainage from Labs A, B, C, D 26-M	Clinch River immediately at S-50 Sewer outfall 10-M	Clinch River one mile downstream of last K-25 effluent 13-M
	~~β-α~~ ~~16-W~~		19/50 30-W	PPB U	PPB U α β	PPB U	PPB U
	α ± β ± 2σ	[F⁻]		1/3 - 1/27 1	1/5 - 1/27	1/9 0	1/5 0
1/5	1.1 ± 0.1 1	1/3 - 1/27 <0.2	α β	2/1 - 2/24 0	4 3.9 ± 1.1 37	2/22 5	2/1 0
1/9	0 9	2/1 - 2/24 <0.2	1/10 5.8 5932		2/1 - 2/24 5 1.9 ± 1.6 31		
1/16	0 10	2/28 - 3/27 <0.2	1/31 3.8 571	4/8 - 4/26 0	2/27 - 3/28 1	3/6 1	3/6 0
1/23	0.2 5	4/8 - 4/26 <0.2	3/7 2.3 1167	4/5 - 4/26 0	4/3 - 4/28 40 40	4/3 0	4/3 0
2/2	0 0	5/1 - 5/26 <0.2	4/18 6 10,036	5/1 - 5/28 0	5/1 - 5/25 40 1 ± 1.4 4	5/1 0	5/1 0
cooking 2/7	0 0	5/31 - 6/26 <0.2	5/16 3.1 2868		6/5 - 6/24 20 3.3 ± 1.1 26	6/5 0	6/5 0
D 2/17	0.3 2		6/20 4.9 355				
2/20	0 16	7/5 - 7/26 <0.2	7/13 3.6 204				
A 2/28	0 3	7/31 - 8/27 <0.2	8/8 1.4 1614		7/4 - 7/26 10 63 34	7/5 0	7/5 0
drink 3/6	0.1 6	9/5 - 9/25 0.3	9/5 ~~[illegible]~~ 20 533		8/1 - 8/28 2 3.6 4	8/7 0	8/2 0
3/12	0.1 9	10/9 —	12/[illegible] 2.5 1014		9/5 - 9/25 2 1.9 8	9/5 0	9/5 0
3	0 12	10/30 - 11/28 0.3	12/11 7.1 4633		10/3 - 10/[illegible] 5 — 5		10/2 0
3/27	0.1 19	12/4 12/22 0.2	✓		11/30 - 12/25 1 2.1 ± 3.1 17		11/1 0
4/3	0.2 12	12/28 1/26 >0.2			12/19 - 12/22 1 Sample Destroyed 7		12/5 0
4/10	0.1 13	1/20 2/27 >0.2			2/15 - 3/27 1 1.6 ± 1.1 14 ± 21		2/5 0
4/17	0 0				2/27 4 0.8 24 ± 21		2/5 0
4/26	0 0				3/29 1 1.5 0 ± 21		3/30 0
5/2	0.2 0				5/31 6 3.2 10 ± 21		8/1 0
5/8	0 16				6/25 6 3.7 22		9/5 0.5
5/15	0.2 35	16-W d/m/100 ml.	16-W d/m/100 ml.	16-W d/m/100 ml.	16-W d/m/100 ml.	16-W d/m/100 ml.	7/31 3 1.5 3
5/22	0 12						8/26 3 1.6 0
6/3	0 55	α β	α β	α β	α β	α β	U PPB 28 1 1 7
6/9	0.2 76	1004 B 8/24 0 9	1401 11/15 0.1 0	Drink 2 K303 8/5 0 3	Cafe 5/4 Drink 1.1 0	K1001 7/13 Drink 0 0	0.5
6/14	0 50	1401 8/28 0.2 1	1515 11/24 0.0 6	Drink 7/20 K1404 7/16 0 1	6/11 0 2	K1003 7/20 Drink 0 0	0
6/19	0.1 19	1024 9/5 0 50	1004 A 11/28 0.4 2	Drink 7/27 K1058 7/20 0 0	5/18 0 2	K1001 7/27 Drink 0 4	0
6/22	0.5 42	Cooking 1002 9/13 0.3 20	Cooking 1002 12/8 0.0 18	K1004 7/27 D 0.1 13.0	5/25 1.1 0	Cafe 8/3 0 0	0
		1301 9/18 0.1 14	1025 Drink 12/11 0.0 19	Cafe 3/9 Cooking 0 2		Drink 8/10 0 0	0
7/5	0 8	631 9/25 0.1 0	1030 Drink 12/20 No results 0.5 0	K1004A 3/16 Drink 0 7	Cafe 6/1 Cooking 0.9 0	" 8/16 0 5	0.5
D 1/10	0.4 37	1004 D 10/9 [illegible] 3	K1001 Drink 12/28 0.3 4	K1003 3/23 Drink 0.1 0	1004 B 6/8 Drink 0.2 0	A 8/23 0 0	0.5
7/17	0 39	Cooking 1302 [illegible] 0	Cooking 1/3 0 0	K1401 3/27 Drink 0 0	1004 D 6/15 Drink 0 1	Cafe 9/31 0 0	0
4 7/25	0 34	[illegible]	K1001 Drink 1/9 0 0	Cafe 4/7 Cooking 0 0	Drink 1401 6/29 0 0	K1001 9/17 Drink 0 0	0
2 7/31	0 42	[illegible] 3 4	1036 Drink 1/16 0.1 0	K1004D 4/13 Drink 0.1 5	" 6/22 0 10	1004 9/14 Drink 0 2	0
ing 8/7	0.1 29	Cof. 10/31 0 0	1004 Drink 1/26 0.1 0	K1001 B 4/18 Drink 0 7	Cafe 7/6 Cooking 0.4 30	1131 9/21 Drink 0 0	0

16 W

{Water - at 100% Sensitivity} 5/2/49

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Date	Time	Uranium PPB	Fluoride PPM	Counts Per min Per 100 ml. alpha	Beta	PH	Location
/5/49	9:30AM	0	<0.2	0.1±1.1	45±21	7.6	K-631
/12/49	9:00PM	0	<0.2	0.1±1.1	34±21	7.3	K-1501
/18/49	2:30PM	0	<0.2	0.0±1.1	36±29	7.3	K-1036
/25/49	3:50PM	0	<0.2	0.0±1.1	31±21	7.3	K-303-S
/2/49	2:55PM	0	—	0.3±1.1	46±21	7.6	K-1004-D
/9/49	1:10PM	0	—	0.3±1.1	91±36	7.2	K-413
/23/49	2:30 PM	0	—	0.0±1.1	102±41	7.3	K-1048
/1-30/49	weekly Composite	—	<0.2	—	—	—	K-25 + K-27
/31/49	1:30 PM	0	—	0.11±1.1	99±40	7.5	K-1405
/6/49	10:05AM	0	—	0.6±1.6	50±21	7.2	K-1028
6/13/49	2:00 PM	0	—	0.2±1.1	41±21	7.5	K-402-6
/20/49	11:15AM	0	—	2.5±1.1	59±24	7.4	K-25 Cafeteria Cooking Water
/6-6/30	Comp.	—	<0.2	—	—	—	K25+27 Drinking Water
6/27/49	2:15 PM	0	—	0.8±1.1	67±26	7.5	K-1131
7/18/49	1:30 PM	0	—	0.2±1.1	89±36	7.4	
/5/49	3:00 P.M.	0	—	0.7±1.1	75±30	7.4	
7/11/49	1:40 P.M.	0	—	0.4±1.1	97±39	7.6	
7/25/49	1:35 P.M.	0	—	0.6±1.1	69±39	7.1	
7/5-7/27	Comp.	—	Less than 0.2 ppm				K-25, K-27 Drinking Water
8/1/49	2:15 P.M.	0	—	0.13±1.1	26±21	7.6	
8/8/49	1:00 P.M.	0	—	0.0±1.1	6±21	7.4	
8/15/49	12:35 P.M.	0	—	0.0±1.1	2±21	7.3	
8/26/49	9:15 A.M.	0	—	0.1±1.1	25±21	7.4	Drinking Water, K-1410.
8/30/49	3:30 P.M.	0	—	0.0±1.1	17±21	7.3	Drinking Water, K-1
/1 to 8/31/49	Composite	—	<0.2	—	—	—	K-25-K-27 Drinking Water
9/8/49	8:25 A.M.	0	—	0.3±1.1	11±21	7.6	Drinking Water K-100
9/12/49	9:55AM	0	—	0.3±1.1	4±21	7.3	" " K-100
9/19/49	1:10PM	0	—	0.0±1.1	17±21	7.2	" " K-100
9/26/49	9:50AM	0	—	0.1±1.1	30±21	7.6	" " K-113
/8-9/26	Comp.	—	<0.2	—	—	—	K-25 K-27 Drinking
10/5/49	9:35AM	0	—	0.0±1.1	1±21	7.5	Cafeteria Cooking
10/10/49	9:30AM	0	—	0.0±1.1	11±21	7.4	Drinking Water,
10/20	9:00 AM	0	—	0.2±1.1	46±21	7.5	Drinking Water, K-
10/28	3:30 AM	0	—	—	—	—	Drinking Water, K
Monthly Comp of Weekly Samples		—	<0.2	—	—	—	Drinking Water Check.
11-3-49	9.00 A.M.	0	—	0.1±1.1	11±21	7.2	K-25 - K-27 Drinking Water K-1
11-18-49	3.00 P.M.		—	0.±1.1	6±21	7.2	K-25 K-27

LOCATION

SAMPLE NO. Reference # 16 W.

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Beta	PH	Remarks
11-29-41	10:10 A.M.	0	-	0 ± 1.1	3 ± 21	7.5	K-25-K-27 Drinking Water from K-1034.
11-4/11-28 Composite		-	Less than 0.2	-	-	-	K-25 K-27 Drinking Water

Cafeteria Cooking Water
16-W

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mils alpha	Beta	PH	Remarks
5/17/49	1:05PM	0	—	0.0 ± 1.1	280 ± 112	7.4	
5-4-49	9:00 A.M.	0	—	0.0 ± 1.1	28 ± 21	7.1	

16 N

Date	Time	U/PPB	Fluoride/PPM	Counts per min per 100 mile Alpha	Beta	pH	Location
/19/48	3:40PM	0	<0.2	0.0 ± 1.1			K-631
/26/48	12:50PM	0	<0.2	0.2 ± 1.1			K-1203-3
/2/48	2:45PM	0	<0.2	0.0 ± 1.1			K-702
/9/48	10:20AM	0	<0.2	0.1 ± 1.1			K-1501
/17/48	9:00AM	0	<0.2	0.5 ± 1.1			K-1005
/23/48	10:30AM	0	<0.2	0.0 ± 1.1			K-413
/1/48	9:20AM	0	<0.2	0.0 ± 1.1			K-1049
/7/48	1:20PM	0	<0.2	0.3 ± 1.1			K-1004-D
/13/48	10:50AM	0	<0.2	0.1 ± 1.1			K-131
/20/48	10:07AM	0	<0.2	0.1 ± 1.1			K-131
/27/48	3:15PM	0	<0.2	0.3 ± 1.1			K-1032
/5/48	3:26PM	0	<0.2	0.5 ± 1.1			K-1034
/13/48	10:45AM	0	<0.2	0.1 ± 1.1			K-1028-18
/18/48	10:17AM	0	<0.2	0.0 ± 1.1			K-631
/48	11:15AM	0	<0.2	0.2 ± 1.6			K-1401
/48	3:30PM	0	<0.2	0.5 ± 1.1			K-1030
/48	2:50PM	0	<0.2	0.2 ± 1.1			K-1131
/18/48	9:00AM	0	<0.2	0.1 ± 1.1			K-402-1
/22/48	2:45PM	0	<0.2	0.3 ± 1.1			K-413
/29/48	1:00PM	0	<0.2	0.1 ± 1.1			K-1030
/6/48	1:00PM	0	<0.2	0.0 ± 1.1			K-1003
/13/48	1:30PM	0	<0.2	0.2 ± 1.1	14 ± 8	7.6	K-1401
/20/48	2:00PM	0	<0.2	0.1 ± 1.1	40 ± 21	7.2	K-802
/28/48	9:05AM	0	<0.2	0.4 ± 1.1	20 ± 21	7.8	K-303-4
/3/49	1:15PM	0	<0.2	0.0 ± 1.1	—	7.5	K-1131
/10/49	10:20AM	0	<0.2	0.4 ± 1.1	—	7.4	Grand Port #41
/17/49	2:50PM	0	<0.2	0.0 ± 1.1	0 ± 21	7.7	K-1004-D
/24/49	10:10AM	0	<0.2	0.0 ± 1.1	47 ± 21	7.4	K-1036
/1/49	1:35PM	0	<0.2	0.0 ± 1.1	47 ± 21	7.2	K-402-5
/7/49	10:15AM	0	<0.2	0.0 ± 1.1	15 ± 21	7.3	K-1037
/14/49	10:35AM	0	<0.2	0.2 ± 1.1	87 ± 35	7.5	K-131
/21/49	2:00PM	0	0.2	0.1 ± 1.1	61 ± 24	7.4	K-309-3
	10:07AM	0	<0.2	0.0 ± 1.1	30 ± 21	7.1	K-1405
	9:30AM	0	<0.2	0.1 ± 1.1	21 ± 21	7.6	K-1401
/14/49	3:45PM	0	<0.2	0.0 ± 1.1	37 ± 21	7.5	K-1021
/22/49	2:50PM	0	<0.2	0.0 ± 1.1	81 ± 32	6.5	K-303-6
/28/49	2:05PM	0	<0.2	0.0 ± 1.1	37 ± 21	7.7	K-4[illegible]

Date	Time	U/PPB	Fluoride/PPM	Counts per min. Per 100 Ml. Alpha	Beta	PH	Location
/22/47	9:50 AM	0	<0.2	1			K-402-7
/28/47	11:00 AM	0	<0.2	1			K-302-3
/3/47	12:10 PM	0	<0.2	1			K-1001, wing C
/11/47	12:15 PM	0	<0.2	<0.5			K-631
/17/47	2:15 PM	0	<0.2	<0.5			K-302-3
/24/47	1:45 PM	0	<0.2	<0.5			K-131
/2/47	10:50 AM	0	<0.2	2			Garage area
/10/47	3:30 PM	0	<0.2	2			K-131
/17/47	4:00 PM	0	<0.2	1.1 ± 0.9			K-1024, Rm. 7
/22/47	4:00 PM	0	<0.2	0.3 ± 0.6			K-1001, wing C
/2/48	1:40 PM	0	0.2	0.8 ± 0.7			K-302-3
/8/48	2:00 PM	0	<0.2	0.9 ± 0.6			Garage area
/12/48	10:28 AM	0	<0.2	0.0 ± 0.5			K-131
/28/48	1:10 PM	0	<0.2	1.4 ± 0.7			K-131
/23/48	2:45 PM	0	<0.2	0.2 ± 0.5			K-1050
	3:40 PM	0	<0.2	0.3 ± 0.5	-		K-1037
8	2:30 PM	0	<0.2	0.0 ± 0.5	-		K-310-3
/16/48	9:30 AM	0	<0.2	0.1 ± 0.5	-		K-1049
/23/48	2:30 PM	0	<0.2	0.1 ± 0.5	-		K-131
/4/48	1:10 PM	0	<0.2	0.1 ± 0.5			Brand Headquarters
/8/48	1:40 PM	0	<0.2	0.1 ± 0.5			K-310-3
/17/48	2:30 PM	0	<0.2	0.6 ± 0.6			Administration Bldg.
/24/48	1:35 PM	0	<0.2	0.4 ± 0.5			K-413
/1/48	1:30 PM	0	<0.2	0.2 ± 0.5			K-309-2
/6/48	8:45 AM	0	<0.2	0.2 ± 0.5			K-1068-D
/12/48	2:30 PM	0	<0.2	0.2 ± 0.5			K-25 Drinking
/20/48	1:30 PM	0	<0.2	0.1 ± 0.5			K-1131
/22/48	2:00 PM	0	0.2	0.2 ± 0.5			K-1101
/4/48	12:30 PM	0	<0.2	0.1 ± 0.5			K-1029
/13/48	2:40 PM	0	<0.2	0.6 ± 0.6			K-25 Drinking
/24/48	10:15 AM	0	<0.2	0.0 ± 0.5			K-1024, Rm. 7
/1/48	10:15 AM	0	<0.2	0.1 ± 0.5			K-1020
	1:25 AM	0	<0.2	0.1 ± 0.5			K-1030
8	2:01 PM	0	<0.2	0.0 ± 0.5			K-1203-3
/21/48	9:10 AM	0	<0.2	0.0 ± 0.5			K-1401
/28/48	10:40 AM	0	<0.2	0.2 ± 0.5			K-1405
/6/48	2:45 PM	0	<0.2	0.5 ± 1.1			K-1405

Re-circulating water K-25

17 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPm	Counts Per min. Per 100 mile alpha	Beta	PH	Remarks
/28/47	10:55AM	0	---	<0.5			
/11/47	12:00 N	0	---	2			
/24/47	1:35 PM	0	---	1			
2/10/47	10:10AM	0	---	1			
2/22/47	10:20 AM	0	-	0.9 ± 0.7			
2/29/47	10:45 AM	0	-	0.8 ± 0.7			
1/12/48	10:20 AM	0	-	0.3 ± 0.5			
2/2/48	2:00 PM	0	-	0.0 ± 0.5	-		
2/16/48	2:15PM	0	-	0.2 ± 0.5	-		
3/1/48	9:55AM	0	-	0.2 ± 0.5	-		
3/15/48	9:20AM	0	-	0.5 ± 0.6	-		
4/1/48	10:50AM	0	-	0.3 ± 0.5	-		
1/12/48	10:30 AM	0	-	0.0 ± 0.5	-		
5/3/48	12:30 PM	0	-	0.1 ± 0.5	-		
5/1[illegible]/48	1:22 PM	0	-	0.2 ± 0.5	-		
[illegible]/48	1:40PM	0	-	0.6 ± 1.1	-		
[illegible] 48	10:30 AM	2	-	0.7 ± 1.1	-		
1/17/48	10:21AM	0	-	0.3 ± 1.1	-		
2/21/48	1:50PM	0	-	0.2 ± 1.1	-		
5/26/49	2:45PM	1	-	-	-		

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Process Recirculating Water K-25

17W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mis. alpha	Beta	PH	Remarks
3/2/48	1:40PM	0	–	0.0 ± 1.1	–		

Recirculating water K-27

17W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min. Per 100 Mls Alpha	Beta	PH
123/47	9:25 AM	0	--	2		
1 3/47	10:20 AM	0	---	4		
117/47	10:00 AM	0	---	1		
2/1/47	10:00 AM	0	---	1		
/16/47	1:05 PM	0	--	< 0.5		
15/48	10:10 AM	0	-	0.2 ± 0.6		
19/48	12:30 PM	0	-	1.1 ± 0.6	-	
28/48	1:10 PM	0	-	0.4 ± 0.5	-	
19/48	2:45 PM	0	-	0.1 ± 0.5	-	
23/48	10:25 AM	0	-	0.3 ± 0.5	-	
8/48	12:50 PM	0	-	0.3 ± 0.5	-	
22/48	10:25 AM	0	-	0.5 ± 0.6	-	
5/48	12:30 PM	0	-	0.4 ± 0.6	-	
3/48	12:30 PM	0	-	0.0 ± 0.5	-	
1[illegible]8	2:06 PM	0	-	0.5 ± 0.5	-	
[illegible]6/48	1:50 PM	0	-	0.2 ± 1.1	-	
[illegible]48	10:20 AM	0	-	0.1 ± 1.1	-	
1/17/48	10:19 AM	0	-	0.4 ± 1.1	-	
2/21/48	1:55 PM	0	-	0.5 ± 1.1	-	
/26/49	3:15 PM	0	-	-	-	

Process Recirculating water - 1F-21
17W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	PH	Remarks
8/2/48	2:05 PM	0	—	0.0 ± 1.1	—		

Cafeteria Cooling Water
20 W

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 mils			Remarks
				Alpha	Beta	PH	
4/18/49	1:00 PM	0	—	0.2 ± 1.1	33 ± 21	7.0	
4/25/49	4:00 PM	0	—	0.2 ± 1.1	18 ± 21	7.3	

now Recorded under 16 W

Cafeteria Cooking Water

20W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile Alpha	Beta	PH	Remarks
8/4/48	2:25PM	0	<0.2	0.2 ± 1.1	–		
8/9/48	10:25AM	0	<0.2	0.1 ± 1.1	–		
8/17/48	9:10AM	0	<0.2	0.4 ± 1.1	–		
/23/48	10:47AM	0	<0.2	0.0 ± 1.1			
/1/48	12:45PM	0	<0.2	0.0 ± 1.1			
/7/48	1:20PM	0	<0.2	0.0 ± 1.1	–		
/14/48	9:15AM	0	<0.2	0.0 ± 1.1	–		
/20/48	1:35PM	0	<0.2	0.0 ± 1.1	–		
/27/48	3:15PM	0	<0.2	0.2 ± 1.1	–		
/5/48	3:30PM	0	<0.2	0.0 ± 1.1	–		
/13/48	10:50AM	0	<0.2	0.0 ± 1.1	–		
/18/48	2:30PM	0	<0.2	0.0 ± 1.1	–		
/25/48	3:45PM	0	<0.2	0.5 ± 1.1	–		
/1/48	3:42PM	0	<0.2	0.4 ± 1.1	–		
/10/48	3:00PM	0	0.2	0.0 ± 1.1	–		
/18/48	9:30AM	0	<0.2	0.0 ± 1.1	–		
48	1:15PM	0	<0.2	0.2 ± 1.1	–		
/22/48	2:55PM	0	<0.2	0.1 ± 1.1	–		
2/6/48	3:50PM	0	–	0.0 ± 1.1	34 ± 11	7.9	
2/13/48	1:35PM	0	–	0.1 ± 1.1	18 ± 8	7.7	
/20/48	12:40PM	0	–	0.1 ± 1.1	59 ± 24	7.3	
/28/48	9:10AM	0	–	0.2 ± 1.1	9 ± 21	7.7	
3/49	1:30PM	0	–	0.0 ± 1.1	16 ± 21	7.6	
10/49	2:15PM	0	–	0.2 ± 1.1	14 ± 21	7.5	
17/49	2:45PM	0	–	0.4 ± 1.1	0 ± 21	7.7	
24/49	2:10PM	0	–	0.0 ± 1.1	54 ± 22	7.4	
/1/49	1:45PM	0	–	0.0 ± 1.1	52 ± 21	7.3	
14/49	2:30PM	0	–	0.1 ± 1.1	59 ± 21	7.5	
/21/49	2:15PM	0	–	0.1 ± 1.1	50 ± 21	7.9	
/49	8:35AM	0	–	0.0 ± 1.1	37 ± 21	7.5	
/8/49	2:15PM	0	–	0.0 ± 1.1	38 ± 31	7.4	
/49	3:50PM	0	–	0.0 ± 1.1	33 ± 21	6.5	
/49	3:30PM	0	–	0.2 ± 1.1	76 ± 30	6.5	
/49	10:00AM	0	–	0.3 ± 1.1	122 ± 49	7.4	
4/5/49	9:40AM	0	–	0.0 ± 1.1	50 ± 21	7.5	
4/11/49	9:35AM	0	<0.2	0.0 ± 1.1	38 ± 31	7.7	
4/2/49	9:10AM	0	–	0.0 ± 1.1	37 ± 21	7.4	

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Sampling Location: Cafeteria Cooking Water
Plot Plan Ref. No: 20 W

Sampling Location and Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Mile Alpha	Beta	PH	Remarks
11/11/47	1:31 PM	0	<0.2	2			
11/17/47	2:30 PM	0	<0.2	1			
11/24/47	4:00 PM	0	<0.2	<0.5			
12/3/47	10:10 AM	0	<0.2	1			
12/12/47	3:30 PM	0	<0.2	1.3 ± 0.9			
12/17/47	4:10 PM	0	<0.2	0.9 ± 0.7			
12/23/47	9:40 AM	0	<0.2	0.2 ± 0.6			
12/29/47	2:00 PM	0	<0.2	0.1 ± 0.6			
1/8/48	2:30 PM	0	<0.2	1.6 ± 0.7			
1/13/48	10:20 AM	0	<0.2	0.5 ± 0.6			
1/23/48	3:00 PM	0	<0.2	0.1 ± 0.5			
1/29/48	2:20 PM	0	<0.2	0.2 ± 0.5			
2/2/48	3:30 PM	0	<0.2	0.0 ± 0.5			
2/9/48	3:00 PM	0	<0.2	0.0 ± 0.5	-		
2/ /48	10:20 AM	0	<0.2	0.1 ± 0.5	-		
/48	3:10 PM	0	<0.2	0.2 ± 0.5	-		
, 48	1:50 PM	0	<0.2	0.2 ± 0.5	-		
3/8/48	1:50 PM	0	<0.2	0.3 ± 0.5	-		
3/17/48	3:15 PM	0	<0.2	0.3 ± 0.5	-		
3/24/48	1:45 PM	0	<0.2	0.7 ± 0.6	-		
4/2/48	3:00 PM	0	<0.2	0.1 ± 0.5	-		
4/7/48	10:05 AM	0	<0.2	0.6 ± 0.6	-		
4/12/48	2:50 PM	0	<0.2	0.4 ± 0.6	-		
4/20/48	2:30 PM	0	<0.2	0.0 ± 0.5	-		
/27/48	2:10 PM	0	<0.2	0.0 ± 0.5	---		
5/3/48	1:00 PM	0	<0.2	0.0 ± 0.5	---		
/10/48	10:20 AM	0	<0.2	Sample exhausted by operational error			
5/18/48	2:55 PM	0	<0.2	0.4 ± 0.5	-		
5/25/48	9:40 AM	0	<0.2	0.1 ± 0.5	-		
/1/48	10:20 AM	0	<0.2	0.2 ± 0.5	-		
/9/48	1:35 PM	0	<0.2	0.2 ± 0.5	-		
/1 8 /1/48	2:14 PM	0	<0.2	0.1 ± 0.5	-		
	10:50 AM	0	<0.2	0.4 ± 0.5	-		
	12:35 PM	0	<0.2	0.0 ± 0.5	-		
/6/48	2:55 PM	0	<0.2	0.3 ± 1.1	-		
/12/48	3:45 PM	0	<0.2	0.3 ± 1.1	-		
7/21/48	2:55 PM	0	<0.2	0.8 ± 1.1			

S-50 sewer outfall

21 W

Sampling Location & Plot Reference Plan.

Date	Time	Coliform/PPB	Fluoride/PPM	Counts per min per 100 mile Alpha	Beta	PH	Remarks
/20/47	3:30 PM	0	< 0.2	1			
/28/47	3:20 PM	80	0.2	–			
1/3/47	12:50 PM	800	0.3	–			
11/11/47	3:06 PM	150	0.4	–			
/18/47	10:45 AM	600	0.3	–			
/24/47	1:00 PM	200	0.4	–			
2/1/47	3:40 PM	80	0.2	–			
2/10/47	2:30 PM	80	0.5	–			
2/16/47	1:30 PM	170	<0.2	–			
2/22/47	3:40 PM	40	0.3	–			
2/29/47	1:30 PM	40	0.2	–			
/5/48	3:40 PM	0	0.3	–			
/14/48	11:00 AM	30	0.4	–	–		
/19/48	1:10 PM	4	<0.2	–	–		
/25/48	12:50 PM	800	0.3	–	–		
2/3/48	2:45 PM	80	0.3	–	–		
48 2/17/48	2:00 PM	10	–	–	–		
2/23/48	1:05 PM	2	<0.2	–	–		
/16/48	2:00 PM	20	–	–	–		
3/2/48	1:30 PM	40	–	–	–		
/9/48	3:20 PM	1	–	–	–		
/17/48	3:00 PM	23	–	–	–		
3/24/48	9:50 AM	10	–	–	–		
4/1/48	12:55 PM	11	–	–	–		
/5/48	1:20 PM	33	–	–	–		
/12/48	2:15 PM	10	–	–	–		
4/23/48	4:00 PM	Could not collect sample, River water covered drain.					
4/30/48	3:00 PM	No sample taken. Clinch R. above sewer outlet					
5/7/48	4:00 PM	" " "					
/17/48	1:24 PM	0	–	–	–		
5/18/48	1:20 PM	2	–	–	–		
/24/48	2:00 PM	3	–	–	–		
6/9/48	12:50 PM	4	–	–	–		
/14/48	2:20 PM	3	–	–	–		
/21/48	1:00 PM	18	–	–	–		
/28/48	1:10 PM	14	–	–	–		
7/5/48	2:50 PM	0					

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S-50 Sewer Outfall
21W

Sampling Location + Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile alpha	Beta	PH	Remarks
5/16/48	1:45PM	10	–	–	–		
10/18/48	1:05 PM	50	–	–	–		
11/3/48	9:23AM	8	–	–	–		
12/8/48	1:20PM	5	–	–	–		
1/18/49	10:05AM	9	–	–	–		
2/21/49	1:10PM	7	–	–	–		
3/30/49	9:30AM	8	–	–	–		
4/11/49	10:30AM	1	–	–	–		

Month of June – Sampling position covered. No sample taken.

oplar Creek immediately below Powerhouse effluent. Mud

22 M-E

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 miles Alpha	Beta	PH	Remarks
/12/49	1:20 PM	1.13 ug/gm	–	7.9 ± 0.8	80.6	–	Results per gm. dry weight
/13/49	1:10 PM	0.5 micrograms per gm.		5.4 ± 0.4	0.0		"
/12/49	1:35 PM	0.71 mg/gm.	–	–	18		
/19/49	9:00 A.M.	0.686 mg/gm.	–	–	130		"
/2/49	1:30 P.M.	2.50 mg/gm.	–	3.6	93		"
4/49	2:00 P.M.	3.00 mg/gm.	–	–	123		"
-7/49	9:32 A.M.	2.5 mg/gm.	–		176		"
2-5-49	9:20 a.m.	5.00 mg/gm.		–	214		

LOCATION Poplar Creek Immediately Below Powerhouse Effluent

SAMPLE NO. 22D

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Beta	PH	Remarks
11/14-11/18	Composite	0	—	—	4±21	7.6	
11/21/11/25	Composite	0	—	—	5±21	7.8	

LOCATION Poplar Creek Immediately before junction w/Clinch River

SAMPLE NO. 22 W-E

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
1-21-49	1:35 PM	0	-	0.5 ± 1.1	61 ± 24	6.9	
3-29-49	10:00 AM	0	-	0.2 ± 1.1	90 ± 36	7.5	
4-4-49	1:15 PM	1	-	0.6 ± 1.1	49 ± 21	7.7	
4-11-49	2:00 PM	1	-	0.1 ± 1.1	20 ± 21	7.4	
4-18-49	12:50 PM	-	-	0.4 ± 1.1	34 ± 21	7.6	
4-25-49	3:00 PM	0	-	0.1 ± 1.1	16 ± 21	7.9	
2 - 5/6/49	Comp.	0	-	-	50 ± 21	8.0	
9 - 5/13/49	Comp.	1	-	-	127 ± 51	7.7	
16 - 20/49	Comp.	0	-	-	233 ± 93	7.7	
23 - 5/27/49	Comp	0	-	-	19 ± 21	8.1	
31 - 6/5/49	Comp.	1	-	-	48 ± 27	8.2	
3 - 6/10/49	Comp.	0	-	-	45 ± 29	8.1	
13 - 5/17/49	Comp.	1	-	-	49 ± 21	7.6	
20 - 5/24/49	Comp.	1	-	-	43 ± 29	7.7	
27 - 7/1/49	Comp.	0	-	Sample destroyed		8.1	
11 - 7/15/49	Comp.	1	-	-	79 ± 32	8.0	
5 - 7/8/49	Comp.	0	-	-	80 ± 32	8.0	
7/18 - 7/22	Comp.	1	-	-	56 ± 21	7.3	
7/25 - 7/29	Comp.	0	-	-	56 ± 22	7.7	
8/1 - 8/5	Comp.	0	-	-	11 ± 21	7.8	
8/8 - 8/12	Comp.	0	-	-	6 ± 21	7.8	
8/15 - 8/19	Comp.	0	-	-	12 ± 21	7.9	
8/22 - 8/26	Comp.	0	-	-	24 ± 21	7.8	

Poplar Creek below Coverhouse Effluent — 22-D

8/29 - 9/2	Comp.	0	-	-	5 ± 21	8.0
9/5 - 9/9	Comp.	0	-	-	16 ± 21	7.9
9/12 - 9/16	Comp.	0	-	-	9 ± 21	PH sample destroyed
9/19 - 9/23	Comp.	0	-	-	34 ± 21	7.8
9/26 - 9/30	Comp.	0	-	-	0 ± 21	7.7

22-D — Poplar Creek Immediately Below Coverhouse Effluent

10/7/49	Comp.	0	-	-	12 ± 21	7.6
10/14/49	Comp.	0	-	-	11 ± 21	7.8
10/21/49	Comp.	0	-	-	47 ± 21	8.0
10/28/49	Comp.	0	-	-	21 ± 21	8.0
10/31-11/4	Comp.	0	-	-	29 ± 21	7.6

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Poplar Creek immediately [illegible]
22W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	PH	Remarks
7/5/48	10:00AM	0	–	0.1 ± 1.1	–		
7/12/48	1:53PM	0	–	0.4 ± 1.1	–		
7/19/48	3:05PM	0	–	0.3 ± 1.1	–		
7/26/48	1:20PM	0	–	0.4 ± 1.1	–		
/2/48	2:50PM	0	–	0.0 ± 1.1	–		
/9/48	12:47PM	0	–	0.1 ± 1.1	–		
8/16/48	1:55PM	0	–	0.6 ± 1.1	–		
/23/48	9:35AM	0		0.2 ± 1.1			
/1/48	9:10AM	1	–	0.0 ± 1.1	–		
/7/48	9:30AM	0	–	0.0 ± 1.1	–		
/14/48	8:30AM	0	–	0.4 ± 1.1	–		
/20/48	12:30PM	0	–	0.0 ± 1.1	–		
/27/48	3:05PM	0	–	0.4 ± 1.1	–		
/4/48	12:55AM	0	–	0.2 ± 1.1	–		
0/ /48	10:50AM	0	–	0.0 ± 1.1	–		
/18/48	10:50AM	0	–	0.0 ± 1.1	–		
/-/48	2:30PM	0	–	0.3 ± 1.1	–		
11/1/48	3:15AM	0	–	0.5 ± 1.1	–		
11/10/48	11:00AM	0	–	0.4 ± 1.1	–		
11/17/48	9:40AM	0	–	0.0 ± 1.1	–		
11/29/48	10:40AM	0	–	0.4 ± 1.1	–		
1/22/48	1:35PM	0	–	0.2 ± 1.1	–		
2/6/48	3:10PM	0	–	0.2 ± 1.1	0 ± 11	8.0	
2/13/48	9:57AM	0	–	0.6 ± 1.1	5 ± 8	7.7	
2/20/48	9:45AM	0	–	0.4 ± 1.1	53 ± 21	7.3	
2/27/48	1:30PM	0	–	0.5 ± 1.1	9 ± 21	7.5	
/3/49	12:55PM	0	–	1.0 ± 1.1	15 ± 21	7.5	
/10/49	1:50PM	0	–	0.0 ± 1.1	16 ± 21	7.8	
/17/49	1:05PM	0	–	0.5 ± 1.1	0 ± 21	7.6	
/24/49	1:10PM	0	–	0.3 ± 1.1	20 ± 21	7.3	
/1/49	9:45AM	0	–	0.3 ± 1.1	22 ± 21	7.3	
/7/49	1:25PM	0	–	0.3 ± 1.1	16 ± 21	7.4	
4/49	1:42PM	1	–	0.3 ± 1.1	50 ± 21	7.7	
/49	1:30PM	0	–	0.2 ± 1.1	26 ± 21	7.8	
3/ /49	1:10PM	0	–	0.0 ± 1.1	27 ± 21	7.3	
/7/49	1:20PM	0	–	0.0 ± 1.1	18 ± 21	7.9	
3/14/49	1:20PM	2	–	0.1 ± 1.1	33 ± 21	7.6	

Sampling Location: Popular Creek immediately before junction with Clinch R.
Plot Plan Ref. No: 22 W

Sampling Location and Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 Mile Alpha	Beta	PH	Remarks
0/28/47	3:15PM	0	<0.2	1			
1/3/47	12:40 PM	0	<0.2	2			
1/11/47	1:15 PM	0	<0.2	1			
1/17/47	1:40 PM	0	<0.2	1			
1/25/47	9:45 AM	0	<0.2	1			
2/1/47	10:45 AM	0	<0.2	1			
2/9/47	1:30 PM	0	<0.2	1			
2/16/47	1:45 PM	0	<0.2	2.5 ± 0.8			
2/22/47	3:30 PM	0	<0.2	2.4 ± 1.0			
2/29/47	4:10 PM	0	<0.2	0.4 ± 0.7			
1/5/48	4:00 PM	0	<0.2	0.1 ± 0.5			
1/13/48	10:10 AM	0	<0.2	0.5 ± 0.6			
1/19/48	1:10 PM	0	<0.2	2.1 ± 0.7			
1/29/48	12:45PM	0	<0.2	0.5 ± 0.5			
[illegible]/48	3:00PM	0	<0.2	0.1 ± 0.5			
[illegible]/48	1:40PM	0	–	0.5 ± 0.5	–		
2/23/48	1:00PM	0	<0.2	0.2 ± 0.5	–		
2/16/48	1:45PM	0	–	0.3 ± 0.5	–		
3/2/48	1:00PM	0	–	0.1 ± 0.5	–		
3/9/48	3:10PM	0	–	0.8 ± 0.6	–		
/15/48	2:45PM	0	–	0.2 ± 0.5	–		
'22/48	1:00 PM	0	–	0.8 ± 0.6	–		
4/1/48	12:45PM	0	–	0.3 ± 0.5	–		
4/5/48	1:00PM	0	–	0.0 ± 0.5	–		
4/12/48	1:35PM	0	–	0.1 ± 0.5	–		
4/20/48	10:25 AM	0	–	0.5 ± 0.6	–		
4/28/48	10:00 AM	0	–	0.0 ± 0.5	–		
5/3/48	9:00 AM	0	---	0.1 ± 0.5	---		
5/10/48	9:15AM	0	–	0.5 ± 0.5	–		
5/17/48	1:15PM	0	–	0.1 ± 0.5	–		
[illegible]/48	10:40AM	0	–	0.1 ± 0.5	–		
[illegible]/48	9:45 AM	0	–	0.3 ± 0.5	–		
[illegible]/48	9:15 AM	0	–	0.4 ± 0.5	–		
1/14/48	2:15PM	0	–	0.3 ± 0.5	–		
/21/48	12:45PM	0	–	0.0 ± 0.5	–		
6/28/48	1:00 PM	0	–	0.7 ± [illegible]			

90

Ground water adjacent to K-1239 sludge pit

23W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile		
				Alpha	Beta	PH
1/28/47	3:30 PM	0	---	-		
2/4/47	10:00 AM	0	-	-		
1/19/48	3:00 PM	0	-	-	-	
2/20/48	10:15 AM	0	-	-	-	
3/19/48	2:10 PM	0	-	-	-	
4/26/48	2:00 PM	0	-	-	-	
5/24/48	9:30 AM	0	-	-	-	
6/14/48	1:00 PM	0	-	-	-	
7/26/48	9:20 AM	0	-	-	-	
8/19/48	9:05 AM	0	-	-	-	
12/21/48	1:30 PM	0	-	-	-	
1/18/49	2:00 PM	0	-	-	-	
2/23/49	9:30 AM	0	-	-	-	
3/22/49	2:25 PM	0	-	-	-	
4/[illegible]/49	1:00 PM	0	-	-	-	
[illegible]/49	9:55 AM	0	-	-	-	
6/20/49	1:15 AM	0	-	-	-	

FY-1957 Avg/s = 11.

DATE 51	C/M 100ml 24D	Discharge Norris Ft³/Sec NEAREST 100	DATE	C/M 100ml	1000 Ft³/Sec	DATE	C/M 100ML	1000 F³/Sec	DATE	C/M 100ml	1000 Ft³/Sec	DATE	C/M 100ml	1000 Ft³/Sec	DATE	C/M 100ml	1000 Ft³/Sec
ARCH																	
16	6	6.9	5/11		4.6												
7		6.0	5/12	0	3.1												
18	6	5.3	5/13		.02												
19		7.5	5/14	5	5.4												
20	0	7.7	5/15		6.0												
21		7.7	5/16	1	5.0												
22	0	7.1	5/17		4.0												
23		7.1	5-18	1	2.6												
24	0	5.3	5/19	[illegible]	5.5												
25		4.4	20		0												
26	0	7.1	21	1	5.2												
27		6.2	22	1	6.8												
28	0	2.1	23		6.8												
29		1.7	24	1	6.7												
30	0	27	25		6.9												
31		0	26	1	6.2												
il			27		0.4												
1	0	0	28.	0	4.5												
2		3.0	29.		9.6												
3	0	3.0	30.		5.4												
4		0	31	10	6.7												
5	0	0	JUNE														
6		0.02															
7	0	0	1	8	6.4												
8		0.3	2		6.8												
9	0	2.3	3	2.2	2.2												
10		0.38	4		6.8												
11	0		5	4	4.9												
12		0.03 0.0	6		5.2												
13	2	.003	7	3	2.1												
14		1.10	8		0.83												
15	7	.0	9	0	0												
16		1.4	10		0.91												
17	10	1.8	11	0	0												
18		0.4	12		6.90												
19	15	0.121	13	12	6.00												
20		0.344	14		4.50												
21	4	0.0	15	9	4.50												
22		0.0	16		1.00												
23	15	0.932	17	5	1.4												
24		0.131	18		5.8												
25	19	0.310	19	0	0												
26		0	20		7.0												
27	24	0	21	0	2.3												
28	16	2.53	22		0.012												
29		0.248	23	—	3.4												
30	26	4.1	24		1.5												
			25	0	6.1												
ay			26		7.0												
1		3.6	27		1.0												
2	11	4.0	28	4	1.0												
3		4.9	29		1.0												
4	0	5.9	30	4	1.0												
5		6.6															
6	0	0.7															
7		3.5															
8	0	5.0															
9		4.4															

All d/m/100ml are ±21, which is 95% C.L. error by counter on known sample.
24-D sple. pt., K-1515 finished water. Samples are 48 hr cumulative or 24 hr cum.
ft3/s in thousands.
TVA - 2-7181 - ext. 742 J. H. Wilkinson 681

min. of 150 cfs Bowman - Water Control Norris Release
+ Elza Pump

8750 (93)

DATE	d/m/100ml	ft3/s
JANUARY 1950		
1	0	5.7
2	—	4.9
3	1	7.6
4	—	4.9
5	7.9	4.4
6	—	5.5
7	8	—
8	—	3.4
9	7	6.2
10	—	8.2
11	9.7	7.9
12	—	7.3
13	2.0	7.8
14	—	—
15	0.0	7.7
16	—	7.9
17	8	7.9
18	—	7.8
19	7	7.7
20	—	8.0
21	0.0	—
22	—	8.2
23	0.0	8.2
24	—	8.2
25	0	8.1
26	—	8.2
27	19	8.1
28	—	—
29	1	8.2
30	—	8.2
31	2	8.2
FEBRUARY		
1	—	8.5
2	0	10.8
3	—	17.2
4	7	—
5	—	21.1
6	6	21.6
7	—	21.7
8	3	21.7
9	—	15.7
10	11	14.7
11	—	—
12	1	16.8
13	—	22.0
14	2	21.5
15	—	23.8
16	4	25.5
17	—	22.5
18	9	—
19	—	24.7
20	13	25.1
21	—	25.1
22	0	25.0
23	—	23.0
24	1	21.0
25	—	21.0
26	16	0
27	—	0.4
28	21	0
29	—	1.0
30	29	0.8
31	—	1.0
Σ=170 n=15 x̄=11.3		
APRIL		
1	18	—
2	—	3.5
3	0	3.1
4	—	1.4
5	7	3.6
6	—	2.6
7	6	0.8
8	—	—
9	9	0
10	—	2.4
11	8	5.2
12	—	7.5
13	0	6.3
14	—	7.5
15	7	7.5
16	—	7.5
17	16	7.5
18	9	7.5
19	7	7.5
20	—	7.5
21	0	7.5
22	—	7.5
23	11	7.5
24	—	7.5
25	4	7.5
26	—	7.5
27	0	7.5
28	—	7.5
29	7	7.5
30	—	0
Σ=77 n=15 x̄=5.1		
MAY		
1	4	5.2
2	—	5.0
3	0	4.2
4	—	4.4
5	0	3.8
6	—	—
7	7	2.6
8	—	2.5
9	7	2.1
10	—	1.8
11	14	1.6
12	—	1.4
13	16	1.4
14	—	1.9
15	13	1.8
16	—	1.6
17	14	1.4
18	—	1.4
19	7	2.1
20	—	1.8
21	7	1.8
22	—	1.3
23	—	1.3
24	—	1.3
25	5	6.3
26	—	5.4
27	0	6.9
28	—	5.1
29	2	—
30	—	0
31	0	4.2
Σ=77 n=15 x̄=5.1		
JUNE		
1	39	3.6
2	—	3.4
3	15	3.5
4	10	3.8
5	—	3.8
Σ=54 n=20 x̄=2.7		
JULY		
1	—	2.3
2	45	1.3
3	—	—
4	12	0.6
5	—	2.6
6	12	2.4
7	—	3.0
8	36	2.2
9	—	1.2
10	27	4.3
11	—	4.3
12	19	4.5
13	—	3.4
14	9	3.0
15	—	1.6
16	32	0.5
17	—	0.9
18	38	0.9
19	—	0.9
20	52	0.9
21	—	0.9
22	45	1.8
23	—	2.4
24	39	4.3
25	—	0.9
26	—	—
27	71	0.4
28	—	1.2
29	—	0.5
30	39	1.0
31	25	1.3
n=11 Σ=515		
AUGUST		
1	30	0.7
2	—	0.9
3	21	1.9
4	—	0.1
5	61±24	1.1
6	—	1.0
7	20	2.4
8	—	2.4
9	3	2.4
10	—	2.4
11	3	2.4
12	—	2.4
13	35	3.5
14	—	3.5
15	17	4.9
16	—	4.8
17	1	3.7
18	—	5.7
19	7	3.5
20	—	4.3
21	4	5.5
22	—	5.7
23	—	4.9
24	4	5.5
25	4	5.6
26	—	5.6
27	0	4.3
28	—	5.7
29	0	5.3
30	2	3.3
31	23±25	0.8
n=19 Σ=296		
SEPT.		
1	61±27	1.7
2	35	0.04
3	103±41	0.7
4	49	0.3
5	37	1.0
6	150	0.2
7 over	47	1.1
8	32	0.245
9	26	0
10	38	0
11	57	0.090
12	27	0.08
13	28	0
14	29	0
15	23	0
16	40	2.8
17	43	2.9
18	21	5.0
19	4	—
20	0	5.5
21	3	6.7
22	—	6.6
23	0	6.9
24	—	6.9
25	0	7.1
26	—	6.6
27	13	6.3
28	—	6.4
29	7	6.3
30	—	7.2
OCTOBER		
1	0	7.6
2	—	7.3
3	0 (YS)? Accum	7.3
4	—	7.3
5	0	7.0
6	—	7.2
7	7	7.4
8	—	7.4
9	8	7.3
10	—	7.5
11	10	7.5
12	—	7.5
13	0	7.5
14	—	7.5
15	0	7.6
16	—	7.6
17	0	7.6
18	—	7.5
19	2	6.0
20	—	4.5
21	13	1.5
22	—	0
23	4	5.0
24	—	6.4
25	0	4.8
26	0	5.4
27	5	5.6
28	—	0.3
29	1	0.3
30	—	5.6
31	0	5.6
NOVEMBER		
1	—	3.9
2	1	3.2
3	—	5.4
4	5	5.9
5	—	4.9
6	1	7.2
7	—	6.6
8	2	6.3
9	—	5.3
10	8	7.6
11	—	6.5
12	2	7.1
13	—	8.5
14	10	8.4
15	—	8.4
16	0	6.6
17	—	6.0
18	0	6.8
19	—	4.5
20	3	6.2
21	—	6.6
22 over	11	5.5
23	—	1.4
24	3	5.9
25	—	6.1
26	2	4.9
NOVEMBER		
28	0	7.8
29	—	7.4
30	7	6.8
DECEMBER		
1	—	7.5
2	0	7.5
3	—	6.6
4	6	5.0
5	—	6.0
6	0	4.9
7	—	6.5
8	20	4.9
9	29	2.9
10	23	6.8
11	23	7.2
12	28	8.5
13	—	8.5
14	16	8.3
15	—	8.3
16	4	8.4
17	—	8.4
18	0	8.6
19	—	8.3
20	0	8.1
21	—	8.1
22	6	8.1
23	—	8.1
24	0	—
25	—	7.7
26	0	8.0
27	—	8.1
28	1	8.1
29	—	7.6
30	0	8.1
31	—	7.6
JANUARY 1951		
1	21	7.8
2	—	7.7
3	1	6.1
4	—	4.4
5	1	3.6
6	—	1.8
7	2	2.1
8	—	6.6
9	0	7.7
10	—	6.4
11	4	5.9
12	—	7.4
13	0	5.3
14	—	2.3
15	—	4.5
16	0	4.2
17	—	4.7
18	—	4.3
19	0	3.1
JANUARY		
21	0	4.5
22	—	6.7
23	0	1.3
24	—	1.3
25	2	7.6
26	—	7.8
27	0	7.9
28	—	7.9
29	2	5.3
30	—	5.3
31	3	5.3
FEBRUARY		
1	—	5
2	13	5.1
3	—	3.6
4	10	1.3
5	—	5.0
6	0	5.8
7	—	6.0
8	0	6.[illegible]
9	—	6.[illegible]
10	11	[illegible]
11	—	5.0
12	10	3.1
13	—	9.8
14	—	6.7
15	—	7.7
16	0	8.2
17	—	8.3
18	0	8.2
19	—	7.8
20	0	6.6
21	4	7.1
22	3	7.6
23	—	7.5
24	16	7.5
25	—	5.[illegible]
26	7	7.8
27	—	8.1
28	16	8.2
MARCH		
1	—	8.2
2	4	8.3
3	—	8.3
4	—	8.[illegible]
5	9	7.4
6	4	7.7
7	—	7.[illegible]
8	6	7.4
9	—	7.1
10	0	7.[illegible]
11	—	6.0
12	—	7.[illegible]
13	—	7.6
14	—	7.[illegible]
15	—	6.9

16 Σ=73 x̄=4.6

BETA ACTIVITY IN K-25 SANITARY WATER

1949	No Samples taken n	Sum of β count all samples Σ	Average $\bar{x}$	d/m/100ml PEAK	
JULY	17	1525	89.7	170	
AUGUST	18	274	15.2	38	
SEPT.	15	201	13.4	41	
OCT.	16	250	15.6	60	$\frac{653}{48} = 13.6$
NOV.	16	291	18.2	76	
DEC.	16	112	7.0	18	
1950					
JAN.	16	73	4.6	19	
FEB.	14	60	4.3	13	
MAR.	15	170	11.3	29	$45 \overline{)303} = 6.7$
APR.	15	77	5.1	18	
MAY	16	195	12.2	60	
JUNE	20	524	26.2	60	$51 \overline{)796} = 15.6$
~~[illegible]~~	$\Sigma n = 194$	$\Sigma = 3752$	$\frac{\Sigma}{\Sigma n} = 19.3$	(FY 50)	

JULY	17	515	30.3	71	
AUG.	18	296	16.4	63	
SEPT.	25	758	30.3	103	$1569 \div 60 = 26.2$
OCT.	~~15~~ 16	45	2.8	13	
NOV.	15	55	3.7	11	$459 \div 48 = 9.5$
DEC.	17	159	9.4	29	

CAL YR 1950 : $\frac{3127}{204} = 15.3$

1951

Jan	17	17	1	5	$\frac{154}{44} = 3.3$
Feb	13	51	4	13	
Mar	14	86	6	17	
Apr	15	19	1	10	
May	18	144	8	26	
June					
July					

LOCATION Effluent Water from K-25 Water Purification Plant

SAMPLE NO.

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
11/18/49	9:00 AM	–	–	–	7 ± 21		
11/20/49	9:00 AM	–	–	–	7 ± 21		
10-21-49	Disc recounted one month after original count				20 ± 21		
11-30-49	9:00 AM	–	–	–	9 ± 21		
12-2-49	9:00 AM	–	–	–	7 ± 21		
12-4-49	9:00 AM	–	–	–	3 ± 21		
12-6-49	9:00 AM.	–	–	–	3 ± 21		
12-8-49	9:00 AM.	–	–	–	9 ± 21		
12-10-49	9:00 A.M.	–	–	–	9 ± 21		
12-12-49	9:00 A.M.	–	–	–	11 ± 21	Nov. Σ = 291	
12-13-49	9:00 A.M.	–	–	–	7 ± 21	n = 16	
11-22-49	9:00 A.M.	–	–	–	12 ± 21		
11-24-49	9:00 A.M.	–	–	–	9 ± 21		
11-26-49	9:00 A.M.	–	–	–	8 ± 21		
11-28-49	9:00 A.M.	–	–	–	6 ± 21		
11-2/11-28	Composite	0	Leachen 0.2	0 ± 21	—		
12/14/49	9:00 am				18 ± 21		
12/16/49	"				12 ± 21		
12/18/49	"				7 ± 21		
12/20/49	"				8 ± 21		
12/22/49	"				8 ± 21		
12/24/49	"				3 ± 21		
12/26/49	"				6 ± 21		
12/28/49	"				1 ± 21		
11/30 – 12/28	Composite	0	< 0.2	0.0 ± 1.1	—	Dec. Σ = 112	
12/30/49	9:00 am				0 ± 21	n = 16	

LOCATION Effluent Water From K-25 Water Purification Plant

SAMPLE NO. 24-D

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
9-7-49	9:35 AM	—	—	—	14 ± 21	—	
9-9-49	9:00 AM	—	—	—	12 ± 21	—	
9-11-49	9:15 AM	—	—	—	3 ± 21	—	
9-13-49	8:40 AM	—	—	—	7 ± 21	—	
9-15-49	8:45 AM	—	—	—	14 ± 21		
9-17-49	9:00 AM	—	—	—	0 ± 21		
9-19-49	9:00 AM	—	—	—	10 ± 21		
9-21-49	8:35 AM	—	—	—	27 ± 21		
9-23-49	8:10 AM	—	—	—	21 ± 21		
9-25-49	9:00 AM	—	—	—	41 ± 21		
9-27-49	9:00 AM	—	—	—	15 ± 21		
9-29-49	8:50 AM	—	—	—	19 ± 21		Σ = 201 n = 15
9/1 to 9/29/49	Composite	0	<0.2	0.3 ± 1.1	—		
10/1/49	9:00 AM	—	—	—	0 ± 21		
10/3/49	9:00 AM	—	—	—	0 ± 21		
10/5/49	9:00 AM	—	—	—	9 ± 21		
10/7/49	9:00 AM	—	—	—	5 ± 21		
10/9/49	9:00 AM	—	—	—	8 ± 21		
10/11/49	10:00 AM	—	—	—	10 ± 21		
10/13/49	10:00 AM	—	—	—	10 ± 21		
10/15/49	9:00 AM	—	—	—	9 ± 21		
10/17/49	9:00 AM	—	—	—	4 ± 21		
10/19/49	9:00 AM	—	—	—	8 ± 21		
10/21/49	9:00 AM	—	—	—	49 ± 21		
10/23/49	9:00 AM	—	—	—	60 ± 21		
10/25/49	9:00 AM	—	—	—	29 ± 21		
10/27/49	9:00 AM	—	—	—	12 ± 21		
10/29/49	9:00 AM	—	—	—	18 ± 21		
10/31/49	9:00 AM	—	—	—	14 ± 21		Σ = 250 n = 16
10/1 to 10/31	Composite	0	<0.2	0.2 ± 1.1	—		
11/1/49	10:20 AM	—	—	—	76 ± 21		
11/2/49	8:25 AM	—	—	—	54 ± 21		
11/4/49	8:40 AM	—	—	—	34 ± 21		
11/6/49	9:00 AM	—	—	—	16 ± 21		
11/8/49	8:35 AM	—	—	—	9 ± 21		
11/10/49	9:00 AM	—	—	—	5 ± 21		
11/12/49	9:00 AM	—	—	—	4 ± 21		
11/14/49	9:00 AM	—	—	—	13 ± 21		
11/16/49	9:05 AM	—	—	—	22 ± 21		

LOCATION Effluent Water from X-25 Water Purification Plant

SAMPLE NO. 24-D

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
49	9:00AM	–	–	–	97 ± 39	–	
7/14/49	9:00 AM	–	–	–	105 ± 42	–	
7/15/49	9:00AM	–	–		80 ± 32	–	
7/9 to 7/15/49	9:00AM	0	–	1.0 ± 1.1	–	–	
7/17/49	9:00AM	–	–	–	83 ± 33	–	
7/18/49	9:00AM	–	–	–	74 ± 29		Sample collected from 12:15 AM to 9:00 AM
7/19-49	8:30 AM				170		
~~7/19/49~~	~~8:30 AM~~	~~–~~		~~–~~	~~130~~		~~8-30-49~~
~~7/20/49~~					~~74 ± 29~~		
7/21/49	9:00 AM	–	–	–	94 ± 37		
7/17 to 7/23	Comp.	0	–	0.0 ± 1.1	–		
7/23/49	9:00AM	–	–	–	51 ± 21		
7/25/49	9:00AM	–	–	–	66 ± 26		
7/27/49	9:00AM	–	–	–	73 ± 29		
7/24 to 7/29/49	Comp.	0	–	0.1 ± 1.1	–	n = 17	NB, 9/25/50
7/29/49	9:00 AM	–	–	–	74 ± 29	Σ = 1575 for	7/
8/- /49	9:00 AM	–	–	–	35 ± 21		
49	8:30 AM	–	–	–	38 ± 21		
49	8:30 AM	–	–	–	12 ± 21		
8/8/49	9:00 AM	–	–	–	9 ± 21		
7/31/49	9:00 AM	–			15 ± 21		
7/1 to 7.31/49	Comp.	–	<0.2	–	–		
8/10/49	8:55 A.M.	–	–	–	14 ± 21		
8/12/49	9:30 A.M.	–	–	–	17 ± 21		
8/14/49	[illegible]	–	–	–	13 ± [illegible]		
8/16/49	[illegible]	–	–	–	3 ± 21		
8/18/49	9:00 A.M.	–	–	–	13 ± 21		
8/20/49	9:00 A.M.	–	–	–	10 ± 21		
8/21/49	2:00 P.M.	–	–	–	8 ± 21		
8/22/49	9:00 A.M.	–	–	–	17 ± 21		
8/23/49	9:00 A.M.	–	–	–	1 ± 21		
8/24/49	8:30 A.M.	–	–	–	22 ± 21		
8/26/49	9:00 A.M.	–	–	–	30 ± 21		
8/ -/49	9:00 A.M.	–	–	–	17 ± 21	n = 18	
8/30/49	8:55 A.M.	–	–	–	0 ± 21	Σ = 274	
8/1 to 8/31/49	Comp.	0	<0.2	alpha 0.2 ± 1.1	–	–	
9-1-49	9:00 A.M.	–	–	–	6 ± 21	–	
9-3-49	9:00 A.M.	–	–	–	8 ± 21	–	
9-5-49	9:00 A.M.						

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Effluent water from X-25 Water Purification Plan
24 D

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile alpha	Beta	PH	Remarks
/14/49	9:00AM	–	–	–	293 ± 117		
/16/49	9:00AM	–	–	–	334 ± 134		
5/18/49	9:00AM	–	–	–	286 ± 114		
/20/49	8:40AM	–	–	–	204 ± 82		
/16-22/49	Composite	0	<0.2	0.6±1.1	–		
/21/49	9:00AM	–	–	–	154 ± 62		
/22/49	9:00AM	–	–	–	195 ± 78		
/23/49	9:00AM	–	–	–	59 ± 24		
/24/49	9:00AM	–	–	–	16 ± 21		
/26/49	9:35AM	–	–	–	40 ± 21		
/23-29/49	Composite	0	<0.2	1.6±1.1	–		
/28/49	9:00AM	–	–	–	35 ± 21		
/29/49	9:00AM	–	–	–	62 ± 21		
/30/49	9:00AM	–	–	–	152		
1/49	9:40AM	–	–	–	88 ± 34		
3/49	9:00AM	–	–	–	57 ± 23		
6/5	Composite	1	<0.2	0.1±1.1	–		
/5/49	9:00AM	–	–	–	116		
/7/49	9:00AM	–	–	–	55 ± 22		
/9/49	8:25AM	–	–	–	24 ± 21		
6-5 to 6-11	Composite	0	<0.2	0.2±1.1	34 ± 21		
/13/49	9:00 AM	–	–	–	51 ± 26		
/15/49	8:20 AM	–	–	–	53 ± 27		
/17/49	9:00 AM	–	–	–	40 ± 21		
6-13-17	Camp.	0	0.3	0.3±1.1			
/18/49	9:30 AM	–	–	–	41 ± 21		
/19/49	9:30 AM	–	–	–	47 ± 21		
/20/49	9:30 AM	–	–	–	53 ± 25		
/21/49	9:00 AM	–	–	–	69 ± 28		
/23/49	8:30 AM	–	–	–	37 ± 21		
6-19-25	Camp	1	<0.2	0.1±1.1			
/25/49	9:30 AM	–	–	–	72 ± 42		
/27/49	9:[illegible] AM	–	–	–	66 ± 26		
/29/49	[illegible]	–	–	–	67 ± 27		
/1/49	10:[illegible] AM	–	–	–	88 ± 35		
7-3-49	[illegible]	–	–	–	75 ± 30		
7-5-49	[illegible]	–	–	–	88 ± 35		
7-7-49	[illegible]	–	–	–	79 ± 32		
7 [illegible]	[illegible] AM	–	–	–	131 ± 52		
1/3 to 7/9/49	Composite	1	–	0.1±1.1	–		

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Effluent Water from K-25 Water purification plant
240

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	Pa	Remarks
3/28/49	10:00AM	–	–	–	45 ± 21		
3/29/49	9:00AM	0	<0.2	0.2 ± 1.1	46 ± 21		
3/31/49	8:40AM	0	–	0.0 ± 1.1	56 ± 22		
4/2/49	9:00AM	–	–	–	66 ± 26		
4/4/49	9:00AM	–	–	–	44 ± 21		
4/6/49	8:40AM	–	–	–	48 ± 21		
4/8/49	8:15AM	–	–	–	32 ± 21		
4/2-8/49	Composite	0	<0.2	0.0 ± 1.1	–		
4/10/49	9:00AM	–	–	–	38 ± 21		
4/12/49	8:27AM	–	–	–	33 ± 21		
4/14/49	8:40AM	–	–	–	33 ± 21		
4/16/49	9:00AM	–	–	–	68 ± 27		
4/10-16/49	Composite	0	<0.2	0.0 ± 1.1	–		
4-18-49	9:00 AM	–	–	–	34 ± 21		
4-[illegible]-49	8:40 AM	–	–	–	42 ± 21		
[illegible]-49	8:45 AM	–	–	–	20 ± 21		
4/18-24/49	composite	0	<0.2	0.0 ± 1.1	–		
4-24-49	9:00 AM	–	–	–	19 ± 21		
4-26-49	8:25 AM	–	–	–	53 ± 21		
4-28-49	8:45 AM	–	–	–	25 ± 21		
4-28-49	9:00 PM	–	–	–	145 ± 58		see notes on W.O. creek overflow at this time
4-29-49	8:20 AM	–	–	–	135 ± 54		
4-29-49	9:00 PM	–	–	–	100		
4-30-49	9:00 AM	–	–	–	16		
4-30-49	9:00 PM	–	–	–	60		
5-1-49	9:00 AM	–	–	–	53		
5-1-49	9:00 PM	–	–	–	48		
5-2-49	9:00 AM	–	–	–	47		
4/26-30/49	composite	0	<0.2	0.0 ± 1.1	–		
5/4/49	8:45AM	–	–	–	38 ± 21		
5/[illegible]/49	8:30AM	–	–	–	58 ± 23		
4/2-8/49	Composite	0	<0.2	0.2 ± 1.1	–		
5/8/49	9:00AM	–	–	–	85 ± 34		
5/10/49	9:45AM	–	–	–	74 ± 30		
5/12/49	9:00AM	–	–	–	148 ± 59		
5/8-14/49	Composite	0	<0.2	0.0 ± 1.1	–		

Effluent Water from K-25 Water purification plant
24 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
/7/49	9:00AM	0	0.4	0.0±1.1	21±21		
/9/49	9:00AM	0 190	–	0.7±1.1	24±21		
/11/49	8:45AM	0	–	0.0±1.1	20±21		
/13/49	8:40AM	0	–	0.0±1.1	33±21		
/15/49	8:40AM	0	<0.2	0.1±1.1	70±28		
/16/49	8:45AM	–	–	0.1±1.1	57±23		
/17/49	8:40AM	0	–	0.0±1.1	149±60		
/18/49	8:30AM	–	–	0.0±1.1	139±56		
/19/49	9:00AM	0	–	0.2±1.1	109±44		
/20/49	9:00AM	–	–	–	166±66		
/21/49	8:30AM	2	<0.2	0.2±1.1	92±37		
/22/49	9:00AM	–	–	0.3±1.1	57±23		
/23/49	8:40AM	0	–	0.1±1.1	34±21		
/25/49	8:20AM	0	–	0.1±1.1	37±21		
/27/49	8:30AM	0	–	0.1±1.1	25±21		
49	8:30AM	0	<0.2	0.0±1.1	24±21		
1	9:05AM	0	–	0.0±1.1	26±21		
/5/49	9:00AM	0	–	0.0±1.1	16±21		
/7/49	9:00AM	0	<0.2	0.0±1.1	13±21		
/9/49	8:45AM	0	–	0.1±1.1	28±21		
/11/49	9:20AM	0	–	0.1±1.1	26±21		
/13/49	9:15AM	0	–	0.0±1.1	29±21		
/15/49	9:00AM	0	–	0.1±1.1	39±21		
/17/49	9:00AM	0	–	0.0±1.1	27±21		
/18/49	10:00AM	–	–	–	24±21		
/18/49	10:00PM	–	–	–	50±21		
/19/49	10:00AM	7	–	0.6±1.1	105±42		
/19/49	10:00PM	–	–	–	147±44		
/20/49	10:00AM	–	–	–	77±31		
/20/49	10:00PM	–	–	–	98±39		
/21/49	10:00AM	0	<0.2	0.3±1.1	78±31		
/23/49	8:25AM	0	–	0.2±1.1	67±27		
5/49	10:00AM	0	–	0.0±1.1	47±21		
49	10:00PM	–	–	–	101±40		
/26/49	10:00AM	–	–	–	97±39		
/26/49	10:00PM	–	–	–	91±36		
/27/49	10:00AM	0	–	0.0±1.1	77±31		

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Effluent water from K-25 water purification Plant

24W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min per 100 mile alpha	Beta	PH	Remarks
12/1/48	8:55AM	0	–	0.2±1.1	27±8		
2/3/48	9:20AM	0	–	0.0±1.1	26±8		
2/5/48	8:00AM	0	<0.2	0.0±1.1	37±8		
2/7/48	9:30AM	0	–	0.3±1.1	37±8		
2/9/48	8:50AM	0	–	0.0±1.1	33±8		
2/11/48	8:00AM	0	–	0.0±1.1	9±8		
2/13/48	8:30AM	0	<0.2	0.0±1.1	20±8		
2/15/48	8:40AM	0	–	0.5±1.1	9±8		
2/17/48	9:15AM	0	–	0.0±1.1	35±21		
2/19/48	9:00AM	0	–	0.1±1.1	38±21		
2/21/48	9:00AM	0	–	0.3±1.1	32±21		
2/23/48	8:30AM	0	<0.2	0.5±1.1	25±21		
2/25/48	9:00AM	0	–	0.1±1.1	23±21		
2/27/48	10:00AM	0	<0.2	0.0±1.1	35±21		
2/[illegible]48	9:00AM	0	–	0.1±1.1	15±21		
[illegible]/21/48	9:00AM	0	–	0.2±1.1			
[illegible]	9:00AM	0	–	0.1±1.1	16±21		
1/4/49	8:45AM	0	<0.2	0.0±1.1	22±21		
1/6/49	8:15AM	0	–	0.1±1.1	53±30		
1/7/49	8:20AM	–	–	–	102±58		
1/8/49	9:00AM	0	–	0.0±1.1	39±21		
1/9/49	9:10AM	–	–	–	25±21		
1/10/49	9:00AM	0	<0.2	0.2±1.1	32±21		
1/12/49	9:15AM	0	–	0.7±1.1	12±21		
1/14/49	8:35AM	0	–	0.0±1.1	4±21		
1/16/49	9:00AM	0	–	0.0±1.1	8±21		
1/18/49	8:40AM	0	<0.2	0.1±1.1	2±21		
1/20/49	9:10AM	0	–	0.0±1.1	70±28		
1/22/49	9:00AM	0	–	0.1±1.1	56±22		
1/23/49	9:00AM	–	–	0.2±1.1	151±60		
1/24/49	8:25AM	*50	<0.2	3.1±1.1	64±26		*
[illegible]	9:36AM	0	–	0.0±1.1	49±21		
[illegible]	9:00AM	0	–	0.0±1.1	26±21		
[illegible]	9:00AM	4	–	0.8±1.1	41±21		
1/1/49	9:05AM	0	<0.2	0.0±1.1	47±21		
2/3/49	8:30AM	2	–	0.0±1.1	42±21		
2/5/49	9:00AM	0	–	0.1±1.1	21±21		

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effluent water from K-25 Water purification Plant
24W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile Alpha	Beta	PH	Remarks
7/17/48	9:00AM	0	–	0.1±1.1	18±8		
7/19/48	12:00PM	0	–	0.0±1.1	14±8		
7/21/48	8:30AM	0	<0.2	0.3±1.1	14±8		
7/23/48	9:15AM	0	–	0.0±1.1	19±8		
7/25/48	12:00PM	0	–	0.0±1.1	11±8		
7/27/48	8:50AM	0	<0.2	0.0±1.1	19±8		
7/29/48	8:40AM	0	–	0.2±1.1	23±8		
8/1/48	8:25AM	0	–	0.2±1.1	17±8		
8/3/48	12:00PM	0	–	0.0±1.1	4±8		
8/5/48	9:05AM	0	0.2	0.0±1.1	25±8		
8/7/48	8:30AM	0	–	0.4±1.1	5±8		
8/9/48	12:00PM	0	–	0.0±1.1	8±8		
8/11/48	8:55AM	0	<0.2	0.0±1.1	26±8		
8/13/48	9:34AM	0	–	0.2±1.1	3±8		
8/15/48	8:20AM	0	–	0.2±1.1	15±8		
[illegible]/48	12:00PM	0	–	0.2±1.1	2±8		
[illegible]/48	8:32AM	0	<0.2	0.1±1.1	3±8		
8/21/48	8:17AM	0	–	0.1±1.1	11±8		
8/23/48	12:00PM	0	–	0.0±1.1	6±8		
8/25/48	9:00AM	0	<0.2	0.0±1.1	23±8		
8/27/48	9:35AM	0	–	0.0±1.1	0±8		
8/29/48	8:30AM	0	–	0.0±1.1	8±8		
8/31/48	12:00PM	0	–	0.2±1.1	8±8		
9/3/48	8:25AM	0	–	0.5±1.1	19±8		* ?
9/5/48	9:05AM	0	<0.2	0.2±1.1	27±8		
9/7/48	8:40AM	0	<0.2	0.2±1.1	66±8		
9/9/48	8:45AM	0	–	0.2±1.1	141±8		
9/11/48	9:16AM	0	–	0.2±1.1	122±8		
9/13/48	12:00PM	0	–	0.3±1.1	64±8		
9/15/48	8:45AM	0	–	0.0±1.1	18±8		
9/17/48	8:50AM	0	<0.2	0.1±1.1	30±8		
9/19/48	10:19AM	0	–	0.3±1.1	27±8		
[illegible]	9:00AM	0	<0.2	0.3±1.1	426±8		
[illegible]/48	8:30AM	0	–	0.0±1.1	103±8		
9/25/48	9:05AM	0	–	0.0±1.1	66±8		
9/27/48	8:45AM	0	–	0.0±1.1	37±8		
11/29/48	10:25AM	0	<0.2	0.1±1.1	93±8		

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Effluent Water from K-25 Water Purification Plant
24W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min Per 100 Mils Alpha	Beta	PH
3/19/48	10:00AM	0	–	0.5 ± 0.6	0.8	
3/22/48	11:00AM	0	–	0.5 ± 0.6	2.31 ± 2.37	
3/24/48	9:50AM	0	–	0.4 ± 0.6	0.0	
3/25/48	10:30AM	0	–	0.4 ± 0.5	0.0	
3/26/48	9:25AM	0	–	0.5 ± 0.5	1.9	
3/29/48	9:00AM	0	–	0.1 ± 0.5	0.0	
3/30/48	10:08AM	0	–	0.3 ± 0.5	0.0	
3/31/48	10:55AM	0	–	0.1 ± 0.5	0.0	
4/1/48	10:10AM	0	–	0.4 ± 0.5	2.0	
4/2/48	10:55AM	0	–	0.7 ± 0.5	0.8	
4/5/48	9:45AM	0	–	0.4 ± 0.6	0.8	
4/6/48	9:30AM	0	–	0.2 ± 0.5	0.0	
4/7/48	9:50AM	0	–	0.3 ± 0.5	0.0	
4/8/48	10:40AM	0	–	0.8 ± 0.6	0.0	
4/[illegible]/48	9:30AM	0	–	0.6 ± 0.6	3.1	
	10:45AM	0	–	0.2 ± 0.5	2.6	
[illegible]/[illegible]/48	9:10AM	0	–	0.1 ± 0.5	1.6	
4/14/48	1:00PM	0	–	0.1 ± 0.5	1.1	
4/15/48	9:20AM	0	–	0.0 ± 0.5	1.6	
7/1/48	8:40AM	0	<0.2	0.0 ± 1.1	17 ± 8	
7/3/48	8:25AM	0	–	0.0 ± 1.1	8 ± 8	
7/5/48	12:01PM	0	–	0.0 ± 1.1	3 ± 8	
7/7/48	9:10AM	0	<0.2	0.0 ± 1.1	0 ± 8	
7/9/48	8:20AM	0	–	0.2 ± 1.1	5 ± 8	
7/11/48		0	–	0.0 ± 1.1	26 ± 8	
7/13/48	9:25AM	0	<0.2	0.0 ± 1.1	13 ± 8	
7/15/48	8:20AM	0	–	0.0 ± 1.1	46 ± 8	

Remarks:

Some effluent boiler in this period

Effluent water from K-25 water purification plant
24W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mill Alpha	Beta	pH
1/28/48	12:40 PM	0	–	0.5 ± 0.6	0.0	
1/29/48	12:30 PM	0	–	0.0 ± 0.5	0.0	
1/30/48	9:30 AM	0	–	0.2 ± 0.5	0.7	
2/2/48	1:55 PM	0	–	0.0 ± 0.5	0.4	
2/3/48	12:20 PM	0	–	0.0 ± 0.5	0.0	
2/4/48	11:00 AM	0	–	0.3 ± 0.5	0.5	
2/5/48	3:30 PM	0	–	0.0 ± 0.5	0.6	
2/6/48	10:30 AM	0	–	0.5 ± 0.5	0.0	
2/9/48	10:20 AM	0	–	0.1 ± 0.5	1.4	
2/10/48	8:35 AM	0	–	0.0 ± 0.5	0.0	
2/11/48	10:45 AM	0	–	0.6 ± 0.6	0.8	
2/12/48	10:15 AM	0	–	0.2 ± 0.5	1.0	
2/13/48	10:30 AM	0	–	0.0 ± 0.5	0.5	
2/16/48	11:10 AM	0	–	0.0 ± 0.5	0.0	
2/17/48	10:15 AM	0	–	0.5 ± 0.6	0.0	
	1:30 PM	0	–	0.3 ± 0.5	0.0	
8	11:00 AM	0	–	0.8 ± 0.6	0.0	
2/20/48	10:05 AM	0	–	0.0 ± 0.5	0.0	
2/23/48	12:30 PM	0	–	0.1 ± 0.5	0.0	
2/24/48	9:40 AM	0	–	0.2 ± 0.5	0.0	
2/25/48	11:00 AM	0	–	0.1 ± 0.5	0.0	
2/26/48	2:15 PM	0	–	0.3 ± 0.5	0.0	
2/27/48	10:20 AM	0	–	0.1 ± 0.5	0.0	
3/1/48	10:35 AM	0	–	1.5 ± 0.7	0.0	
3/2/48	12:40 PM	0	–	0.1 ± 0.5	0.2	
3/3/48	10:05 AM	0	–	0.0 ± 0.5	0.0	
3/4/48	12:55 PM	0	–	0.2 ± 0.5	1.9	
3/5/48	10:15 AM	0	–	0.0 ± 0.5	0.4	
3/8/48	1:20 PM	0	–	1.4 ± 0.7	0.0	
3/9/48	10:30 AM	0	–	0.0 ± 0.5	0.0	
3/10/48	9:30 AM	0	–	0.1 ± 0.5	0.0	
3/11/48	10:35 AM	0	–	0.0 ± 0.5	1.0	
	2:32 PM	0	–	0.0 ± 0.5	0.0	
8	9:47 AM	0	–	0.1 ± 0.5	0.0	
3/16/48	12:50 PM	0	–	0.0 ± 0.5	0.0	
3/17/48	9:30 AM	0	–	0.2 ± 0.5	0.4	
3/18/48	3:15 PM	0		0.0 ± 0.5	0.1	

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Effluent water from A-25 water purification plant

24W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile alpha	Beta	PH
12/15/47	2:25 PM	0	–	1		
12/16/47	10:45 AM	0	–	<0.5	1.05	
12/17/47	3:15 PM	0	–	0.9 ± 0.7	0	
12/18/47	3:45 PM	0	–	0.4 ± 0.7	0	
12/19/47	10:20 AM	0	–	1.3 ± 0.9	1.25	
12/22/47	3:15 PM	0	–	1.6 ± 0.9	0	
12/23/47	9:30 AM	0	–	0.6 ± 0.8	0	
12/24/47	11:00 AM	0	–	1.6 ± 0.8	0	
12/26/47	10:35 AM	0	–	0.3 ± 0.6	0	
12/29/47	12:50 AM	0	–	0.3 ± 0.7	0	
12/30/47	10:30 AM	0	–	1.0 ± 0.7	0	
12/31/47	10:40 AM	0	–	0.2 ± 0.6	–	
12/31/47	10:40 AM	–	–		0.0	
1/2/48	10:00 AM	–	–		1.1	
1/[illegible]/48	10:30 AM	–	–		0.0	
	11:00 AM	–	–		1.3	
"	2:00 PM	–	–		0.0	
1/9/48	4:00 PM	–	–		0.0	
1/12/48	10:50 AM	–	–		0.4	
1/2/48	10:00 AM	0	–	0.2 ± 0.6		
1/5/48	10:30 AM	0	–	–		
1/7/48	11:00 AM	0	–	0.3 ± 0.5		
1/8/48	2:00 PM	0	–	0.8 ± 0.6		
1/9/48	4:00 PM	0	–	0.6 ± 0.6		
1/12/48	10:50 AM	0	–	0.0 ± 0.5		
1/13/48	10:00 AM	0	–	0.3 ± 0.5	7.8	
1/14/48	11:00 AM	0	–	0.0 ± 0.5	0.6	
1/15/48	1:40 PM	0	–	0.0 ± 0.5	0.7	
1/16/48	11:00 AM	0	–	0.3 ± 0.5	0.0	
1/19/48	1:20 PM	0	–	0.0 ± 0.5	0.0	
1/20/48	10:20 AM	0	–	0.4 ± 0.5	0.0	
1/[illegible]/48	10:15 AM	0	–	0.0 ± 0.5	0.0	
	11:00 AM	0	–	0.3 ± 0.5	0.0	
[illegible]/48	2:50 PM	0	–	0.0 ± 0.5	0.5	
1/26/48	1:40 PM	0	–	0.3 ± 0.5	0.8	
1/27/48	10:00 AM	0	–	0.3 ± 0.5	0.3	

Effluent water from 1-25 water purification plant
24-W

Sampling Location & Plot Reference Plan

Date	time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile alpha	Beta	PH
0/23/47	1:31 PM	0	---	0.5		
/24/47	10:00 AM	0	---	-		
/27/47	3:35 PM	0	---	1		
/28/47	3:40 PM	0	---	0.5		
/29/47	9:35 AM	0	---	1		
/30/47	10:07 AM	0	---	1		
/31/47	10:30 AM	0	---	1		
/3/47	10:30 AM	0	---	1		
/4/47	9:55 AM	0	---	4		
/5/47	9:50 AM	0	---	1		
/6/47	2:20 PM	0	---	3		
/7/47	2:00 PM	0	---	1		
/10/47	11:00 AM		---	1		
/11/47	10:45 AM	0	---	1		
/12/47	9:15 AM	0	---	1		
3/47	11:01 AM	0	---	2		
, 47	9:15 AM	0	---	2		
11/17/47	10:40 AM	0	---	1		
1/18/47	2:30 PM	0	---	1		
1/19/47	10:50 AM	0	---	1		
/20/47	10:45 AM	0	---	1		
/21/47	9:15 AM	0	---	2		
/24/47	12:50 PM	0	---	1		
/25/47	9:25 AM	0	---	2		
/26/47	9:25 AM	0	---	2		
/28/47	9:55 AM	0	---	1		
/28/47	9:55 AM				2 ≠ 1	
/1/47	10:30 AM	0	---	<0.5	0	
/2/47	9:20 AM	0	---	1	0	
/3/47	10:26 AM	0	---	1		
/4/47	10:15 AM	0	---	<0.5		
/5/47	10:45 AM	0	---	1	0	
	3:30 PM	0	---	1	0.26	
. 1	10:30 AM	0	---	1	1.47	
1:0/47	10:30 AM	0	---	1	0.48	
/11/47	10:30 AM	0	---	2	1.18	
2/12/47	2:55 PM	0	---	2		

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Bottom of settling basins #1 and #2 at K-1515, Mud

24 M-E

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min. Per 100 mile alpha	Beta	PH	Remarks
-/16/48	12:35PM	5000	–	43 ± 7	2098		
3/31/48	12:05PM	–	–	10 ± 2	1137		
5/20/48	1:10PM	7500	–	11.5 ± 3.8	1508		
6/14/48	3:33PM	2,500	–	31.0 ± 5.3	1041		
1/10/48	2:00PM	10,000	–	39.8 ± 6.8	3058		
2/15/48	2:00PM	875	–	13.9 ± 2.7	13,674		
1/12/49	9:35AM	2.5	–	5.3 ± 0.9	1666		
2/9/49	3:00PM	4.7 ug/g.	–	11.4 ± 1.9	4198		
3/16/49	10:45AM	0.62 ug/g	–	15.6 ± 2.7 c/m/g	8391 c/m/g		Results are based on one gram dry wt.
4/18/49	3:50PM	5.6 ug/gm	–	16.4 ± 1.5	10,775		"
5/11/49	3:30PM	6.25 ug/gm	–	13.0 ± 1.4	5468		Results per gram dry weight
5/31/49		2.5 Micrograms per gm.		12.4 ± 1.0	3846.1		"
7-20-49	3:20 PM	1.04 micrograms/gm.	–	3.3 ± 0.3	1071		Results based on one gm dry wt.
7-20-49	3:20 PM	0.38 " "	–	7.7 ± 0.6	207		(3" under top layer of sand filters - results based on one gm dry weight.)
8-1-49	9:00 AM	0.50		14.5 ± 1.2	742		Results based on one gm. dry wt
8/23/49	10:00 AM	2.50		17.0 ± 1.4	1186		
9/7/49	8:50AM	0.50 mg/gm.		5.3 ± 0.4	441		Sludge from filters 1515 - S.E. Corner
9/8/49	10:15A.M.	3.12 mg/gm.		14.1 ± 1.4	760		Sludge from N.E. Corner of settling basins K-1515.
10/5/49	9:20 A.M.	1.25 mg/gm.		1.9 ± 0.2	55		
10/13/49	9:15A.M.	1.38 mg/gm.		3.8 ± 0.3	835		Per gram per dry weight.

Clinch River above Elza Gate, Mud

25ME-X

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPB	Counts per min. Per 100 mile			Remarks
				Alpha	Beta	PH	
1/21/48	10:00 AM	380	82.2	0.1	11±11		

25ME4.

11-7-49-10:25 A.M. 0.16 Micrograms/gm. — 5
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Clinch River. 1½ mile from Elza gate
25 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile Alpha	Beta	PH	Remarks
1/24/47	9:10 AM	0	<0.2	1			
2/5/47	10:00 AM	0	<0.2	1			
1/16/48	10:20 AM	0	<0.2	0.8 ± 0.6	–		
2/6/48	3:00 PM	0	<0.2	0.2 ± 0.3	–		
3/1/48	1:30 PM	0	<0.2	0.4 ± 0.5	–		
4/2/48	3:20 PM	0	–	0.1 ± 0.5	–		
5/10/48	3:30 PM	0	<0.2	0.2 ± 0.5	–		
6/1/48	2:25 PM	0	<0.2	0.1 ± 0.5	–		
7/16/48	2:30 PM	0	<0.2	0.1 ± 1.1	–		
8/9/48	1:05 PM	0	<0.2	0.2 ± 1.1	–		
12/8/48	3:45 PM	0	<0.2	0.0 ± 1.1	–		
5/26/49	2:00 PM	0	<0.2	0.3 ± 1.1	1±21		

Drainage from Labs. A, B, C, + D.

~~29W~~ 26M & 27M
26W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per min. Per 100-mile Alpha	Beta	PH
1/28/47	10:20 AM	40	---	7		
12/23/47	9:35 AM	2	–	2.4 ± 0.8		
1/29/48	2:15 PM	3	–	0.4 ± 0.5		
2/16/48	4:10 PM	3	–	2.1 ± 0.7	–	
3/19/48	12:45 PM	2	–	1.0 ± 0.6	–	
4/22/48	2:40 PM	0	–	0.5 ± 0.6	–	
5/6/48	1:07 PM	10	–	3.5 ± 0.8	–	
6/18/48	10:30 AM	3	–	0.1 ± 0.6	–	
7/26/48	3.05 PM	1	–	0.4 ± 1.1	1 ± 2	
8/17/48	9:00 AM	3	–	0.8 ± 1.1	–	
2/21/48	2:10 PM		–	4.9 ± 1.1	–	
/24/49	2:00 PM	10	–	4.0 ± 1.1	47 ± 29	
2/23/49	9:45 AM	1	–	1.8 ± 1.1	40 ± 21	
3/29/49	3:35 PM	4	–	0.6 ± 1.1	97 ± 39	
4/20/49	2:00 PM	10	–	6.2 ± 1.6	36 ± 21	
30/49	Composite wkly Spl.	3	–	2.9 ± 1.6	94 ± 38	–
6/6 - 6/7	Composite	5	–	14.5 ± 1.1	46 ± 29	–
/5-7/27/49	Comp.	3	–	2.86 ± 1.1	83 ± 33	
8/1 - 8/30	Comp.	5	–	2.1 ± 1.1	40 ± 21	–
9/5 - 9/27	Comp.	1	–	2.2 ± 1.1	24 ± 29	–
mo. Comp. of weekly Samples		2	–	0.3 ± 1.5	66 ± 21	–
11-7/11-28	Composite	3	–	1 ± 1.6	53 ± 21	–

Sampling Location: Flow Ditch at west end of holding pond
Plot Plan Ref. No: 29 W

SAMPLING LOCATION AND PLOT REFERENCE PLAN

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. For 100 Ml. Alpha	Beta	PH	Remarks
8/6/48	12:50PM	4	–	2.9 ± 2.2	–		
8/9/48	10:16AM	0	–	0.9 ± 1.1	–		
8/17/48	8:35AM	0	–	1.8 ± 1.1	–		
8/23/48	10:35AM	0		1.0 ± 1.1			
9/1/48	12:30PM	0	–	1.0 ± 1.1	–		
9/7/48	12:45PM	1	–	4.6 ± 1.1	–		
9/14/48	9:06AM	0	–	3.9 ± 1.1	–		
9/20/48	12:10PM	8	–	6.7 ± 1.1	–		
9/27/48	10:10AM	4	–	3.3 ± 1.1	–		
10/4/48	10:25AM	5	–	5.1 ± 1.1	–		
10/11/48	10:10AM	5	–	23.1 ± 1.1	–		
10/18/48	9:03AM	4	–	3.3 ± 1.1	–		
10/25/48	10:10AM	5	–	8.8 ± 1.1	–		
11/1/48	3:30PM	12	–	7.6 ± 1.1	–		
11/[illegible]/48	8:45AM	8	–	8.8 ± 1.1	–		
11/19/48	1:01PM	5	–	3.8 ± 1.1	–		
[illegible]/48	12:30PM	6	–	8.7 ± 1.1	–		
1/29/48	9:40AM	8	–	–	–		
2/6/48	3:40PM	16	–	8.8 ± 1.1	–	–	
12/20/48	12:30PM	10	–	18.2 ± 1.1	–	–	
1/10/49	3:25AM	2	–	2.7 ± 1.1	–	–	
1/24/49	10:00AM	10	–	12.2 ± 1.1	–	–	
2/7/49	10:10AM	4	–	6.9 ± 1.1	–	–	
3/1/49	10:10AM	2	–	5.6 ± 1.1	–	–	
3/14/49	3:35PM	12	–	10.0 ± 1.1	–	–	
3/29/49	9:30AM	2	–	2.4 ± 1.1	–	–	
4/12/49	9:20AM	1	–	10.9 ± 1.1	–	–	
5/2/49	2:35PM	80	–	–	–	–	
5/17/49	12:30PM	2	–	–	–	–	
5/31/49	1:40PM	6	–	–	–	–	
6/13/49	2:10PM	9	–	–	–	–	
6/[illegible]/49	9:30AM	3	–	–	–	–	
7/11/49	1:30PM	6	–	–	–	–	
7/25/49	10:45A.M.	10	–	–	–	–	
8/8/49	1:15P.M.	13	–	–	–	–	
8/23/49	10:30A.M.	7	–	–	–	–	

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K-1004-Y Normally Cold drain before dumping
30W

Sampling Location + Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	PH	Remarks
1/14/49	9:15AM	–	–	0.9 ± 1.1	8803		
1/21/49	9:00AM	–	–	0.1 ± 1.1	2335		
1/28/49	9:20AM	–	–	0.3 ± 1.1	3057		
1/7/49	9:05AM	–	–	1.0 ± 1.1	2530		
1/14/49	8:40AM	–	–	0.0 ± 1.1	719		
1/21/49	12:45PM	–	–	1.2 ± 1.6	8933		
1/28/49	9:10AM	–	–	3.2 ± 1.1	19,601		
1/4/49	10:05AM	–	–	0.5 ± 1.1	1012		The liquid level gauge measured 18½ inches at 50% Geometry
1/22/49	9:00AM	–	–	7.8 ± 1.1	1585		at 100% Geometry
5-4-49	9:30AM		–	4.3 ± 1.6	1553	2940 gal	0.078 mc
5/17/49	10:45AM	–	–	5.2 ± 1.6	2303	2760 gal.	0.108 mc
1/31/49	8:15AM	–	–	3.6 ± 1.1	9250		
6/8/49	10:15AM	–	–	9.1 ± 1.1	908	2360 gal.	0.0365 mc
6/20/49	12:58PM	–	–	2.8 ± 1.6	3274	2280 gal.	0.127 mc
5-49	9:45AM	–	–	2.2 ± 1.1	2750	3080 gal.	– 0.1444 mc
7-18-49	9:45A.M.	–	–	6.82 ± 1.1	5485	2280 gal.	– 0.213 mc
8-1-49	12:40P.M.	–	–	6.4 ± 1.1	1628	3160 gal.	– 0.088 mc
8/22/49	8:30 A.M.	–	–	6.1 ± 1.1	419	3100 gal.	– 0.022 mc
~~9-12-49~~	~~11:15AM~~	–	–			Liquid level - 43"	
9-12-49	11:15 A.M.	–	–	3.4 ± 1.1	812	4140 gal	– .057 mc
9-6-49	9:20 A.M.	–	–	14 ± 1.1	2660	4140 gal.	– 0.188 mc
10-4-49	9:35A.M.	–	–	15 ± 1.1	4464	2580 gal.	– 0.1963 mc
10-22-49	9:30 A.M.	–	–	13.2 ± 1.1	1229	2360 gal.	– 0.049 mc
11-17-49	8:35 A.M.	–	–	15	1416	2620 gal	– 0.063 mc
12-7-49	8:45A.M.	–	–	5.0 ± 1.1	1573	3280 gal	– 0.091

Sludge from Powhatan sewage disposal plant

31 ME

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile alpha	Beta	PH	Remarks
2/10/49	1:05PM	300 ug/g.	–	191.5 ± 32.5	7.6		Results are reported on one gram dry wt. basis
3/16/49	3:40PM	25 ug/gram	–	261 ± 44	630		

Date	32-D	Date	24-D
6/1/49	24±21	6/1/49	88±34
6/3	86±34	6/3	57±23
6/5	61±24	6/5	116
6/7	49±21		55±22
6/9	67±27		24±21
6/11	25±21		34±21
6/13	42±21		51±21
6/15	55±22		53±21
6/17	31±29		40±21
6/18			41±21
6/19	57±23		47±21
6/20			63±25
6/21	67±26		69±28
6/23	36±21		37±21
6/25	78±31		72±42
6/27	56±22		66±26
6/29	67±27		67±27
	15 | 801		17 | 980
	53.4		57.6
7/1	87±35		88±35
7/3	101±40		75±30
7/5	81±32		88±35
7/7	67±27		79±32
7/9	99±40		131±52
7/11	82±33		97±39
7/13	88±35		97±39
7/14	123±49		105±42
7/15	73±29		80±32
7/17	—		83±33
7/18			78±31
7/18	118		74±29
7/19	160		170
7/21	91±36		94±37
7/23	76±31		51±21
7/25	87±35		66±26
7/27	77±31		73±29
7/29	92±37		74±29
7/31	152±21		30±21
	17 | 1512		19 | 1633
	89.2		86.0

Date	32-D	24-D
8/2	31±21	35±21
8/4	24±21	38±21
8/6	7±21	12±21
8/8	9±21	8±21
8/10	15±21	14±21
8/12	10±21	17±21
8/14	9±21	13±21
8/16	8±21	3±21
8/18	8±21	8±21
8/20	16±21	10±21
8/21	—	8±21
8/22	11±21	17±21
8/23	—	1±21
8/24	10±21	22±21
8/26	43±21	30±21
8/28	12±21	17±21
8/30	0±21	0±21
	15 | 243	17 | 259
	14.2	15.2
9/1	10±21	6±21
9/3	1±21	8±21
9/5	7±21	4±21
9/7	8 "	14 "
9/9	19 "	12 "
9/11	3 "	3 "
9/13	12 "	7 "
9/15	11 "	14 "
9/17	12 "	0 "
9/19	4 "	10 "
9/21	22 "	27 "
9/23	35 "	21 "
9/25	40 "	41 "
9/27	13 "	15 "
9/29	12 "	19 "
	15 | 209	15 | 201
	13.9	13.4
10/1		11±21
10/3		0 "
10/5		9 "
10/7		5 "
10/9		8 "
10/11		10 "
10/13		10 "
10/15		9 "
10/17		4 "
10/19		8 "
10/21		49 " → 70, 1 mo. later
10/23		60 "
10/25		29 "
10/27		12 "
10/29		18 "
10/31		19 "
		16 | 250
		15.6
11/1		76±21
11/2		54 "
11/4		34 "
11/6		16 "
11/8		9 "
11/10		5 "
11/12		4 "
11/14		13 "
11/16		22 "
11/18		7 "
11/20		7 "
11/22		12 "
11/24		9 "
11/26		8 "

Date	24-D
12/2	72±21
12/4	3 "
12/6	3 "
12/8	9 "
12/10	9 "
12/12	11 "
12/13	7 "
12/14	18 "
12/16	12 "
12/18	7 "
12/20	8 "
12/22	8 "
12/24	3 "
12/26	6 "
12/28	1 "
12/30	0 "
	16 | 112
	7.0

18.2

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LOCATION Effluent - Water Purification Plant, K-1515.

SAMPLE NO. 32-D

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
9-5-49	9:00 A.M.	–	–	–	7 ± 21	–	
9-7-49	8:50 AM	–	–	–	8 ± 21	–	
9-8-49	9:10 AM	–	–	–	19 ± 21		
9-11-49	9:05 AM	–	–	–	3 ± 21		
9-13-49	9:00 AM	–	–	–	12 ± 21		
9-15-49	8:55 AM	–	–	–	11 ± 21		
9-17-49	9:00 AM	–	–	–	12 ± 21		
9-19-49	9:00 AM	–	–	–	4 ± 21		
9-21-49	9:00 A.M.	–	–	–	22 ± 21		
9-23-49	8:20 AM	–	–	–	35 ± 21		
9-25-49	9:00 AM	–	–	–	40 ± 21		
9-27-49	9:00 AM	–	–	–	13 ± 21		
9-29-49	8:30 AM	–	–	–	12 ± 21		
9/1 to 9/29/49	Comp.	0	< 0.2	0.2 ± 1.1	–		

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LOCATION Influent - Water Purification Plant, K-1515

SAMPLE NO. 32-D

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
49	9:00 AM	–	–	–	99 ± 40	–	–
7/3 to 7/49	Comp.	0	–	0.0 ± 1.1	–	–	–
7/11/49	9:00 AM	–	–	–	82 ± 33	–	–
7/13/49	9:00 AM	–	–	–	88 ± 35	–	–
7/14/49	9:00 AM	–	–	–	123 ± 49	–	overflow tube stopped up. Sample taken
7/15/49	9:00 AM	–	–	–	73 ± 29	–	"
7/9 to 7/15/49	~~Comp. 9:00 AM~~	+	–	0.8 ± 1.1	–	–	–
7/17/49	Overflow stopped up – no sample taken						
7/18/49	9:00 AM	–	–	–	168	–	Overflow line stopped up. Spot taken.
7/19/49	9:00 AM	–	–	–	160	–	–
7/21/49	9:00 AM	–	–	–	91 ± 36	–	–
7/17 to 7/23	Comp.	0	–	0.0 ± 1.1	–	–	–
7/23/49	9:00 AM	–	–	–	76 ± 31	–	–
7/25/49	9:00 AM	–	–	–	87 ± 35	–	–
7/27/49	9:00 AM	–	–	–	77 ± 31	–	–
7/29/49	Comp.	0	–	0.9 ± 1.1	–	–	–
7/29/49	9:00 AM	–	–	–	92 ± 37	–	–
7/31/49	9:00 AM	–	–	–	15 ± 21		
7/1 to 7/31/49	Comp.	–	<0.2	–	–	–	–
8/2/49	9:00 AM	–	–	–	31 ± 21	–	–
8/4/49	9:00 AM	–	–	–	24 ± 21	–	–
8/8/49	9:00 AM	–	–	–	9 ± 21	–	–
8/10/49	9:10 A.M.	–	–	–	15 ± 21		
8/12/49	9:10 A.M.	–	–	–	10 ± 21		
8/14/49	9:10 A.M.	–	–	–	13 ± 21		
8/16/49	9:10 A.M.	–	–	–	9 ± 21		
8/18/49	9:10 A.M.	–	–	–	8 ± 21		
8/20/49	9:00 A.M.	–	–	–	16 ± 21		
8/22/49	9:00 A.M.	–	–	–	11 ± 21		
8/24/49	9:00 A.M.	–	–	–	10 ± 21		
8/26/49	9:00 A.M.	–	–	–	43 ± 21		
8/28/49	9:00 A.M.	–	–	–	12 ± 21		
8/30/49	8:40 A.M.	–	–	–	0 ± 21		
8/1 to 8/31/49	Comp.	0	<0.2	0.0 ± 1.1	–	–	
9-1-49	9:00 A.M.	–	–	–	10 ± 21	–	
9-3-49	9:00 A.M.	–	–	–	1 ± 21	–	

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Influent Water purification Plant, K-1515
32D

Date	Time	Uranium PPB	Fluoride/PPM	Counts per min. Per 100 mile alpha	Beta	PA	Remarks
3/18/49	10:00PM	—	—	—	44 ± 21		
3/18/49	10:00PM	—	—	—	311 ± 78		
3/19/49	10:00AM	—	—	—	135 ± 41		
3/19/49	10:00PM	—	—	—	129 ± 39		
3/20/49	10:00AM	—	—	—	179 ± 54		
3/20/49	10:00PM	—	—	—	137 ± 41		
3/25/49	10:00AM	—	—	—	109 ± 44		
3/25/49	10:00PM	—	—	—	103 ± 41		
3/26/49	10:00AM	—	—	—	179 ± 72		
3/26/49	10:00PM	—	—	—	174 ± 70		
3/27/49	10:00AM	—	—	—	162 ± 65		
3/27/49	10:00PM	—	—	—	86 ± 34		
4-29-49	9:00PM	—	—	—	60		
4-30-49	9:00 AM	—	—	—	92		
4-[illegible]-49	9:00 PM	—	—	—	91		
[illegible]-49	9:00 AM	—	—	—	57		
5-1-49	9:00 PM	—	—	—	62		
5-2-49	9:00 AM	—	—	—	70		
4/29/49	8:30AM	—	—	—	197 ± 79		
6/1/49	9:50 AM	—	—	—	24 ± 21		
6/3/49	9:00 AM	—	—	—	84 ± 34		
6/5/49	9:00AM	—	—	—	61 ± 24		
6/7/49	9:00 AM	—	—	—	49 ± 21		
6/9/49	8:30AM	—	—	—	67 ± 27		
6/11/49	9:00 AM	—		—	25 ± 21		
6/15/49	9:00 AM	—	—	—	42 ± 21		
6/15/49	9:00 AM	—	—	—	55 ± 22		
6/17/49	9:00 AM	—	—	—	31 ± 29		
6/19/49	9:30 AM	—	—	—	57 ± 23		
6/21/49	9:30 AM	—	—	—	67 ± 26		
6/23/49	8:00 AM	—	—	—	36 ± 21		
6/[illegible]/49	9:30 AM	—	—	—	78 ± 31		
[illegible]/27/49	9:30 AM	—		—	56 ± 22		
[illegible]/49	9:30 AM	—		—	67 ± 27		
7/1/49	[illegible]	—	—	—	87 ± 35		
7-3-49	[illegible]	—	—	—	151 ± [illegible]		
7-5-49	[illegible]	—	—	—	81 ± 32		

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Influent to water purification plant

24W (32-D)

Sampling Location and Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile alpha	Beta	PH	Remarks
/2/48	8:45AM	0	<0.2	1.4 ± 1.1	2 ± 2		
/3/48	8:40AM	0	–	0.0 ± 1.1	4 ± 2		
/4/48	8:55AM	0	–	0.1 ± 1.1	4 ± 2		
/5/48	9:00AM	0	–	0.0 ± 1.1	5 ± 2		
/6/48	8:40AM	0	–	0.0 ± 1.1	7 ± 2		
/9/48	9:05AM	0	<0.2	0.0 ± 1.1	3 ± 2		
/10/48	8:45AM	0	–	0.0 ± 1.1	4 ± 2		
/11/48	9:00AM	0	–	0.2 ± 1.1	7 ± 2		
/12/48	9:04AM	0	–	0.2 ± 1.1	2 ± 2		
/13/48	8:45AM	0	–	0.0 ± 1.1	6 ± 8		
/16/48	8:37AM	0	<0.2	0.0 ± 1.1	29 ± 8		
/17/48	8:45AM	0		0.1 ± 1.1	33 ± 8		
/18/48	8:40AM	0		0.4 ± 1.1	41 ± 8		
/19/48	8:29AM	0		0.3 ± 1.1	38 ± 8		
/20/48	8:25AM	0		1.2 ± 1.1	38 ± 8		
/48	8:35AM	0	<0.2	0.4 ± 1.1	29 ± 8		
/48	9:30AM	0	<0.2	0.2 ± 1.1	51 ± 8		
/25/48	8:25AM	0		0.0 ± 1.1	17 ± 8		
/26/48	8:15AM	0		0.0 ± 1.1	18 ± 8		
/27/48	8:55AM	0		0.0 ± 1.1	17 ± 8		
/30/48	10:10AM	0		0.1 ± 1.1	13 ± 8		
/31/48	8:30AM	0		0.0 ± 1.1	35 ± 8		

Influent to water purification plant

24W (32-D)

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile Alpha	Beta	PH	Remarks
9/48	12:30PM	0	<0.2	0.0 ± 0.5	2 ± 3		
10/48	12:30PM	0	–	0.2 ± 0.5	3 ± 3		
1/11/48	12:40PM	0	–	0.1 ± 0.5	2 ± 3		
1/14/48	9:21AM	0	–	0.1 ± 0.5	2 ± 3		
1/15/48	10:00AM	0	–	0.3 ± 0.5	5 ± 3		
1/16/48	1:00PM	0	–	0.1 ± 0.5	1 ± 3		
1/17/48	9:55AM	0	–	0.5 ± 0.6	0 ± 3		
1/18/48	10:35AM	0	<0.2	0.7 ± 0.6	0 ± 3		
1/21/48	8:40AM	0	<0.2	0.1 ± 0.5	1 ± 3		
1/22/48	2:30PM	0	–	0.5 ± 0.5	1 ± 3		
1/23/48	12:45PM	0	–	0.0 ± 0.5	0 ± 3		
1/24/48	12:40PM	0	–	0.2 ± 0.5	0 ± 3		
1/25/48	12:45PM	0	–	0.0 ± 0.5	1 ± 3		
1/28/48	12:45PM	0	<0.2	0.6 ± 0.6	1 ± 3		
1/ '48	No Sample taken		–	–	–		
30/48	9:40AM	0	–	0.3 ± 0.5	4 ± 3		
8	12:45PM	1	–	0.6 ± 0.6	5 ± 3		
2/48	2:10PM	0	–	0.6 ± 0.6	2 ± 3		
6/48	9:45AM	0	–	0.6 ± 0.6	2 ± 3		
7/48	10:30AM	0	<0.2	0.2 ± 0.5	2 ± 3		
8/48	3:00PM	0	–	0.8 ± 1.1	1 ± 2		
9/48	1:47PM	0	–	0.6 ± 1.1	1 ± 2		
2/48	1:37PM	0	–	0.5 ± 1.1	0 ± 2		
3/48	9:15AM	0	<0.2	0.2 ± 1.1	1 ± 3		
14/48	9:00AM	0	–	1.0 ± 1.1	2 ± 2		
15/48	9:20AM	0	–	0.7 ± 1.1	51 ± 26		
16/48	9:27AM	0	–	0.4 ± 1.1	5 ± 2		
19/48	1:00PM	0	–	0.5 ± 1.1	2 ± 2		
20/48	9:15AM	0	< 0	0.3 ± 1.1	3 ± 3		
21/48	2:45PM	0	–	0.2 ± 1.1	10 ± 2		
22/48	9:00AM	0	–	0.4 ± 1.1	6 ± 2		
23/48	8:55AM	0	–	0.4 ± 1.1	2 ± 2		
24	9:35AM	0	<0	0.7 ± 1.1	3 ± 3		
8	10:02AM	0	–	0.3 ± 1.1	3 ± 3		
28/48	8:01AM	0	–	0.4 ± 1.1	1 ± 2		
29/48	9:10AM	0	–	0.1 ± 1.1	2 ± 2		
30/48	8:50AM	0	–	0.2 ± 1.1	3 ± 2		

119

Influent to water purification plant
24 W (32D)

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile Alpha	Beta	PH	Remarks
4/16/48	1:15PM	0	–	0.0 ± 0.5	0.0		
4/19/48	10:30AM	0	–	0.0 ± 0.5	0.0		
4/20/48	10:10AM	0	–	0.0 ± 0.5	0.0		
4/21/48	2:00PM	0	–	0.3 ± 0.5	3.8		
4/22/48	9:50AM	0	–	0.0 ± 0.5	0.4		
4/23/48	8:50AM	0	<0.2	0.1 ± 0.5	0.0		
4/26/48	10:00AM	0	<0.2	0.0 ± 0.5	2.7		
4/27/48	9:35AM	0	–	0.4 ± 0.5	4.1		
4/28/48	9:35AM	0	–	0.2 ± 0.5	0.0		
4/29/48	10:25AM	0	–	0.0 ± 0.5	0.0		
4/30/48	10:35AM	0	–	0.5 ± 0.5	1.8		
5/3/48	8:40AM	0	<0.2	0.3 ± 0.5	2.4		
5/4/48	12:40PM	0	–	0.1 ± 0.5	0.6		
5/5/48	9:08AM	0	–	0.1 ± 0.5	0.0		
5/6/48	9:20AM	0	<0.2	0.0 ± 0.5	9.7 ± 3.5		
5/7/48	11:00AM	0	<0.2	0.5 ± 0.6	–		
[illegible] 48	9:00AM	0	–	0.1 ± 0.5	2.7 ± 2.7		
5/11/48	1:30PM	2	–	0.6 ± 0.6	3.0 ± 3.0		
5/12/48	10:50AM	0	–	0.1 ± 0.5	1.1 ± 2.8		
5/13/48	9:35AM	0	–	0.2 ± 0.5	8.6 ± 4.3		
5/14/48	10:43AM	0	–	0.2 ± 0.5	5.0 ± 3.0		
5/17/48	9:40AM	0	<0.2	0.0 ± 0.5	3.0 ± 3.0		
5/18/48	9:00AM	0	–	0.3 ± 0.5	9.0 ± 3.0		
5/19/48	10:50AM	0	–	0.8 ± 0.6	5.0 ± 3.0		
5/20/48	8:50AM	0	–	0.3 ± 0.5	3.0 ± 3.0		
5/21/48	12:40PM	0	–	0.1 ± 0.5	2.0 ± 3.0		
5/24/48	10:25AM	0	<0.2	0.2 ± 0.5	0.0 ± 3.0		
5/25/48	8:42AM	0	–	0.0 ± 0.5	1.0 ± 3.0		
5/26/48	1:20PM	0	–	0.1 ± 0.5	1.0 ± 3.0		
5/27/48	10:30AM	0	–	0.0 ± 0.5	0.0 ± 3.0		
5/28/48	9:05PM	0	–	0.4 ± 0.5	0.0 ± 3.0		
[illegible]	9:05AM	0	<0.2	0.0 ± 0.5	3 ± 3		
[illegible]	10:[illegible]3AM	0	–	0.1 ± 0.5	7 ± 3		
[illegible]	9:30AM	0	–	0.4 ± 0.5	4 ± 3		
[illegible]4/48	9:30PM	0	–	0.1 ± 0.5	3 ± 3		
[illegible]7/48	8:50PM	0	–	0.0 ± 0.5	1 ± 3		
[illegible]5/48	5:20AM	0	–	[illegible]	2 ± 3		

120

LOCATION Alum Salt from Water Purification Plant

SAMPLE NO. 32 M-X

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Counts/min/ml Beta	PH	Remarks
7-18-49	1:00 PM	0.51 mg/gm		-	-		Results based on 1 mg/gm dry wt.

121

East Village sewage disposal plant, sludge
EV-31

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile			Remarks
				Alpha	Beta	PH	
1/22/48	3:05PM	2,500	-	0.1	0 ± 11		

West Village Sewage Disposal Plant, sludge
WV-30

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile			Remarks
				Alpha	Beta	PH	
1/26/48	12:30PM	45,000	-	277	49 ± 11		

Hand from near the top of the liquid level of the aluminum pit at R-1024

(Special)

Date	Time	Uranium/PPB	Uranium/PPM	Counts per min. per 100 mile			Remarks
				Alpha	Beta	PH	
2/49	12:50PM	4 PPb	—	1.3±1.6	—		

123

Sludge from the bottom of the dilution pit K-1024
(special)

Date	Time	Uranium/PPM	Fluoride/PPM	Counts per min per 100 mls			Remarks
				Alpha	Beta	PH	
2/2/49	12:50PM	35.5 ug/g	-	230 ± 39	325		

124

Clinch River Below Mouth of Poplar Creek

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 ml. alpha	Beta	PH
10/21/47	2:00PM	0	< 0.2	2		

125

K-1024 acid Dilution pit

Special

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile Alpha	Beta	PH	Remarks
3/16/49	1:15PM	0	–	–	–		
/16/49	1:40PM	6,000	–	–	–		
/16/49	2:20PM	1,500	–	–	–		
/16/49	2:44PM	2,000	–	–	–		
/16/49	3:47PM	145	–	–	–		
/17/49	8:35AM	50	–	–	–		
/17/49	9:32AM	200	–	–	–		
/17/49	10:32AM	50	–	–	–		
/17/49	11:35AM	25	–	–	–		
/17/49	12:47PM	25	–	–	–		
/17/49	2:22PM	25	–	–	–		
/29/49	1:00 PM	4	–	–	–		
"	1:15PM	1,500	–	–	–		
"	2:18PM	1,500	–	–	–		
"	2:30PM	400	–	–	–		
	3:30PM	2,000	–	–	–		
9	8:45AM	100	–	–	–		
"	9:55AM	150	–	–	–		
"	11:05AM	800	–	–	–		

126

Edge of Popular Creek inlet N.W. of 305-8

Sampling Location & Plot Reference Plan

Date	time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 Mi.		
				alpha	Beta	PH
/21/47	10:35AM	8	--	-		

127

32-YE							
249+86	274+98	276+70	277+50	279+29	279+11	278+38	278+76
Acid dil. W	Pit W of	Pit N of	Pit N of	Pit S.E. of	Pit S of	Pit. W. of	Pit at
of K-1024	1004-D	1004-C	1004-A	1004-A	1004-B	1004-B	1005
7/20/50 —	3/1/50 150μg/g	3/1/50 10μg/g	2/20/50 88μg/g	2/20/50 250μg/g	2/20/50 —	2/20/50 75μg/g	2/20/50 —

LOCATION ACID DILUTION PIT SLUDGE

SAMPLE NO. 32-Y*E

Date	Time	Uranium P.P.B.	Fluoride, P.P.M.	Counts/min/ml Alpha	Beta	PH	Remarks
9-15-49	1:35 PM	875 mg/gm	West of K-1004-D, 274 ± 98				
9-15-49	1:55 PM	19 "	North of K-1004-C, 276 ± 70				
9-15-49	2:05 PM	84 "	North of K-1004-A, 277 ± 50				
9-15-49	2:15 PM	375 "	S.E. of K-1004-B, 278 ± 29				
9-15-49	2:20 PM	750 "	South of K-1004-B, 279 ± 11				
9-15-49	2:25 PM	No sludge	West of K-1004-B, 278 ± 38				

(24 C) Water July-3-1951

Sampling Location

At K1515 implvent bay on Clinch River
Just Below Gallaher Bridge
48 hr Composite for P

130

41 ME
Sampling Location

Jan-1981 MUQ

Poplar Creek at bridge crossing below K-31

131

42 ME Jan-1-1951 MUd.

Sampling Location

Poplar Creek below pond For Power House effluent.

Same as old 22 ME

132

43 ME

Sampling Location
Poplar Creek just below junction with
Clinch River

133

43 -W Nov-1-1951 water

Sampling Location

Poplar Creek just below junction with Clinch River

Monthly Sample for Uranium only

13M Nov 1-1951 Water

Sampling Location

Clinch River 1 mile below Poplar Creek junction

V. only

1 sample monthly.

Not to be confused with original 13W which was at the mouth of Poplar Creek.

135

11 W Nov 1-1951 Water

Sampling Location

Poplar Creek opposite K-27 Drain

1 sample monthly
U only.

136

Water

II / W Nov 1-1951

Sampling Location

K1300 Drain entrance to Poplar Creek
N.E. of 1303-B
1 sample monthly
U. only.

137

Drainage at east end of holding pond

1 W-A

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 miles		
				Alpha	Beta	PH
3/15/48	2:00PM	0	–	–	–	
3/22/48	10:05AM	0	–	–	–	
4/1/48	1:15PM	0	–	–	–	
4/6/48	10:50AM	0	–	–	–	
4/12/48	10:10AM	0	–	–	–	
4/19/48	9:10AM	0	–	–	–	
4/26/48	9:30AM	0	–	–	–	
5/3/48	10:15AM	0	---	---	---	
5/10/48	9:45AM	0	–	–	–	
5/17/48	9:05AM	0	–	–	–	
5/24/48	9:42AM	0	–	–	–	
6/1/48	9:20AM	0	–	–	–	

In drainage ditch, ten [illegible] upstream [illegible] fence

1 W-B

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile			Remarks
				Alpha	Beta	PH	
/15/48	2:30PM	3	-	-	-		
/22/48	10:10AM	2	-	-	-		
4/1/48	1:20PM	6	-	-	-		
/6/48	9:50AM	5	-	-	-		
4/12/48	10:15AM	2	-	-	-		
4/19/48	9:15AM	0	-	-	-		
4/26/47	9:35AM	0	-	-	-		
5/3/48	10:30AM	0	---	---	---		
/10/48	9:50 AM	1	-	-	-		
/17/48	9:10AM	1	-	-	-		
/24/48	9:45AM	3	-	-	-		

Drainage from Process Bldg. into Poplar Creek - opposite R-306-2 ?
3 W

Sampling location & Plot Reference Plan

Date	time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile		
				alpha	Beta	PH
/12/47	1:20 PM	2	---	-		
2/4/47	9:45 AM	0	-	-		
/5/48	10:00 AM	0	-	-	-	
/2/48	2:30 PM	0	-	-	-	

140

Process Drainage into [illegible]

3W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mls Alpha	Beta	PH	Remarks
5/15/48	1:10 PM	0	–	–	–		
1/26/48	10:45 AM	0	–	–	–		
1/10/48	10:15 AM	0	–	–	–		

141

Drainage from [illegible]

3 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile		
				Alpha	Beta	PH
3/1/48	9:45 AM	0	–	–	–	
4/5/48	12:15 PM	0	–	–	–	
5/13/48	2:30 PM	0	–	–	–	

Process Drainage into Poplar Creek W. of K-303
4 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile			Remarks
				Alpha	Beta	PH	
7/48	2:50 PM	0	–	–	–		
7/48	10:12 AM	0	–	–	–		
10/48	9:30 AM	0	–	–	–		

143

Drainage into [illegible] [illegible]
4W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. per 100 Mile			Remarks
				Alpha	Beta	PH	
4/13/48	10:40 AM	0	–	–	–		
5/20/48	2:10 PM	0	–	–	–		

144

Drainage from Process Bldg. into Poplar Creek - opposite [illegible] -
4 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. Per 100 mile		
				Alpha	Beta	PH
/12/47	1:10PM	2	---	-		
/3/47	1:30PM	0	-	-		
/19/48	2:30PM	0	-	-	-	
/16/48	1:00PM	0	-	-	-	

145

Drainage from Process Behind R-304-1
4W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min. Per 100 mile		
				Alpha	Beta	PH
3/18/48	4:00 PM	0	-	-	-	

146

Drainage from [illegible]

5 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile		
				alpha	Beta	PH
/12/47	2:45PM	0	---	-		
2/3/47	2:00PM	0	-	-		
/19/48	2:30PM	0	-	-	-	
-/16/48	12:50PM	0	-	-	-	

147

[illegible] drainage into [illegible] West of N-206

5W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min. Per 100 mile			Remarks
				alpha	Beta	PH	
[illegible]/20/48	2:20PM	0	-	-	-		
[illegible]/17/48	3:00PM	0	-	-	-		
[illegible]/48	10:10AM	0	-	-	-		
[illegible]/10/48	9:40AM	0	-	-	-		

148

Drainage from Process Blend K-300-2
5W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 ml alpha	Beta	PH
2/18/48	4:00PM	0	–	–	–	

149

Drainage into [illegible]
5W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/ppb	Fluoride/ppm	Counts per min per 100 mils Alpha	Beta	PH	Remarks
4/13/46	10:30AM	4		-	-	-	

150

Drainage from R-031

6W-H

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile alpha	Beta	PH
3/22/48	12:25 PM	0	–	–	–	
3/30/48	3:00 PM	There was no water in the drain line				
4/23/48	4:00 PM	Could not Collect sample. Drain line dry.				
5/7/48	4:00 PM	" " "	"	"	"	"
5/12/48	1:20 PM	No Drainage	–	–	–	
5/18/48	12:25 PM	No Drainage	–	–	–	
5/25/48	10:05 AM	No Drainage	–	–	–	

Drainage from R-131
6W-13

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile Alpha	Beta	PH	Remarks
3/22/48	12:35 PM	0	–	–	–		
3/30/48	12:45 PM	0	–	–	–		
4/6/48	10:30 AM	24	–	–	–		
4/12/48	3:45 PM	3	–	–	–		
4/22/48	1:50 PM	0	–	–	–		
4/27/48	3:00 PM	0	---	---	---		
5/7/48	10:30 AM	2	–	–	–		
5/12/48	1:25 PM	1	–	–	–		
5/18/48	12:30 PM	4	–	–	–		
5/25/48	10:05 AM	0	–	–	–		

Drainage from hot scrap yard into Bay N.W. of Gallaher gate
8 W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per min. Per 100 mile		
				Alpha	Beta	PH
1/12/47	3:45PM	0	---	-		
2/3/47	10:40AM	0	-	<0.5		
1/20/48	10:10AM	0	-	0.4 ± 0.5	-	
/2/48	1:00PM	0	-	0.1 ± 0.5	-	

Drainage from hot scrap yard into Bay N.E. of Gallaher Gate
8W

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per min. Per 100 mile		
				Alpha	Beta	PH
3/10/48	3:20PM	0	–	1.4 ± 0.7	–	

Drainage from [illegible] into [illegible]

8 W

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min per 100 mile alpha	Beta	pH.	Remarks
1/1/48	10:20AM	0	< 0.2	0.4 ± 0.5	–		
/3/48	8:45AM	0	–	0.2 ± 0.5	–		
/2/48	10:15AM	0	–	0.6 ± 0.5	–		
/26/48	1:11PM	0	–	0.2 ± 1.1	–		
/10/48	10:00AM	0	–	0.1 ± 1.1	–		
2/8/[illegible]	12:55PM	0	–	0.4 ± 1.1	–		

Bear Creek at Oak Ridge Turnpike

11 W-C

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. per 100 mile		
				Alpha	Beta	PH
3/19/48	2:30 PM	0	–	0.3 ± 0.6	–	
3/24/48	9:00 AM	0	–	0.7 ± 0.6	–	
4/1/48	12:30 PM	0	–	0.2 ± 0.5	–	
4/5/48	9:30 AM	0	–	0.0 ± 0.5	–	
4/12/48	1:30 PM	0	–	–	–	

Clinch River approx. 1/2 mile above K-25

12 W-1

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mils			Remarks
				Alpha	Beta	PH	
2/1/48	2:00PM	0	–	–	–	–	

157

[illegible] River 1/2 mile below R-10 effluent

12W-2

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mils			Remarks
				Alpha	Beta	PH	
1/48	2:30PM	0	–	–	–	–	

158

Manhole at edge of avenue F between K area and 1300 area gate

14 W-A

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mile		
				alpha	Beta	pH
3/23/48	3:15 PM	5	-	-	-	
4/2/48	12:15 PM	80	-	-	-	
4/6/48	12:45 PM	17	-	-	-	
4/13/48	9:50 AM	160	-	-	-	
4/20/48	10:40 AM	140	-	-	-	
4/27/48	12:30 PM	35	---	---	---	
5/3/48	12:45 PM	10	---	---	---	
5/11/48	4:05 PM	13	-	-	-	
5/18/48	2:40 PM	8	-	-	-	
5/25/48	9:32 AM	5	-	-	-	

Sewer at S.E. Corner of [illegible] and [illegible] Street

14W-B

[illegible] Location & Pict Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min. Per 100 mile alpha	Counts Per Min. Per 100 mile Beta	PH
3/23/48	3:30 PM	0	–	–	–	
4/2/48	12:10 PM	0	–	–	–	
4/6/48	1:00 PM	0	–	–	–	
4/13/48	9:45 AM	4	–	–	–	
4/20/48	10:55 AM	7	–	–	–	
4/27/48	12:35 PM	3	---	---	---	
5/3/48	1:00 PM	0	---	---	---	

Thanks - at [illegible]

14W-B

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per min. Per 100 mile			Remarks
				Alpha	Beta	PH	
/11/48	4:00PM	0	–	–	–		
5/18/48	2:39PM	10	–	–	–		
5/25/48	9:30AM	5	–	–	–		

161

Manhole of slope south of K-4021

14 W-C

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per Min. per 100 ml			Remarks
				Alpha	Beta	PH	
5/3/48	1:10 PM	0	---	---	---	---	

Sewage drain at slope on south side of K-402-1
14-W-C

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. Per 100 mils alpha	Beta	PH
3/23/48	2:00PM	0	–	–	–	
4/2/48	12:30PM	0	–	–	–	
4/6/48	12:30PM	0	–	–	–	
4/13/48	10:05AM	0	–	–	–	
4/20/48	1:10PM	0	–	–	–	
4/27/48	12:45PM	0	---	---	---	

Mannon Well by S.W. Corner of A-1450 Bldg.
14 W-C

Sampling Location & Plot Pg. Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile			Remarks
				Alpha	Beta	PH	
11/48	3:35PM	53	–	–	–		
18/48	2:25PM	30	–	–	–		
25/48	9:20AM	50	–	–	–		

164

Powerhouse Water Discharge
18 W

Sampling Location + Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile		
				Alpha	Beta	PH
1/2/47	2:00 PM	0	---	–		
2/2/47	10:30 AM	0	–	–		
1/9/48	1:10 PM	0	–	–	–	
2/2/48	1:15 PM	0	–	–	–	
3/8/48	3:45 PM	0	–	–	–	
4/1/48	10:40 AM	0	–	–	–	

Powerhouse intake water

19W

Sampling Location & Plot Dif. Plume

Date	Time	Uranium/PPB	Fluoride/PPM	Counts Per Min. Per 100 mile		
				Alpha	Beta	PH
/12/47	3:25PM	0	---	-		
2/2/47	10:30AM	0	-	-		
/19/48	1:00PM	0	-	-	-	
2/2/48	3:15PM	0	-	-	-	
3/8/48	3:40PM	0	-	-	-	
4/1/48	10:30AM	0	-	-	-	

166

Bear Creek at Oak Ridge Sampling
[illegible]

Sampling Location & Plot Reference Plan

Date	Time	Uranium/PPB	Fluoride/PPM	Counts per min. per 100 mile			Remarks
				alpha	Beta	PH	
/3/48	8:30AM	0	–	0.1 ± 0.5	–		
/1/48	2:45PM	0	–	0.6 ± 0.5	0 ± 3		
/12/48	10:25AM	0	–	0.9 ± 1.1	2 ± 2		
/9/48	2:10PM	0	–	0.5 ± 1.1	0 ± 2		
/7/48		1	–	0.5 ± 1.1	0 ± 11		
/4/48	1:10 PM	0	–	0.6 ± 1.6	1 ± 8		
/3/48	9:45AM	1	–	0.8 ± 1.1	8 ± 11		
/8/48	1:40 PM	0	–	0.4 ± 1.1	–		

167

[illegible] sample [illegible] from [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] and area being used for top soil supply.

139 MA

Sampling Location & Plot Ref. Plan

Date	Time	Uranium/PPB	Uranium/PPM	Counts per min. per 100 mils			Remarks
				Alpha	Beta	PH	
1/2/48	10:20AM	440	-	-	-		

168

Mud Sample Data

mouth of 1300 Drain — opposite K27 Drain

# 1. ME 1 sample monthly			# 11 ME Was 1 sample everyother mo. Now 1 sample every mo.		
Date	Micrograms U/gm mud	β/dis min/gm	Date	Micrograms U/gm mud	β dis/min/gm mud
1-9-50	7.50	—	—	—	
2-7-50	7.50	—	—	—	
3-6-50	12.50	—	—	—	
4-5-50	12.50	—	4-10-50	100	
5-1-50	12.50	—	—	—	
6-5-50	3.75	—	6-12-50	0.50	
7-5-50	5.00	—	7-11-50	1.50	
8-8-50	3.75	—	8-8-50	1.38	
9-5-50	5.00	—	—	—	
10-2-50	7.50	—	10-3-50	0.50	
11-1-50	0.78	—	—	—	
12-5-50	1.25	—	12-5-50	0.75	
1-28-51	1.25	—	—	—	—
2-26-51	9.24	94	2-26-51	0.58	1.31
3-28-51	10.0	105	—	—	—
4-26-51	1.25	96	4-26-51	0.0	75
5-31-51	2.50	65	5-31-51	1.05	58
6-30-51	10.00	80	6-30-51	1.0	86
7-27-51	20.00	100	7-27-51	1.0	[illegible]
8-28-51	13.70	121	8-28-51	0.9	[illegible]
9-28-51	10.00	122	Not accurable		

169

1 mile down stream Clinch River — K31 Bridge Crossing Poplar Creek

13 ME 1 sample monthly — 41 ME - 1 sample monthly

Date	microgram U/gm mud	Pdis/min/gm mud	Date	microgram U/gm mud	Pdis/min/gm
1-5-50	0.60	450			
2-1-50	0.25	250			
3-6-50	0.50	292			
4-3-50	0.39	175			
5-1-50	0.18	53			
6-5-50	0.25	28			
7-5-50	0.25	39			
8-2-50	0.25	76			
9-5-50	0.35	60			
10-2-50	0.17	40			
11-1-50	0.40	88			
12-5-50	0.13	11			
1-2-51	0.22	130	1-2-51	0.88	55
2-26-51	0.33	72	2-26-51	0.54	29
3-28-51	0.38	108	3-28-51	1.00	96
4-26-51	0.32	94	4-26-51	0.0	75
5-31-51	0.37	55	5-31-51	0.75	53
6-30-51	0.38	43	6-30-51	2.0	87
7-27-51	0.50	41	7-27-51	0.5	61
8-28-51	0.50	36	8-28-51	1.5	45
9-28-51	0.15	45	9-28-51	1.13	74

Poplar Creek below Powerhouse effluent. #42 ME 1 sample monthly			Mouth of Poplar Creek #43 ME 1 sample monthly		
Date	Micrograms U/gm mud	B dis/min/gm mud	Date	Micrograms U/gm mud	B dis/min/gm
1-9-50	2.50				
2-13-50	2.50				
3-6-50	1.50				
4-5-50	1.25				
5-1-50	1.88				
6-5-50	0.63				
7-5-50	0.63				
8-2-50	1.75				
9-5-50	1.50				
10-2-50	2.00				
11/1/50	1.00				
12/5/50	5.83				
1-2-51	0.13	138	1-2-51	1.04	186
2-26-51	0.94	179	2-26-51	1.60	124
3-28-51	2.50	142	3-28-51	3.50	155
4-26-51	0	139	4-26-51	no data	
5-31-51	0.50	123	5-31-51	1.25	30
6-30-51	5.50	74	6-30-51	1.50	100
7-27-51	0.5	105	7-27-51	2.50	67
8-28-51	2.5	115	8-28-51	0.60	77
9-28-51	0.65	108	9-28-51	1.25	111

171

(15)

Box# 4-3-1-5

ChemRisk/Shonka Research Associates, Inc., Document Request Form #13

~~#08~~

(This section to be completed by subcontractor requesting document)

JKLamb / 1034A Document Center

Requestor / Document Center (is requested to provide the following document)

Date of request 7/17/95 Expected receipt of document 8/11/95

Document number none Date of document 1951-1952

Title and author (if document is unnumbered)

Water Survey Analyses 1951-1952

~Please copy everything in this folder~ including the little sample cards

→Thanks! Sorry I knew it's a pain

(This section to be completed by Document Center)

Date request received 7/18/95

Date submitted to ADC 7/19/95

Date submitted to HSA Coordinator 7/18/95

(This section to be completed by HSA Coordinator)

Date submitted to CICO 7/19/95 7/31/95

Date received from CICO 7/31/95

Date submitted to ChemRisk/Shonka and DOE 8/8/95

(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received

Signature

WATER SURVEY ANALYSES
1951 - 1952

This document has been approved for release to the public by:

Gary W. Hall for A.D. Quist 8/2/95
Technical Information Officer Date
Oak Ridge K-25 Site

Union Carbide Nuclear Company, Oak Ridge Gaseous Diffusion Plant, Operating Contractor for the U.S. Atomic Energy Commission.

WCX-911 (Jan'48) K-25 NRC

Residue No. HPK-25-13 Date 12-4-50 Priority

Description W.O. Lake Operator —

Method ☐ Alpha ☒ Beta ☐ Fission

Amplifier

Count time	1x10	1x10	1x10	
Rate	19.7	17.5	20.2	
Blank or Bkg.	18.4	18.4	18.4	
Net rate	1.3	−0.9	1.8	
Corr. rate				
Avg. rate	0.73			

(1)

Answer

WCX-911 (Jan'48) K-25 NRC (2)

Residue No. HPK-25-12 Date 11-28-50 Priority

Description Operator

Method ☐ Alpha ☐ Beta ☐ Fission

Amplifier X X X

Count time	1x10	1x10	1x10	
Rate	23.1	20.3	20.8	
Blank or Bkg.	16.6	16.6	16.6	
Net rate	6.5	3.7	4.2	
Corr. rate				
Avg. rate				

(2)

Answer 4.8

Counted

operator	date
[illegible]	11.28.52

Counted

operator	date
[illegible]	12-3-50

WCX-911 (Jan'48) K-25 NRC

Residue No. HPK-25-13 Date 12-6-50 Priority

Description W.O. LAKE Operator

Method ☐ Alpha ☒ Beta ☐ Fission

Amplifier

Count time	1X10	1X10	1X10	
Rate	19.5	18.7	18.3	
Blank or Bkg.	18.6	18.6	18.6	
Net rate	1.1	.3	-.1	
Corr. rate				
Avg. rate	0.43			

Answer

3

WCX-911 (Jan'48) K-25 NRC (1)

Residue No. HPK-25-12 Date 11-28-50 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier X X X

Count time	1X10	1X10	1X10	
Rate	20.1	19.8	19.7	
Blank or Bkg.	16.6	16.6	16.6	
Net rate	3.5	3.2	3.1	
Corr. rate				
Avg. rate				

Answer 3.3

4

Residue No. HPK-25-11 Date 11-13-50 Priority

Description W.O. LAKE Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier

	Sample			Std.		
Count Time	1X10	1X10	1X10			
Count	251	316	235			
Corr. Rate	1	5	0			
Average Rate	2					

Time 0900 Date 11-13-50 Operator

WCX-1276 (OCT.'48)

5

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Counted

operator [illegible] date 11-28-50

Counted

operator [illegible] date 12-5-50

Residue No. HPK-25-11 Date 11-13-50 Priority

Description W.O. LAKE Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T. Sample Std.

Count Time	1X10	1X10	1X10			
Count	32	35	30			
Corr. Rate	3	9	3	0		
Average Rate	5					

Time 0950 Date 11-13-50 Operator

WCX-1276 (OCT.'48)

(6)

W.O. LAKE

Residue No. HPK-25-10 Date 11-3-50 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-1 Sample Std.

Count Time	1X10	1X10	1X10			
Count	32	54	42			
Corr. Rate	.9	12.5	8.3	0		
Average Rate	7.2					

Time 1230 Date 11-3-50 Operator

WCX-1276 (OCT.'48)

(7)

W.O. LAKE

Residue No. HPK-25-10 Date 11-3-50 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-1 Sample Std.

Count Time	1X10	1X10	1X10			
Count	27	60	31			
Corr. Rate	3.9	6.7	.8			
Average Rate	3.6					

Time 1300 Date 11-3-50 Operator

WCX-1276 (OCT.'48)

(8)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HP K-25-1 Date _____ Priority _____

Description [illegible] Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier X-1

	Sample			Std.		
Count Time	1[illegible]0	1[illegible]10				
Count	13[illegible]	12[illegible]				
Corr. Rate	69	[illegible]				
Average Rate	[illegible]					

Time _____ Date [illegible] Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HP K-25-1 Date 8-3-50 Priority —

Description Liquid Sample Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1

	Sample				Std. Std-Y	
Count Time	1X10	1X10	1X10		1X10	
Count	31	31	25		1215	
Corr. Rate	2	4	1		761	
Average Rate	2				761	

Time 1420 Date 8-3-50 Operator [illegible]

WCX-1276 (OCT.'48)

9

Residue No. HP-K25-1 Date 8-3-50 Priority —

Description Liquid Sample Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1

	Sample				Std. Std-Y	
Count Time	1X10	1X10	1X10		1X10	
Count	329	321	339		1215	
Corr. Rate	5	4	6		761	
Average Rate	5				761	

Time 1425 Date _____ Operator [illegible]

WCX-1276 (OCT.'48)

10

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Part 1

Residue No. HPK-25-2 Date 7-14-[illegible] Priority

Description [illegible] Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1 Sample Std. STD.

Count Time	1X10		1X10		1X10	
Count		260	252		1165 2	
Corr. Rate	2.2	1.2	.4			
Average Rate	1.3				732.5	

Time 1335 Date 8-14-50 Operator [illegible] (11)

WCX-1276 (OCT.'48)

Part 2

Residue No. HPK-25-2 Date 8-14-50 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1 Sample Std. STD.

Count Time	1X10	1X10	1X10		1X10	
Count	253	33	258		1165 2	
Corr. Rate	.5	1.9	1.0		732.5	
Average Rate	1.13					

Time 1420 Date 8-14-50 Operator [illegible] (12)

WCX-1276 (OCT.'48)

#1 10-24

Residue No. HPK-[illegible]-3 Date [illegible] Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1 Sample Std. STD.

Count Time	1X30				1X10	
Count	848				1172	
Corr. Rate	2				755	
Average Rate						

Time Date 8-22-50 Operator [illegible] (13)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. [illegible] Date [illegible] Priority [illegible]

Description [illegible] Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1 Sample Std. 1/STD

Count Time	[illegible]				[illegible]	
Count	113				1172	
Corr. Rate	3				755	
Average Rate						

Time [illegible] Date 8-22-50 Operator [illegible] 14

WCX-1276 (OCT.'48)

Residue No. HPK-25-4 #2 Date 8-29-50 Priority 10424

Description [illegible] Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1 Sample Std. 1/STD

Count Time	1x10	1x10	1x10		1x10	
Count	31	321	324		1213	
Corr. Rate	3	4	5		761	
Average Rate		4			761	

Time [illegible] Date 8-29-50 Operator [illegible] 15

WCX-1276 (OCT.'48)

Residue No. HPK-25-4 #1 Date 8-29-50 Priority 10424

Description [illegible] Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-1 Sample Std. 1/STD

Count Time	1x10	1x10	1x10		1x10	
Count	34	313	34		1213	
Corr. Rate	3	4	3		761	
Average Rate		3.33			761	

Time [illegible] Date 8-29-50 Operator [illegible] 16

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-5 #2 Date 9-5-50 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 7-1 Sample Std. V-STD

Count Time	1X10	1X10	1X10		1X10	
Count	32	320	312		12445	
Corr. Rate	3	5	5		785	

Average Rate 4.33

Time Date 9-5-50 Operator MAB (17)

WCX-1276 (OCT.'48)

Residue No. HPK 25-5 #1 Date 9-5-50 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 7-1 Sample Std. V-STD

Count Time	1X10	1X10	1X10		1X10	
Count	341	317	261		12445	
Corr. Rate	7	5	3		785	

Average Rate 5

Time Date 9-5-50 Operator MAB (18)

WCX-1276 (OCT.'48)

Residue No. HPK-25-6 #2 Date 9-11-50 Priority 10607

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 7-1 Sample Std. Std. "y"

Count Time	1X10	1X10	1X10		1X10	
Count	323	35	314		11932	
Corr. Rate	4	2	3		691	

Average Rate 3

Time Date 9-13-50 Operator MAB (19)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-6 #1 Date 9-11-50 Priority 12627

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 7-1

	Sample				Std. Std.	
Count Time	1X10	1X10	1X10		1X10	
Count	26	32	25		1132	
Corr. Rate	1	2	0		691	
Average Rate	1.00					

Time _____ Date 9-13-50 Operator [illegible] (20)

WCX-1276 (OCT.'48)

Residue No. HPK-25-6 #1 Date 9-12-50 Priority 12627

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 7-1

	Sample				Std. By Std.	
Count Time	1X10	1X10	1X10		1X10	
Count	32	35	25		1082	
Corr. Rate	3	2	0		679	
Average Rate	1.67					

Time _____ Date 9-13-50 Operator [illegible] (21)

WCX-1276 (OCT.'48)

Residue No. HPK-25-6 #2 Date 9-12-50 Priority 12627

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 7-1

	Sample				Std. By Std.	
Count Time	1X10	1X10	1X10		1X10	
Count	38	39	26		1072	
Corr. Rate	4	2	1		679	
Average Rate	2.33				1	

Time _____ Date 9-13-50 Operator [illegible] (22)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. WOL-25-7 #2 Date 9-20-50 Priority -45

Description _____ Operator _____

Method ☑ Alpha ☑ Beta ☐ Gamma

Amplifier V-1 Sample Std. Std 4

Count Time	1X30				1X10	
Count	10[illegible]				10836	
Corr. Rate	4				679	
Average Rate						

Time _____ Date 9-20-50 Operator [illegible] (23)

WCX-1276 (OCT.'48)

Residue No. WOL-25-7 #1 Date 9-20-50 Priority -45

Description _____ Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-1 Sample Std. Std 4

Count Time	1X30				1X10	
Count	1059				10836	
Corr. Rate	5				679	
Average Rate						

Time _____ Date 9-20-50 Operator [illegible] (24)

WCX-1276 (OCT.'48)

Residue No. HPK-25-8 #1 Date 9-27-50 Priority -45

Description _____ Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-1 Sample Std. Y std

Count Time	1X30				1X10	
Count	1032				1094	
Corr. Rate	2.8				683	
Average Rate						

Time _____ Date 9-27-50 Operator [illegible] (25)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-8-#2 Date 9-27-50 Priority 10424

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 1-1

	Sample				Std. 4 STD	
Count Time	1X30				1X15	
Count	1029				1094	
Corr. Rate	2.7				683	
Average Rate						

Time _____ Date 9-27-50 Operator [illegible] (26)

WCX-1276 (OCT.'48)

Residue No. HPK-25-8 Date 10-9-50 Priority _____

Description W.O. Lake 8:30 AM Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample				Std.	
Count Time	1X10	1X10	1X10			
Count	244	31	243			
Corr. Rate	2	14	2			
Average Rate	2.7					

First Run

Time 1520 Date 10-11-50 Operator [illegible] (27)

WCX-1276 (OCT.'48)

Residue No. HPK-25-8 Date 10-9-50 Priority _____

Description W.O. Lake 8:30 AM Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample				Std.	
Count Time	1X10					
Count	313					
Corr. Rate	5					
Average Rate	5					

Second Run

Time 1530 Date 10-11-50 Operator [illegible] (28)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-9 Date 10-19-50 Priority

Description White OAK LAKE 10-16-50 - 830 AM Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-3

	Sample			Std.		
Count Time	1x10	1x10	1x10			
Count	256	34	352			
Corr. Rate	1	4	1			
Average Rate	2					

Time 1050 Date 10-19-50 Operator [illegible] (29)

WCX-1276 (OCT. '48)

Residue No. HPK-25-9 Date 10-19-50 Priority

Description White OAK LAKE 10-16-50 830 AM Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-3

	Sample			Std.		
Count Time	1x10	1x10	1x10			
Count	260	246	259			
Corr. Rate	3	1	3			
Average Rate	2.33					

Time 1030 Date 10-19-50 Operator [illegible] (30)

WCX-1276 (OCT. '48)

Residue No. HPK-25-6 Date 8-11-49 Priority

Description W.O. Dam Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier separate Samples

	Sample			Std.		
Count Time	1x5	1x5	1x5			
Count	21.6	19.6	20.4			
Corr. Rate	2.6	1.6	2.4			
Average Rate	2.20					

Time 1300 Date 9-13-50 Operator S.K. (31)

WCX-1276 (OCT. '48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

WCX-911 (Jan'48)

Residue No. D0860 Date 6-23-50 Priority 1042-4

Description Bottle Residue Operator R.E.J. MCB

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier 3-1 4-1

Count time	1X32		1X10	
Rate	12.6		19.5	
Blank or Bkg.	12.2		20.9	
Net rate	.4		-1.4	
Corr. rate	2.89		9.49	
Avg. rate				

Answer

32

WCX-911 (Jan'48)

Residue No. 1217 W Date 6-23-50 Priority 1042-4

Description Bottle Residue Operator R.E.J. MCB

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier 4-1 3-1

Count time	1X32		1X32	
Rate	26.1		15.5	
Blank or Bkg.	20.9		12.2	
Net rate	5.2		3.3	
Corr. rate	35.26		23.86	
Avg. rate			23.86	

Answer 4.3 x 7 30.5 ± 71

33

Residue No. W0L-1 Date 6-8-50 Priority 1042-4

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-1 Sample Std. 1C

Count Time	1X10	1X10		1X10	
Count	142	138		219	
Corr. Rate	72	69		1393	
Average Rate	71			1393	

Time 1500 Date 6-8-50 Operator W.C.B.

WCX-1276 (OCT.'48)

34

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Counted

operator [illegible] date 6-23-58

Counted

operator [illegible] date 6-23-58

White Oak Lake

Residue No. WOL-~~#~~ 1 Date 6-14-50 Priority

Residue ~~Filtrate~~ from

Description WOL-2 Operator SK

Method [ ] ~~Alpha~~ [X] Beta [ ] Gamma

Amplifier	X-1	Sample	WOL-2	X-1	Std. CS-1
Count Time	1X10	1X10		1X10	~~1X10~~
Count	14 35	15 1		204 4	~~204 4~~
Corr. Rate	73	76		1297	~~1377~~
Average Rate	75			1297 OK.	~~1377~~

Time Date 6-14-50 Operator VCS

35

WCX-1276 (OCT.'48)

White Oak Lake

Liquid ~~Residue~~ No. WOL-2 Date 6-14-50 Priority

Description ~33cc Filtered Liquid Operator S.K.

Method [ ] Alpha [ ] Beta [ ] Gamma

3/16 from tube

Amplifier	X-3	Sample		X-1	Std. 1Co	
Count Time	1X10	1X10	1X10		1X10	
Count	5 43	5 27	6 28		204 4	
Corr. Rate	16.3	14.7	21.2		1297	
Average Rate	17.4			1297		

Time Date 6-14-50 Operator V.G.

36

WCX-1276 (OCT.'48)

WCX-911 (Jan'48)

Residue No. 154 B-1 Date 6-15-50 Priority 10X24

Description W.OL. #2 (filtrate) Operator SK

Method [ ] Alpha [✓] Beta [ ] Fission

Amplifier T-1 1Co

Count time	1X10			1X10
Rate	78 10			218 4
Blank ~~or Bkg.~~	481			1383
Net rate				
Corr. rate	481			
Avg. rate				

37

Answer

Counted

operator [illegible]

date 6/14/52

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

WCX-911 (Jan'48)

Residue No. 155 B-1 ~~-1~~ Date 6-15-50 Priority 10424

Description W.O.L. #3 Operator SK.

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier T-1 1 Co

Count time	1X10			1X10
Rate	74 54			218 1
Blank or Bkg.	460			1383
Net rate				
Corr. rate	460			
Avg. rate				

Answer

38

White Oak Lake

Liquid ~~Residue~~ No. WOL-3 Date 6-14-50 Priority

Description Unfiltered ~33 cc Operator SK.

Method ☐ Alpha ☒ Beta ☐ Gamma

3rd shelf

Amplifier X-3/16 for ~~Sample~~ tube X-3 Std. 1 Co

Count Time	1X10	1X10	1X10		1X10	
Count	73	74	6 17		45 23	
Corr. Rate	25	25	20		270	
Average Rate		23			270	

Time 1330 Date 6-14-50 Operator [illegible]

39

WCX-1276 (OCT.'48)

WCX-911 (Jan'48)

Residue No. 156 B-1 ~~-1~~ Date 6-15-50 Priority 10424

Description W.O.L. #4 Operator

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier T-1 1 Co

Count time	1X10			1X10
Rate	69 46			219 52
Blank or Bkg.	427			1393
Net rate				
Corr. rate	427			
Avg. rate				

Answer

40

Counted
operator
date 6-16-58

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Counted
operator
date 6/16/58

Liquid White Oak Lake
~~Residue~~ No. WOL-4 Date 6-14-50 Priority

Description Unfiltered ~33 cc. Operator SK
3rd shelf

Method [ ] Alpha [X] Beta [ ] Gamma

Amplifier X-3/16" from tube Sample X-3 Std. 1 Cs

Count Time	1X10	1X10	1X10		1X10	
Count	6 12	6 12	6 24		45 23	
Corr. Rate	20	20	21		270	
Average Rate	20				270	

Time Date 6-14-50 Operator Jrcb (41)

WCX-1276 (OCT.'48)

WCX-911 (Jan'48)

Residue No. 157B-1 Date 6-15-50 Priority 1042X

Description W.O.L. #5 Operator

Method [ ] Alpha [✓] Beta [ ] Fission

Amplifier J-1 1 Cs

Count time	1X10		1X10	
Rate	68 63		319 34	
~~Blank or Bkg.~~	616		1393	
Net rate				
Corr. rate	616			
Avg. rate				

(42)

Answer

Liquid White Oak Lake
~~Residue~~ No. WOL-5 Date 6-14-50 Priority

Description Unfiltered ~33 cc Operator SK
3rd shelf

Method [ ] Alpha [X] Beta [ ] Gamma

Amplifier X-3/16" from tube Sample X-3 Std. 1 Cs

Count Time	1X10	1X10	1X10		1X10	
Count	6 39	6 43	6 22		45 89	
Corr. Rate	22	23	21		272	
Average Rate	22				272	

Time 15 15 Date 6-14-50 Operator Jrcb (43)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Counted

operator [illegible] date 6-16-50

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

WCX-911 (Jan'48)

Residue No. 15813-1 = 1 Date 6-15-50 Priority 10424

Description W. O. L. #6 Operator

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier J-1 1cs

Count time	1X10		1X10	
Rate	93 34		219 20	
Bl~~ank or Bkg~~.	580		1392	
Net rate				
Corr. rate	580			
Avg. rate				

(44)

Answer

Liquid ~~Residue~~ No. WOL-6 Date 6-14-50 Priority

Description Unfiltered ~33cc Operator SR

Method ☐ 3/16" from shelf ☒ Beta ☐ Gamma 1cs

Amplifier X-3/16" Sample Std. ~~[illegible]~~

Count Time	1X10	1X10	1X10		1X10	
Count	6 59	6 61	6 40		45 39	
Corr. Rate	24	25	22		272	
Average Rate	24				272	

(45)

Time Date 6-14-50 Operator [illegible]

WCX-1276 (OCT.'48)

Absorption Curve

Cell No._____ Sample No._____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Counted

operator [illegible] date 6-16-57

Residue No. HPK-25-14 Date 1-11-51 Priority ✓

Description W.O. LAKE Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier

	Sample			Std.		
Count Time	1X10	1X10	1X10		Run	
Count	15.3	16.1	16.4			
Corr. Rate	0.2	0.5	0.8	First		
Average Rate	0.5					

Time 0845 Date 1-11-51 Operator G.A. (46)

WCX-1276 (OCT.'48)

Residue No. HPK-25-14 Date 1-11-51 Priority —

Description W.O. LAKE Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier

	Sample			Std.		
Count Time	1X10	1X10	1X10		Second Run	
Count	16.1	17.0	15.2			
Corr. Rate	0.5	1.4	-0.4			
Average Rate	0.5					

Time 0915 Date 1-11-51 Operator G.A. (47)

WCX-1276 (OCT.'48)

Residue No. HPK-25-15 Date 1-17-51 Priority —

Description W.O. Dam. 10:30 AM. 1-15-51 Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T.3

	Sample			Std.		
Count Time	1X10	1X10	1X10		Run	
Count	18.5	16.0	14.8			
Corr. Rate	2.5	0.	-1.2	First		
Average Rate	0.43					

Time 0900 Date 1-17-51 Operator G.A. (48)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-15 Date 1-17-51 Priority —

Description W.O. Dam 10:30 AM 1-16-51 Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-3

	Sample			Std.		
Count Time	1X10	1X10	1X10			
Count	16.5	17.	16.4			
Corr. Rate	0.5	1.0	0.4			
Average Rate	0.63					

Second Run

Time 0930 Date 1-17-51 Operator GH. (49)

WCX-1276 (OCT.'48)

Residue No. HPK-25-16 Date 1-23-51 Priority

Description W.O. Dam Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-3 Sample T-3 T-3 2nd Run Std.

Count Time	1X10	1X10	1X10			
Count	240	236	234			
Corr. Rate	1.0	0.6	-.6			
Average Rate	0.5					

Time 1445 Date 1-23-51 Operator Colin (50)

WCX-1276 (OCT.'48)

Residue No. HPK-25-16 Date 1-23-51 Priority

Description W.O. Dam Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-3 Sample T-3 T-3 1st Run Std.

Count Time	1X10	1X10	1X10			
Count	223	247	240			
Corr. Rate	-.7	1.7	1.0			
Average Rate	0.7					

Time 1400 Date 1-23-51 Operator Colin (51)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-17 Date _____ Priority _____

Description Dam Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	1st Sample			2nd Sample ~~Std.~~		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	17.7	16.5	15.7	16.5	16.9	17.2
Corr. Rate	2.1	0.9	0.2	0.9	1.2	1.6
Average Rate	1.1			1.3		

1.2

52

Time 1400 Date 1-30-51 Operator [signature]

WCX-1276 (OCT.'48)

Residue No. HPK-25-18 Date 2-6-51 Priority –

Description W.O. DAM Operator _____

Method [ ] Alpha [X] Beta [ ] Gamma

Amplifier

	First Run ~~Sample~~			Second Run ~~Std.~~		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	15.0	14.8	12.9	16.0	15.3	15.1
Corr. Rate	-0.2	-0.4	-2.3	0.8	0.1	-0.1
Average Rate	-0.97			0.26		

53

Time 1600 Date 2-6-51 Operator [signature]

WCX-1276 (OCT.'48)

Residue No. HPK-25-19 Date 2-13-51 Priority _____

Description _____ Operator MK

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T

	Sample			Std.		
Count Time	1X30			1X30		
Count	15.3			15.5		
Corr. Rate	0			0		
Average Rate	0					

54

Time _____ Date 2-13-51 Operator MK

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-20 Date 2-21-51 Priority

Description W.O. Dam 2-19-51 8:45AM Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier 2.1 Sample Std.

Count Time	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Count	[illegible]	[illegible]	[illegible]	15.5	17.5	15.7
Corr. Rate	2.9	2.3	3.3	0.7	2.7	0.7
Average Rate	2.8			1.4		

Time 11:15 Date 2-21-51 Operator [illegible] (55)

WCX-1276 (OCT.'48) Sample avg 2.1

WCX-911 (Jan'48) K-25 NRC

Residue No. HPK-25-21 Date 2-28-51 Priority

Description W.O. Dam. Operator

Method ☐ Alpha ☑ Beta ☐ Fission

Amplifier U

Count time	1 x 30		1 x 30	
Rate	15.6		15.4	
Blank or Bkg.	15.		15	
Net rate	0.6		0.4	
Corr. rate				
Avg. rate		ave = .5		

(56)

Answer

Residue No. HPK-25-22 Date 3-7-51 Priority

Description W.O. DAM Operator

Method ☐ Alpha ☒ Beta ☐ Gamma

Amplifier T-3 Sample Std.

Count Time	1x30				1x30	
Count	16.9				16.9	
Corr. Rate	0.7				0.7	
Average Rate	0.7		0.7		0.7	

Time 0915 Date 3-7-51 Operator [illegible] (57)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Counted

date

operator

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-23 Date 3-12-51 Priority

Description [illegible] Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	T-3	Sample			Std.	
Count Time	1X30		1X30	1		
Count	4 21		4 23			
Corr. Rate	0.4		0.5			
Average Rate	0.45					

Time 1500 Date 3-13-51 Operator [illegible] (58)

WCX-1276 (OCT.'48)

10:30 am

Residue No. HPK-25-24 Date 3-19-51 Priority

Description WO [illegible] Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	T	1st Sample			2nd ~~Std.~~	
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	3 52	4 19	4 39	4 22	5 54	3 40
Corr. Rate	6.9	10.0	12.0	10.3	19.3	5.7
Average Rate	9.6			12.0		

Time 1630 Date 3-26-51 Operator [illegible] (59)

WCX-1276 (OCT.'48)

Residue No. HPK-25-25 Date Priority

Description [illegible] Operator

Method ☑ Alpha ☐ Beta ☐ Gamma

Amplifier	T	Sample	1st Std	2nd ~~Std.~~		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	2 33	2 52	2 43	2 37	[illegible]	[illegible]
Corr. Rate	0.8	3.1	1.8	1.2	-1.8	[illegible]
Average Rate	1.9			0.0		

[illegible] 2 = 1.0

Time 1625 Date 3.29.51 Operator [illegible] (60)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. [illegible] Date _____ Priority _____

Description [illegible] Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T — Sample (1st Sol) — Std.

	Sample			Std.		
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	25	23	57	27	46	36
Corr. Rate	0.3	0.1	3.5	0.5	2.4	1.4
Average Rate	1.3			1.4		

Time 1205 Date 4-6-51 Operator [illegible] (61)

WCX-1276 (OCT.'48)

Residue No. HPK-25-27 Date _____ Priority _____

Description Dam Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T — Sample 1st sol. — 2nd sol ~~Std.~~

	Sample					
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	21	29	54	13	15	22
Corr. Rate	-0.4	+0.5	2.9	-1.2	-0.7	-0.3
Average Rate	+1.0			-0.7		

Time 1200 Date 6-11-51 Operator [illegible] (62)

WCX-1276 (OCT.'48)

Residue No. HPK-25-28 Date _____ Priority _____

Description Dam Operator _____

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier T — Sample 1st sol — Std. 2nd sol

	Sample			Std.		
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	43	43	31	40	19	15
Corr. Rate	1.7	1.7	0.5	1.4	-0.7	-1.1
Average Rate	+1.3			-0.1		

(+0.6)

Time 1200 Date 4-18-51 Operator [illegible] (63)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-29 Date _____ Priority _____

Description Dom _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier	Sample			Std.		
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	251	232	224	225	243	227
Corr. Rate	+0.4	-1.5	-2.3	-2.2	-0.4	-2.0
Average Rate						

Time 1325 Date 4-26-51 Operator [signature] (64)

WCX-1276 (OCT.'48)

Residue No. HPK-[illegible] Date _____ Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier	Sample			Std.		
Count Time	[illegible]					
Count	[illegible]	[illegible]	259	[illegible]	[illegible]	242
Corr. Rate	3.7	3.8	3.5	[illegible]	1.4	1.8
Average Rate	3.7			1.4		

Time _____ Date 5-[illegible] Operator [signature] (65)

WCX-1276 (OCT.'48)

Residue No. HPK-25-31 Date 5/9/51 Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier	1st Portion Sample			2nd Portion Std.		
Count Time	5 min	5 min	5 min	5 min	5 min	5 min
Count	136	118	110	117	119	128
Corr. Rate	5.5	1.9	0.3	0.0	2.1	3.9
Average Rate	2.6			3.0		

Time 1405 Date 5/9/51 Operator [signature] (66)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-32 Date 7-12-51 Priority

Description 420 Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier VV

	1st Portion Sample			2nd Portion Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	2^12	2^25	2^29	2^36	2^43	2^17
Corr. Rate	-0.1	1.2	1.6	2.3	3.0	0.4
Average Rate	0.9			1.9		

Time Date 7-12-51 Operator

67

WCX-1276 (OCT.'48)

Residue No. HPK 25-34 Date 6-12-51 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	1st Portion Sample			2nd Portion Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	3^22	3^1	2^34	3^3	3^1	3^7
Corr. Rate	5.7	3.6	2.5	3.8	3.6	4.2
Average Rate	3.93			3.86		

Time 11-45 Date 6-12-51 Operator

68

WCX-1276 (OCT.'48)

Residue No. HPK-25-35 Date Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	1st sol. Sample			2nd sol. Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	2^48	2^45	3^0	2^57	2^43	2^45
Corr. Rate	1.9	1.6	3.5	2.8	1.4	1.6
Average Rate	2.3			1.9		

Time Date 6-19-51 Operator

69

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPR-25-36 Date _____ Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-3 Sample | Std.

	Sample			Std.		
Count Time	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10
Count	2 35	2 54	3 5	3 12	2 38	3 9
Corr. Rate	0.6	2.5	4.0	4.7	0.9	4.4
Average Rate	2.4			3.3		

70

Time _____ Date 6-19-51 Operator _____

WCX-1276 (OCT.'48)

Residue No. HPR-25-37 Date _____ Priority _____

Description White Oak Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier Sample | Std.

	Sample			Std.		
Count Time	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10
Count	3 59	3 32	3 31	3 52	3 35	3 59
Corr. Rate	10.0	7.3	7.2	9.3	7.6	10.0
Average Rate	8.2			9.0		

71

Time _____ Date 6-27-51 Operator _____

WCX-1276 (OCT.'48)

Residue No. HPR-25-38 Date _____ Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T. Sample | Std.

	Sample			Std.		
Count Time	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10
Count	3 35	3 2	2 63	3 41	2 50	3 11
Corr. Rate	6.5	3.7	2.9	7.1	1.6	4.1
Average Rate	4.4			4.3		

72

Time _____ Date 7-5-51 Operator _____

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK 25-39 Date 7-16-51 Priority

Description W O Dam Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-3

	Sample (1st sol.)			Std. (2nd sol.)		
Count Time	1 x 10	1 x 10	1 x 10	1 x 10	1 x 10	1 x 10
Count	3 8	2 46	2 61	2 58	2 43	3 6
Corr. Rate	4.3	1.7	3.2	2.9	1.4	4.1
Average Rate	3.1			2.8		

Time Date 7-17-51 Operator (73)

WCX-1276 (OCT.'48)

Residue No. HKP-25-59 Date 12/24/51 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier W-3

	Sample			Std.		
Count Time	1 x 5	1 x 5	1 x 5	1 x 5	1 x 5	1 x 5
Count	128	132	134	122	125	140
Corr. Rate	1.5	2.3	2.7	0.3	0.9	3.9
Average Rate	2.2			1.7		

Time Date 12-24-51 Operator (74)

WCX-1276 (OCT.'48)

Residue No. HPK-25-58 Date 12-17-58 Priority

Description Water Dam Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample (1st Portion)			Std. (2nd Portion)		
Count Time	5 min	5 min	5 min	5 min	5 min	5 min
Count	116	150	139	127	120	128
Corr. Rate	-1.8	5.0	2.8	0.4	-1.0	0.6
Average Rate	3.00			0.0		

Time Date 12-18-51 Operator J.C. & W.W. (75)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-57 Date 12-10-51 Priority

Description Water Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-3 1st Sample 2nd Std.

Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	2 50	2 46	2 48	2 63	2 54	2 47
Corr. Rate	3.4	3.0	3.2	4.7	3.8	3.1
Average Rate	3.2			3.9		

Time Date 12-11-51 Operator (76)

WCX-1276 (OCT.'48)

Residue No. HPD-K-25-56 Date 12-4-51 Priority

Description Operator

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier T-3 T-3 T-3 T-3 T-3 T-3

Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	139	1 10	1 35	1 32	134	1 33
Corr. Rate	6	0	3	4	3	3
Average Rate	3			3.0		

Time 1230 Date 12-4-51 Operator (77)

WCX-1276 (OCT.'48)

Residue No. HPK-25-55 Date 11-27-51 Priority

Description Operator

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier T-3 T-3 T-3 T-3 T-3 T-3

Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	1 35	1 26	1 20	1 34	1 36	1 40
Corr. Rate	6	4	3	6	6	7
Average Rate	4.1			6.2		

Time 1350 Date 11-27-51 Operator (78)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-54 Date 11-19-51 Priority

Description Water Operator 1042

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T 1st portion Sample 2nd Portion Std.

Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	158	24	162	29	145	235
Corr. Rate	0	0	0	0	0	0
Average Rate						

Time 1450 Date 11-20-51 Operator Law (79)

WCX-1276 (OCT.'48)

Residue No. HPK-25-53 Date 11-7-51 Priority

Description Water Operator 1042

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier 20-3 Sample Std.

Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	131	132	137	133	112	131
Corr. Rate	2.6	3.6	4.2	3.6	0.0	2.6
Average Rate	3.4			2.0		

Time 1045 Date 11-7-51 Operator [illegible] (80)

WCX-1276 (OCT.'48)

Residue No. HPK-25-52 Date 10-30-51 Priority

Description Operator

Method ☑ Alpha ☐ Beta ☐ Gamma

Amplifier U-3 Sample Std.

Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	122	132	143	134	128	134
Corr. Rate	0.5	2.5	4.7	2.9	1.7	2.9
Average Rate	2.6			2.5		

Time Date 10-30-51 Operator Coleman (81)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-51 Date 10-23-51 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-3

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	143	140	141	133	149	136
Corr. Rate	6.2	5.6	5.8	4.2	7.4	4.8
Average Rate	5.9			5.5		

(82)

Time 1230 Date 10-23-51 Operator Coleman

WCX-1276 (OCT.'48)

Residue No. HPK-25-50 Date 10-17-51 Priority

Description Water Operator Chapman

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier V Sheet 3

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	154	147	147	160	144	159
Corr. Rate	7.7	6.3	6.3	8.9	5.7	8.7
Average Rate	6.8			7.8		

(83)

Time Date 10-17-51 Operator

WCX-1276 (OCT.'48)

Residue No. HPK-25-49 Date 10-9-51 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-3

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	143	153	160	132	153	148
Corr. Rate	4.2	6.2	7.6	2.0	6.2	5.2
Average Rate	6.0			4.5		

W

(84)

Time Date 10-9-51 Operator Coleman

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. NPK-25-48 Date 10-1-51 Priority

Description W.O. [illegible] Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier /— Sample 1st Portion. Std. 2nd Portion.

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	150	140	146	156	148	156
Corr. Rate	5.4	3.6	4.2	6.[illegible]	5.0	6.6
Average Rate	4.3			6.1		

Time Date 10-3-51 Operator [illegible] (85)

WCX-1276 (OCT.'48)

Residue No. NPK-25-47 Date 9-19-51 Priority

Description Operator

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier 2-1 Sample Std.

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	149	137	150	157	138	13[illegible]
Corr. Rate	5.0	2.6	5.2	6.6	2.[illegible]	1.4
Average Rate	4.3			3.6		

Time 1545 Date 9-19-51 Operator Cotey (86)

WCX-1276 (OCT.'48)

Residue No. NPK-25-46 Date 9-13-51 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-3 Sample Std.

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	210	154	153	153	150	21[illegible]
Corr. Rate	10.4	6.4	6.2	6.4	5.6	8.6
Average Rate	7			7		

Time 1530 Date 9-[illegible] Operator A. Cotey (87)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25 45 Date 9-6-51 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	T Sample (1st portion)			Std. (2nd portion)		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	24	132	156	147	139	149
Corr. Rate	10.4	3.2	8.0	6.2	4.6	6.6
Average Rate	6.5			5.8		

Time 1310 Date 9-6-51 Operator [illegible] (88)

WCX-1276 (OCT.'48)

Residue No. HPK-25-44 Date 8-27-51 Priority

Description W O Dam (H2O) Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	V-3 Sample (1st portion)			V-3 Std. (2nd portion)		
Count Time	1X5			1X5		
Count	149	163	149	155	152	142
Corr. Rate	4.6	7.4	4.6	5.8	5.2	3.3
Average Rate	5.5			[illegible]		

Avg. 5.2

Time 1521 Date 8-27-51 Operator [illegible] (89)

WCX-1276 (OCT.'48)

Residue No. HPK-25-43 Date 8-13-51 Priority

Description Dam Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	U-3 Sample (1st sol)			Std. (2nd sol)		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	327	320	321	320	339	329
Corr. Rate	3.6	2.9	3.0	2.9	4.8	3.8
Average Rate	3.2			3.8		

Time Date 8-14-51 Operator [illegible] (90)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK 25-42 Date [illegible] Priority

Description [illegible] Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	1st sol Sample			2nd sol Std.		
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	3 15	3 61	2 46	3 9	2 62	3 2
Corr. Rate	4.3	8.9	1.0	3.7	2.6	3.0
Average Rate	4.7			3.1		

Time [illegible] Date 8-8-51 Operator [illegible] (91)

WCX-1276 (OCT.'48)

Residue No. HPK-25-41 Date 8-1-51 Priority

Description Water Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	1st solution Sample			2nd solution Std.		
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	3 23	3 22	2 57	2 57	3 23	3 1
Corr. Rate	5.1	1.7	1.1	1.1	4.1	2.9
Average Rate	3.6			2.7		

Time 1500 Date 8-1-51 Operator [illegible] (92)

WCX-1276 (OCT.'48)

Residue No. HPK-25-40 Date 7-23-51 Priority

Description W.D. Sam Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier	1st sol T-3 Sample			2nd sol Std.		
Count Time	1x10	1x10	1x10	1x10	1x10	1x10
Count	3 9	2 49	2 55	2 33	2 30	2 [illegible]
Corr. Rate	3.2	0.8	1.4	-0.8	.2	[illegible]
Average Rate	1.8			[illegible]		

Time [illegible] Date 7-[illegible]-51 Operator [illegible] (93)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-98 Date 1-26-53 Priority

Description 24' Area Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 1-3

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	54	57	55	531	448	552
Corr. Rate	47.5	48.1	47.7	52.9	43.5	57.1
Average Rate	~~44~~ 47.8			51.2		

Time Date 1-29-53 Operator

94

WCX-1276 (OCT.'48)

Residue No. HPK 25-97 Date 1-14-53 Priority

Description Operator 10954

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	343	331	332	260	33	218
Corr. Rate	33	31	31	24	25	16
Average Rate	32			22		

Time Date Operator M.E.B.

95

WCX-1276 (OCT.'48)

Residue No. HPK 25-96 Date 1-2-53 Priority

Description Operator 22

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	537	524	526	521	530	54
Corr. Rate	52	49	50	49	48	45
Average Rate	50			47		

Time Date 1-2-53 Operator T.T.

96

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPV 25-95 Date 12-[illegible] Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T-3 Sample Partial Std. [illegible]

Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	5^60	5^42	5^43	5^20	5^20	5^15
Corr. Rate	56.7	53.1	53.3	48.7	48.7	47
Average Rate	51.			48.2		

97

Time _____ Date 12-24 Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HPR-25-94 Date 12/17 Priority _____

Description Water sol. Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	3^49	4^1	4^13	4^12	3^28	3^35
Corr. Rate	34	38	40	40	30	32
Average Rate	37			34		

98

Time 1240 Date 12/17/52 Operator Bacu

WCX-1276 (OCT.'48)

Residue No. HPK-25-93 Date 12-8-52 Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	4^22	4^18	4^12	3^54	4^36	4^37
Corr. Rate	38	37	36	32	41	41
Average Rate	37			38		

99

Time 1:15 PM. Date 12-8-52 Operator Beach

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK 25 - 92 Date 12-1-52 Priority _____

Description _____ Operator 104-4

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier — Sample (1st Portion) | Std. (2nd portion)

	Sample			Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	529	552	511	443	555	555
Corr. Rate	15.6	17.9	13.8	12.1	13.2	14.2
Average Rate	15.8			13.3		

Time 11:50 Date 12 - 3 Operator [illegible] (100)

WCX-1276 (OCT.'48)

Residue No. HPK-25-91 Date 11-19 Priority _____

Description 240 Gram Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier 1-3 — Sample (Portion-1) | Std. (Portion-2)

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	333	31	332	322	34	319
Corr. Rate	6.6	3.4	6.5	5.5	3.7	5.2
Average Rate	5.5			4.8		

avg. = 5

Time _____ Date 11-25 Operator [illegible] (101)

WCX-1276 (OCT.'48)

Residue No. HPK 25-90 Date [illegible] Priority _____

Description [illegible] Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier — Sample | Std.

	Sample			Std.		
Count Time	[illegible]	[illegible]	[illegible]		[illegible]	
Count	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Corr. Rate	39.0	54.2	[illegible]	[illegible]	30.9	[illegible]
Average Rate	37.1			29.7		

Time _____ Date 11-[illegible] Operator [illegible] (102)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-79 Date 11/5/52 Priority _____

Description Wo-Dam H_2O Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-1

	Sample			Std.		
Count Time	3 X 10			3 X 10		
Count	6 37	6 36	6 53	7 35	7 41	6 50
Corr. Rate	26.2	26.1	27.8	32.4	33.0	27.5
Average Rate	26.7			31.0		

103

Time _____ Date 11/5 Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HPK-88 Date 10-27 Priority _____

Description H C. Dam Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier V-1 Portion-1 Sample Std. Portion-2

Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	5 8	5 33	5 11	4 60	5 9	5 24
Corr. Rate	16.6	19.1	16.9	15.4	16.7	18.2
Average Rate	17.5			16.8		

104

Time _____ Date 10-[illegible] Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HKP-87 Date 10-20-52 Priority _____

Description _____ Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier T-3 Portion-1 Sample Portion-2 Std.

Count Time	1X10			1X10		
Count	4 56	4 36	4 38	4 24	3 57	4 [illegible]
Corr. Rate	13.5	11.5	11.7	10.3	7.2	12.9
Average Rate	12.2			10.1		

[illegible] = 11.2

105

Time _____ Date 10-22-52 Operator [illegible]

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. H. KO. 25-86 Date 10-15-52 Priority _____

Description Water Operator _____

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier U

	Sample			Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	421	519	423	413	347	406
Corr. Rate	11.8	18.0	12.0	11.0	8.0	10.3
Average Rate	11.8			9.73		

Time _____ Date _____ Operator AOL. (106)

WCX-1276 (OCT.'48)

Residue No. HKP 25-85 Date 10-9-52 Priority _____

Description Water Operator _____

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier U

	Sample			Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	502	437	444	422	420	445
Corr. Rate	17.4	14.5	15.2	13.0	12.8	15.3
Average Rate	14.7			13.7		

Time _____ Date 10-9-52 Operator Ava. (107)

WCX-1276 (OCT.'48)

Residue No. HKP. 25-84 Date 10-2-52 Priority _____

Description Water Operator _____

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier T

	Sample			Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	541	572	[illegible]	539	456	531
Corr. Rate	[illegible]	[illegible]	7.6	17.9	13.2	17.1
Average Rate	16.5			16.1		

Time _____ Date 10-2-52 Operator Ava. (108)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK 25-83 Date 9/22 Priority _____

Description W. O. Dam Operator [illegible]

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier V-1

	Sample			Std.		
Count Time	3x10			3x10		
Count	534	554	537	545	529	526
Corr. Rate	20.8	22.8	21.1	21.9	20.3	20.0
Average Rate	21.6			20.7		

Time _____ Date 9/22 Operator [illegible] 109

WCX-1276 (OCT.'48)

Residue No. HPK-25-82 Date 9-10-52 Priority [illegible]

Description Water Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

1st sample 2nd sample

Amplifier V-3

	Sample			Std.		
Count Time	1x10	1x10	1x10	1x10		
Count	634	71	719	554	76	655
Corr. Rate	25.5	28.6	30.4	21.1	29.1	27.6
Average Rate	28.2			25.9		

Time _____ Date 9-10-52 Operator [illegible] 110

WCX-1276 (OCT.'48)

Residue No. HPK-25-81 Date 9-1-52 Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier V-1

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	358	317	321	333	354	356
Corr. Rate	34.6	26.4	27.2	29.6	33.8	34.2
Average Rate	29.4			32.5		

Time _____ Date 9-3-52 Operator [illegible] 111

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-70 Date 8/27/52 Priority _____

Description _____ Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier U-1

	Sample			Std.		
Count Time	3 X 10			3 X 10		
Count	426	352	354	4[illegible]	353	355
Corr. Rate	13.0	9.2	9.4	10.8	9.3	9.5
Average Rate	10.2			9.9		

Time _____ Date 8/27 Operator [illegible] 112

WCX-1276 (OCT.'48)

Residue No. HPK-25-79 Date 8-18-52 Priority _____

Description Aqu. H2O Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier U-3

	Sample 1st Partition			Std. 1st Partition		
Count Time	1 X 10			1 X 10		
Count	540	459	460	439	457	434
Corr. Rate	20.3	15.8	15.9	13.8	15.6	[illegible]
Average Rate	17.3			14.2		

[illegible] = 15.8

Time _____ Date 8-20-52 Operator [illegible] 113

WCX-1276 (OCT.'48)

Residue No. HPK-25-78 Date 8-11-52 Priority _____

Description Water Operator [illegible]

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier U-3

	Sample			Std.		
Count Time	1 [illegible]	[illegible]		[illegible]	1 [illegible]	[illegible]
Count	4[illegible]	4[illegible]	4[illegible]	4[illegible]	4[illegible]	4[illegible]
Corr. Rate	9.9	14.3	11.5	11.1	10.9	13.9
Average Rate	11.9			12.0		

Time _____ Date 8-11-52 Operator [illegible] 114

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-77 Date 7-30-52 Priority _____

Description Water Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier T- Sample Std.

Count Time	1x.0	1x.0	1x.0	1x.0	1x.0	1x.0
Count	4 15	4 21	3 56	3 53	4 12	4 0
Corr. Rate	7.5	8.1	5.2	4.9	7.5	6.6
Average Rate	6.9			6.3		

115

Time _____ Date 7-30-52 Operator _____

WCX-1276 (OCT.'48)

Residue No. [illegible] Date 7/21/52 Priority _____

Description _____ Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier [illegible] Sample Std.

Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	229	161	210	27	161	215
Corr. Rate	13.3	6.9	9.5	8.9	6.9	10.5
Average Rate	9.9			8.8		

116

Time _____ Date 7/22/52 Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HPK-25-75 Date 7-16-52 Priority _____

Description HgC W.O. DAM Operator _____

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier V-1 Sample Std.

Count Time	3x10			3x10		
Count	3 13	3 27	4 12	3 56	4 19	3 52
Corr. Rate	2.8	4.2	9.1	7.1	9.7	5.7
Average Rate	6.6			7.9		

117

Time _____ Date _____ Operator [illegible]

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-74 Date 7-8-52 Priority _____

Description H_2O Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier U-1

	Sample			Std.		
Count Time	3 X 10			3 X 10		
Count	3 28	3 27	3 43	3 30	3 21	3 23
Corr. Rate	4.9	5.0	6.5	5.2	4.2	4.4
Average Rate	5.5			4.6		

118

Time _____ Date [illegible] Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HPK-25-73 Date 7-1-52 Priority _____

Description _____ Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier U-1

	Sample			Std.		
Count Time	1 X 5	1 X 5	1 X 5	1 X 5	1 X 5	1 X 5
Count	152	158	150	141	151	158
Corr. Rate	5.7	6.9	5.3	3.5	5.5	6.9
Average Rate	6.0			5.3		

119

Time _____ Date 7-1-52 Operator [illegible]

WCX-1276 (OCT.'48)

Residue No. HPK-25-72 Date 6-23-52 Priority _____

Description water Operator _____

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier X-3

	Sample			Std.		
Count Time	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10	1 X 10
Count	3 31	3 37	3 44	3 23	3 35	3 37
Corr. Rate	7.0	7.6	8.3	6.2	7.4	7.8
Average Rate	7.6			7.1		

120

Time _____ Date 6-24-52 Operator [illegible]

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPE-25-71 Date 6-18-52 Priority

Description H_2O Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier Z-1

	Sample			Std.		
Count Time	3 X5			3 X5		
Count	143	242	150	152	154	227
Corr. Rate	5.5	10.5	6.9	7.3	7.7	11.1
Average Rate	7.6			7.7		

Time Date 6-18 Operator (121)

WCX-1276 (OCT.'48)

Residue No. HPK-25-70 Date 6-11-52 Priority

Description Water Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier Z-1

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	222	231	249	217	225	234
Corr. Rate	10.0	12.	15	9.0	10.6	12.7
Average Rate	11.5			10.8		

Time Date 6-11-52 Operator (122)

WCX-1276 (OCT.'48)

Residue No. APK-25-69 Date 6-3-52 Priority

Description Water Operator

Method [ ] Alpha [ ] Beta [ ] Gamma

Amplifier Z

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	240	263	244	262	263	290
Corr. Rate	13.7	18.3	14.5	17.7	18.3	20.3
Average Rate	17.1			18.[illegible]		

Time Date 6-3-52 Operator (123)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-67 Date 5/26/52 Priority

Description Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier Z

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x5	1x5	1x5
Count	21	24	162	21	216	20
Corr. Rate	8.7	9.3	8.1	8.7	11.7	8.5
Average Rate	8.7			9.6		

Time Date 5/27/52 Operator Calcing (124)

WCX-1276 (OCT.'48)

Residue No. HPK-25-67 Date 5-20-52 Priority

Description Operator

Method ☐ Alpha ☐ Beta ☐ Gamma

Amplifier Z-1

	Sample			Std.		
Count Time	1x5	1x5	1x5	1x1	1x1	1x5
Count	235	230	225	261	29	232
Corr. Rate	12.3	11.3	10.3	17.5	7.1	12.0
Average Rate	11			12.		

Time Date Operator Calcing (125)

WCX-1276 (OCT.'48)

Residue No. HPK-25-66 Date 5/14/52 Priority

Description W.O. Dam 1 Operator

Method ☐ Alpha ☑ Beta ☐ Gamma

Amplifier W-1

	Sample			Std.		
Count Time	3x10			3x10		
Count	412	48	415	361	414	416
Corr. Rate	9.5	9.1	9.8	8.0	9.7	9.9
Average Rate	9.5			9.2		

Time Date 5/14/52 Operator Calcing (126)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-65 Date 5-9-52 Priority

Description H_2O Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier W-1

	Sample			Std.		
Count Time	3X10					
Count	352	362	342	343	41	423
Corr. Rate	7.1	7.6	6.2	5.7	7.9	10.1
Average Rate	7.4					

Time Date 5-9 Operator [illegible] 127

WCX-1276 (OCT.'48)

Residue No. HPK-25-64 Date [illegible] Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier V-3

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	139	143	20	144	132	152
Corr. Rate	2.6	3.6	7.8	3.8	1.6	5.4
Average Rate	4.7			3.5		

Time 1200 Date 4-29-52 Operator Coley 128

WCX-1276 (OCT.'48)

Residue No. HPK-25-63 Date 4-22-52 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier Y-1

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	147	152	148	133	127	151
Corr. Rate	4.7	5.7	4.9	1.9	0.7	5.5
Average Rate	5.1			2.7		

Time Date 4-22-52 Operator Coley 129

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Residue No. HPK-25-62 Date 4-15-52 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier W-1

	Sample			Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	150	149	22	140	22	20
Corr. Rate	4.1	3.9	7.3	2.1	7.3	6.9
Average Rate	5.1			5.4		

Time 1330 Date 4-15-52 Operator Coley (130)

WCX-1276 (OCT.'48)

Residue No. HPK-25-61 Date 1-15-52 Priority

Description Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier W-1

	1st portion Sample			2nd portion Std.		
Count Time	1X5	1X5	1X5	1X5	1X5	1X5
Count	136	135	133	134	126	156
Corr. Rate	2.4	2.2	1.8	2.0	0.4	6.4
Average Rate	2.5			2.4		

Time Date 1-15-52 Operator K.C. W. W (131)

WCX-1276 (OCT.'48)

Residue No. HPK-25-60 Date Priority

Description Water Operator

Method [ ] Alpha [✓] Beta [ ] Gamma

Amplifier V-1

	1st part Sample			2nd part Std.		
Count Time	1X10	1X10	1X10	1X10	1X10	1X10
Count	3 31	3 3	3 17	3 37	3 25	3 43
Corr. Rate	4.3	1.5	2.9	3.9	3.7	5.5
Average Rate	3			4		

Time Date 1-8-52 Operator (132)

WCX-1276 (OCT.'48)

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____

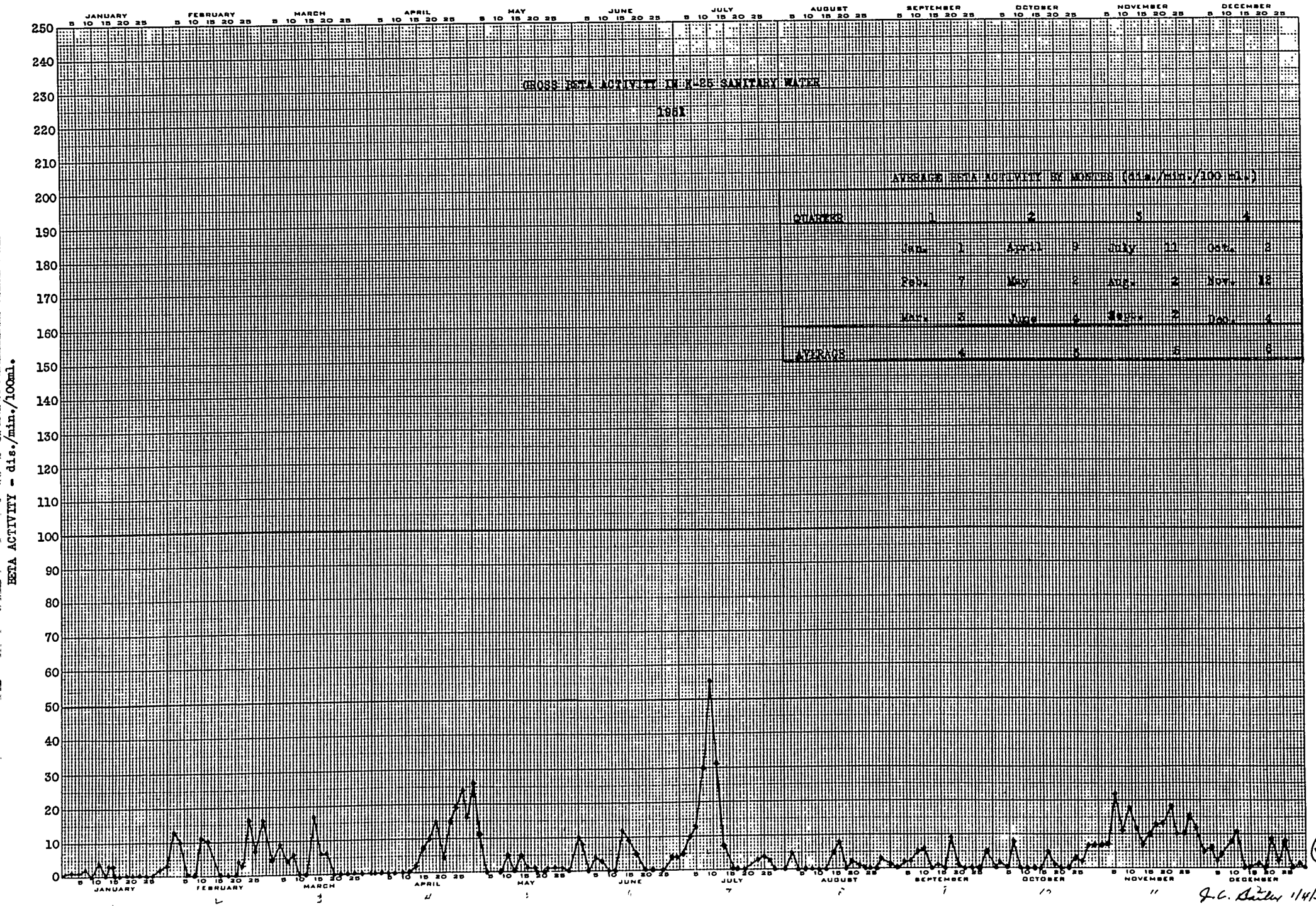
Absorption Curve

Cell No. _____ Sample No. _____

Counter-Shelf

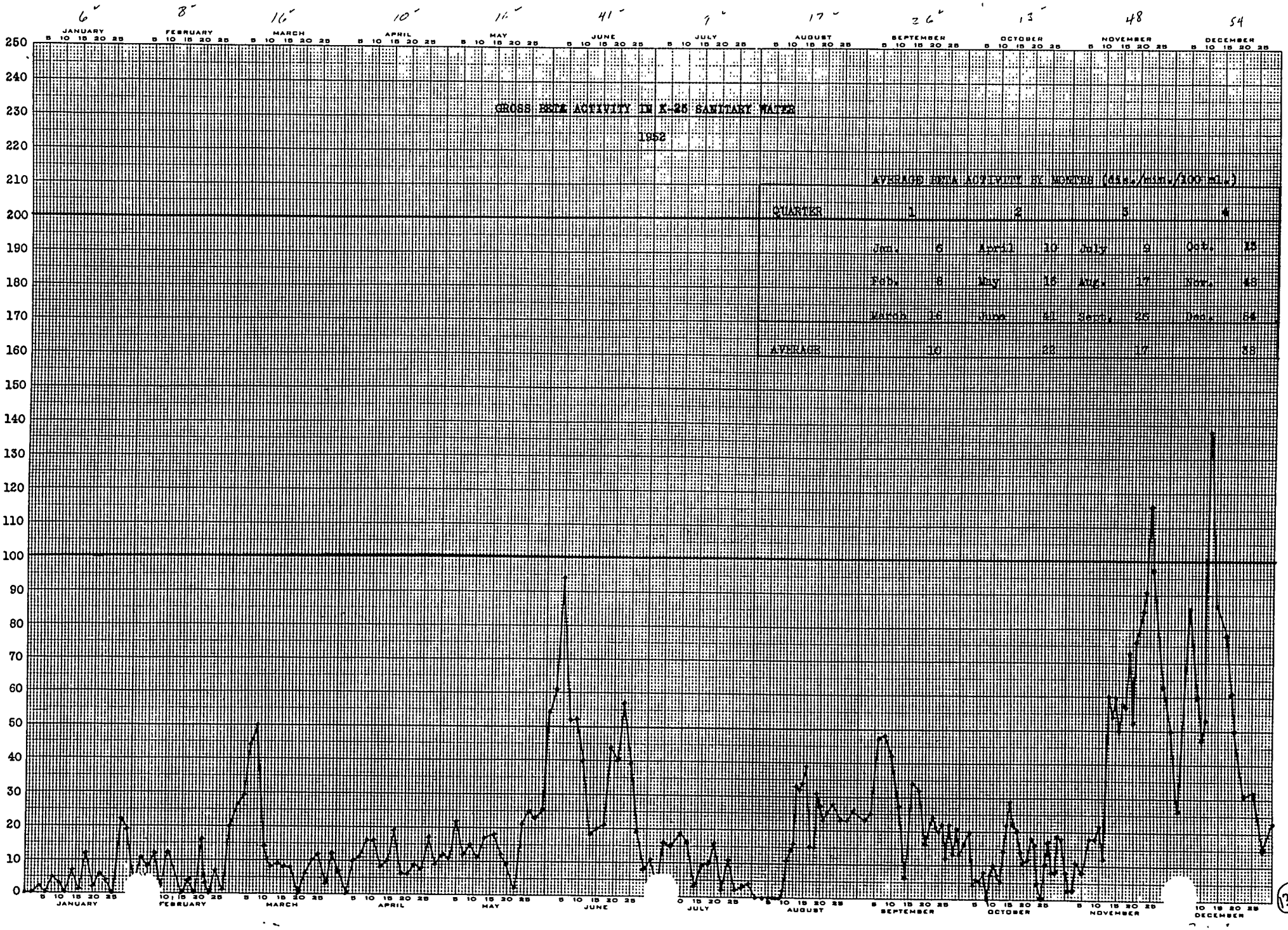
Absorp.	Count	Rate	%
Corr.			100
.000			
.001			
.002			
.005			
.010			
.020			
.040			
.060			
.080			
.120			
.160			
.200			
.250			

Operator _____ Date _____



AVERAGE BETA ACTIVITY BY MONTHS (dis./min./100 ml.)

QUARTER	1		2		3		4	
	Jan.	1	April	9	July	11	Oct.	8
	Feb.	7	May	2	Aug.	2	Nov.	12
	Mar.	3	June	4	Sept.	2	Dec.	4
AVERAGE		4		5		5		6


GROSS BETA ACTIVITY IN K-25 SANITARY WATER
1952
AVERAGE BETA ACTIVITY BY MONTHS (dis./min./100 ml.)
QUARTER 1 2 3 4
Jan. 6 April 10 July 9 Oct. 13
Feb. 8 May 16 Aug. 17 Nov. 48
March 16 June 41 Sept. 26 Dec. 54
AVERAGE 10 22 17 38
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

Settling Basin

Month & Year	Gross β c/m/ml	Ru β c/m/ml	% of Total	Zr β c/m/ml	% of Total	Nb β c/m/ml	% of Total	TRE β c/m/ml	% of Total	Ce β c/m/ml	% of Total	Sr β c/m/ml	% of Total	I β c/m/ml	% of Total	Pu α c/m/ml	% of Total
11-52	66-84	5	5.9	6	7.1	2	2.4	30	35.7	19	22.6	22	26.2				
12-52	33-33	1	3.0	16	48.5	3	9.1	10	30.3							3	9.1
White Oak Lake																	
11-52	8-10							3	30.0	2	20.0	5	50.0				
12-52	14-8.5	1.5	17.6	1	11.8	1.5	17.6	3	35.3							1.5	17.6

WCX-1012 (3-5
Laboratory Cor. . Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 498
Distribution: H.W. Carnes
K-25RC H.F. Henry
File M.F. Schwenn

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
DW-I	1-9-53	2:10 PM	Drinking Water Spot Check, K-1131			7.2	0.3 ± 1.1	93
1N	12-18-52	2:30 PM	Holding Pond Exit from K-1300 Area	2	3.0	5.9		53
2N	12-18-52	2:35 PM	East Exit from K-1300 Area	2	0.7	8.0		54
3N	12-18-52	2:40 PM	Middle Drain from K-1300 Area	4	3.0	7.5		53
4N	12-18-52	2:45 PM	West Drain from K-1300 Area	0	0.1	7.6		43

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All ' Results per gram dry weight.

R. C. Rhea

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WCX-1012 (3-
Laboratory Co. -- Files K25RC
Works Laboratory Department
Special Analysis Section

bdk

Report No. 497
Distribution: H. F. Henry
H. W. Carnes
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
	12/9/52	1:30 p.m.	Clinch River Water at center of White Wing					
			Bridge surface	0.0	0.1	7.2	0.1 ± 1.6	0 ± 21
	"	"	Same location - 6 feet down	0.0	0.1	7.5	0.1 ± 1.6	4 ± 21
	"	"	" " 12 feet down	0.0	0.1	7.4	0.0 ± 1.6	3 ± 21
	"	"	" " Bottom	0.0	0.1	7.5	0.0 ± 1.6	16 ± 21
	"	2:30 p.m.	Clinch River mud - north side at White Wing					
			Bridge	0.5 micrograms/gram			2.8	64
	"	"	Clinch River mud south side at White Wing					
			Bridge	0.3 micrograms/gram			1.6	75

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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RECEIVED FEB 6 1953

Supervisor R. G. Rhees Date 2/3/53

WCX-1012 (3-5
Laboratory Ce Files K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. 494
Distribution: H.W. Carnes
K-25RC H. F. Henry
File M.F. Schwenn

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
13ME	12-18-52	11:45 AM	Clinch River Mud - 1 mile downstream	0.5 micrograms/gram				64
43ME	12-18-52	12:05 PM	Poplar Creek Mud at junction with Clinch	2.25 micrograms/gram				75
42ME	12-18-52	12:15 PM	Poplar Creek Mud below powerhouse effluent	2.5 micrograms/gram				118
11ME	12-18-52	12:30 PM	Poplar Creek Mud opposite K-27 Drain	17.5 micrograms/gram				90
41ME	12-18-52	12:40 PM	Poplar Creek Mud at K-31 Bridge	3.75 micrograms/gram				62
	12-18-52	2:50 PM	Mud from Stream from Confluence of K-1300 and					
			K-1037 Drainage Systems	3.75 micrograms/gram				81
1ME	12-18-52	3:20 PM	Poplar Creek Mud at K-1300 Drain	68.75 micrograms/gram				277

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Results per gram dry weight.

R-C-Rhees

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WCX-1012 (3-
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 49
Distribution: H.W. Carnes
Central File H.F. Henry
Section M.F. Schwenn
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
13M	12-18-52	11:45 A.M.	Clinch River water one mile downstream	0.5	0.3	7.5		41
43M	12-18-52	12:05 P.M.	Poplar Creek at Junction with Clinch	0.5	0.5	7.4		51
42M	12-18-52	12:15 P.M.	Poplar Creek below Powerhouse Effluent	0.0				150
11M	12-18-52	12:30 P.M.	Poplar Creek opposite K-27 Drain	3.0	0.9	7.2		140
1M	12-18-52	3:15 P.M.	Poplar Creek at mouth of K-1300 Drain	4.0	1.0	6.9		
24DE	Dec. Composite		Effluent from water purification plant	0.5	0.2	7.5	0.6 ± 1.6	
24DC	Dec. Composite		Gallahar Bridge Pumphouse influent	1.0	0.5	7.8	0.3 ± 1.1	
16W	Dec. Composite		Drinking water spot check		0.3			
26M	Dec. Composite		Drainage from Labs. A, B, C, and D	6.0			7.5 ± 1.1	65
CW-4	1-15-53	11:00 AM	Clinch River one mile downstream	0.0	0.3	7.4		55
CW-3	1-15-53	11:20 AM	Poplar Creek at Junction with Clinch	0.5	0.3	7.4		51
CW-2	1-15-53	12:40 PM	Poplar Creek opposite K-27 Drain*	0.5				8
CW-2	1-15-53	12:40 PM	Poplar Creek opposite K-27 Drain	1.0				10

*Sample taken in muddy influent from K-27 Drain.

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

R. C. Rhees

FEB 3 1953

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WCX-1012 (3-
Laboratory Co. . Files K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. 491
Distribution: H. F. Henry
H. W. Carnes
D. H. Rader
M. F. Schwenn

Lab Central K-25RC
Files

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
16 W	12/20/52	3:05 pm	Drinking Water spot check, K-1004-D	0.0		6.9	0.0 ± 1.1	37 ± 21
"	12/26/52	1:45 p.m	Drinking water spot check, K-1413	0.0		7.2	0.0 ± 1.1	15 ± 21
"	1/2/53	8:30 am	Drinking water spot check, K-27	0.0		7.3	0.2 ± 1.1	49 ± 21

JAN 20 1953

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M[illegible] Results per gram dry weight.

Supervisor T. Kwasovski Date 1/9/53

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WCX-1012 (3-!
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. 490
Distribution: H. F. Henry ✓
Lab Central Files H. W. Carnes
K25RC D. H. Rader
M. E. Schwenn

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
241DE	12/18/52	9:30 am	Effluent from water purification plant	(48 hour sample)				78 2
"	12/19/52	10:30 am	" " " " "					61 1
"	12/20/52	2:00 pm	" " " " "	24 hour sample				50 1
"	12/24/52	9:45 am	" " " " "	96 hour sample				31 4
"	12/26/52	10:40 am	" " " " "	48 hour sample				32 2
"	12/29/52	1:00 pm	" " " " "	72 hour sample				15 3
24 DC	12/18/52	9:20 am	Gallaher Bridge pumphouse influent	48 hour sample				76
"	12/19/52	10:15 am	" " " " "					69
"	12/20/52	1:45 pm	" " " " "	24 hour sample				37
"	12/24/52	9:30 am	" " " " "	96 hour sample				42
"	12/26/52	10:30 am	" " " " "	48 hour sample				13
"	12/29/52	12:45 pm	" " " " "	72 hour sample				24
CW - 5	1/2/53	9:45 am	" " " " "	96 hour sample				70
CW - 6	1/2/53	9:30 am	Effluent from Water purification plant	96 hour sample				23

JAN 10 1953

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kuroowshi Date 1/9/53

WCX-1012 (3-
Laboratory Co. , Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 489
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES.

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	12/9/52	8:45 am	Effluent from K-25 Water Purification Plant					60
	12/10/52	2:15 pm	" " " " " "					47
	12/11/52	2:00 pm	" " " " " "					53
	12/12/52	10:00 am	" " " " " "					138
	12/16/52	10:30 a.m.	" " " " " "	(96 hour	sample)			87 4
24 DC	12/9/52	8:30 am	Gallaher Bridge Pumphouse Influent					77
	12/10/52	2:00 pm	" " " "					53
	12/11/52	1:45 p.m.	" " " "					227
	12/12/52	9:45 am	" " " "					129
	12/15/52	4:30 pm	" " " "					101
	12/16/52	10:15 am	" " " "					134
16 W	12/12/52	10:15 am	Drinking water spot check K-1085	0.0		6.9	0.0 ± 1.1	133

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All U Results per gram dry weight.

Supervisor T. Kwanoski Date 12/30/52

WCX-1012 (3-
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 480
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
13 ME	11/17/52	10:30 am	Clinch River mud, one mile downstream	1.0 micrograms/gram			2.7 ± 1.1	156
43 ME	"	10:45 am	Poplar Creek mud, before junction with Clinch	1.25	" "			181
42 ME	"	11:00 am	Poplar Creek mud, below powerhouse effluent	5.0	" "			158
41 ME	"	11:15 am	Poplar Creek mud at bridge below K-31	15.0	" "			84
11 ME	"	11:45 am	Poplar Creek mud opposite K-27 drain	1.5	" "			75
1 ME	"	3:05 pm	Poplar Creek mud at K-1300 Drain	56.25	" "			303

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kusnosahi Date 12/30/52

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WCX-1184 (2-52) K-25 NRC

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RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 12/26/52
Type of Sample Water Sample

a7

TO: Mr. Becher; Central Files, K-25 RC

Sample Number	Alpha Cts/min.	Beta Cts/min.	Remarks
HPK-25-95	±	50608 ±	per 100 ml. water
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

1. The limit of error at the 95% certainty level has been estimated from the precision of control samples.

2. The alpha counting rates have been corrected to 50% geometry by comparison of results obtained by counting unaltered uranium with the published alpha specific activity.

3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

APB

APPROVED: Frank S. Voss

WCX-1012 (3-5
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 461
Distribution: H. F. Henry
S. Katz K. M. Jones
File M. F. Schwenn
(K25RC) D. M. Lang

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
30 W	12/11/52	9:00 am	K-1004-J "Normally cold" drum before dumping				93	242
			.021 millicuries total					
			5000 gallons					

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwonoshi Date 12/30/52

WCX-1012 (3-
Laboratory Ce. . Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 486
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
16 W	11/29/52	3:45 p.m	Drinking water spot check K-1131 change house	0.0		7.0	0.1 ± 1.1	56 ± 22 ✓
16 W	12/5/52	3:15 p.m	Cafeteria Cooking Water	0.0		7.0	0.2 ± 1.1	29 ± 21 ✓
42 M	11/17/52	11:00 am	Poplar Creek Water below powerhouse effluent	0.0				
43 M	"	10:45 am	" " " at junction with Clinch	0.0				✓
1 M	"	3:00 pm	" " " at K-1300 Drain	2.0	1.7	8.5	✓	
11M	"	11:45 am	" " opposite K-27 drain	16.0	3.4	7.1	✓	✓
24 DE	November	Composite	Effluent from K-25 purification plant	0.0	0.2	7.3	0.0 ± 1.1	✓
24 DC	"	"	Gallaher Bridge pumphouse influent	0.0	0.2	7.4	0.3 ± 1.1	✓
16 W	"	"	Drinking water spot check		0.0			
26 M	"	"	Drainage from Labs A, B, C, and D	4.0			2.0 ± 1.1	35 ± 21 ✓
16 W	11/20/52	3:10 pm	Drinking water spot check ~~3:10 p.m.~~ K633	0.0		7.0	0.0 ± 1.1	51 ± 21 ✓

ATB

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All [illegible] Results per gram dry weight.

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Supervisor T. Kwasnoski Date 12/15/52

WCX-1012 (3-5
Laboratory Cer. ·iles K25RC
Works Laboratory Department
Special Analysis Section

Report No. 485
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	11/19/52	12:30 pm	Effluent from K-25 Sanitary Water					73 ± 29
"	11/20/52	2:45 pm	" " " " "					52 ± 21
"	11/21/52	10:50 am	" " " " "					76 ± 30
"	11/23/52	11:45 am	" " " " "					85 ± 34
"	11/24/52	12:00 am	" " " " "					91 ± 36
"	11/25/52	12:45 pm	" " " " "					116 ± 46
"	11/26/52	11:45 am	" " " " "					97 ± 39
"	11/29/52	10:45 am	" " " " "					63 ± 25 3
"	12/1/52	10:15 am	" " " " "					50 ± 21
"	12/4/52	10:35 am	" " " " "					26 ± 21 3
"	12/8/52	8:45 am	" " " " "					86 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kuwasaki Date 12/15/52

WCX-1012 (3-5
Laboratory Ce Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 484
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DC	11/19/52	12:15 pm	Gallaher Bridge pumphouse influent					73 ± 29
"	11/20/52	2:30 pm	" " " "					102 ± 41
"	11/21/52	10:40 am	" " " "					102 ± 41
"	11/23/52	11:30 am	" " " "					107 ± 43
"	11/24/52	11:45 am	" " " "					178 ± 71
"	11/25/52	12:30 pm	" " " "					123 ± 49
"	11/26/52	11:30 am	" " " "					80 ± 32
"	11/29/52	10:30 am	" " " "					51 ± 21
"	12/1/52	10:00 am	" " " "					33 ± 21
"	12/4/52	10:25 am	" " " "					20 ± 21
"	12/8/52	8:30 am	" " " "					91 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All / Results per gram dry weight.

Supervisor T. Kwasnoski Date 12/15/52

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WCX-1012 (3-
Laboratory Ce. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 483
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DC	11/13/52	3:10 pm	Gallahar Bridge Pumphouse influent					120 ± 48
"	11/14/52	11:45 pm	" " " "					56 ± 21
"	11/15/52	"	" " " "					58 ± 23
"	11/16/52	11:30 am	" " " "					73 ± 29
"	11/17/52	2:30 pm	" " " "					77 ± 31
"	11/18/52	3:00 pm	" " " "					73 ± 29
24 DE	11/13/52	3:20 pm	Effluent from Water Purification Plant					60 ± 24
"	11/14/52	12:00 am	" " " "					54 ± 22
"	11/15/52	"	" " " "					60 ± 24
"	11/16/52	11:45 am	" " " "					50 ± 21
"	11/17/52	3:00 pm	" " " "					58 ± 23
"	11/18/52	3:15 pm	" " " "					57 ± 23

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski DATE 12/4/52

DEC 5 1952

WCX-1184 (2-52) K-25 NRC

RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 12/19/52
Type of Sample Water Samples
a-7

TO: Mr. Becher; Central Files, K-25 RC

Sample Number	Alpha Cts/min.	Beta Cts/min.	Remarks
HPK 25-94	±	36181 ±	Per 100 ml. water
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

1. The limit of error at the 95% certainty level has been estimated from the precision of control samples.

2. The alpha counting rates have been corrected to 50% geometry by comparison of results obtained by counting unaltered uranium with the published alpha specific activity.

3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

DEC 1952

APPROVED: Frank S. Ross

150

WCX-1184 (2-52) K-25 NRC

RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 12/11/52
Type of Sample Water Sample

TO: A.F. Becher; Central Files, K-25 RC

Sample Number	Alpha Cts/min.	Beta Cts/min.	Remarks
HPK-25-93	±	31753 ±	Per 100 ml. water
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

1. The limit of error at the 95% certainty level has been estimated from the precision of control samples.

2. The alpha counting rates have been corrected to 50% geometry by comparison of results obtained by counting unaltered uranium with the published alpha specific activity.

3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

DEC 12 1952

APPROVED: Frank S. Voss

151

WCX-1012 (3-
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 482
Distribution: H. F. Henry
M. F. Schwenn
K. M. Jones
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
11 ME	10/9/52	10:20 am	Poplar Creek mud opposite K-27 Drain	15.0 Micrograms/gram				86
41 ME	"	10:50 am	Poplar Creek Mud at bridge below K-31	7.5 Micrograms/gram				114
13 ME	"	11:00 am	Clinch River mud one mile downstream	0.5 micrograms/gram			2.3 ± 1.1	89
42 ME	"	11:30 am	Poplar Creek mud below powerhouse effluent	1.25 micrograms/gram				53
43 ME	"	11:45 am	Poplar Creek mud before junction with Clinch	1.25 micrograms/gram				178

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
Results per gram dry weight.

Supervisor T. Kwasnoski 12/4/52

152

WCX-1184 (2-52) K-25 NRC

RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 12-4-52
Type of Sample Water
a 3

TO: Mr. Becher; Central Files, K-25 RC

Sample Number	Alpha Cts/min.	Beta Cts/min.	Remarks
KPK 25-92	±	16021 ±	Per 100 ml. water
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

1. The limit of error at the 95% certainty level has been estimated from the precision of control samples.

2. The alpha counting rates have been corrected to 50% geometry by comparison of results obtained by counting unaltered uranium with the published alpha specific activity.

3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

DEC 3 1952

APPROVED: Frank S. Voss

153

WCX-1012 (3-
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 481
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
13 M	10/8/52	11:00 am	Clinch River one mile downstream	0.0		8.0		8 ± 21
K-31 K-25 M	10/9/52	10:00 am	Poplar Creek between K-31 and K-25	4.0	4.7	7.6		
"	"	"	" " " " " " 6 ft. down	2.0	4.5	7.6		
11 M	"	10:20 am	" " opposite K-27 drain	20.0	14.7	6.8		
K-1131 pile	"	10:35 am	" " " K-1131 pile 3 ft. down	8.0	4.4	7.3		
"	"	10:37 am	" " " " " 6 ft. down	10.0	3.7	7.5		
"	"	10:40 am	" " " " " Bottom	2.0	6.4	7.3		
42 M	"	11:30 am	" " Below powerhouse effluent	0.0	0.2	7.8		
43 M	" "	11:45 am	" " At junction with Clinch	0.0	0.4	8.0		
24 DC	October	Composite	Gallaher Bridge pumphouse influent	0.0	0.4		0.0 ± 1.1	
24 DE	"	"	Effluent from purification plant	0.0	0.4		0.0 ± 1.1	
16 W	October	Composite	Drinking water spot check		0.2			
26 M	October	"	Drainage from Labs A, B, C, and D	10.0			0.4 ± 1.1	7± 21
13 M	11/17/52	10:30 am	Clinch River one mile downstream	0.0		7.1		79 ± 45
16 W	11/7/52	12:15 am	K-1002 Cafeteria Cooking Water	0.0			0.0 ± 1.1	16 ± 21
16 W	11/15/52	10:30 am	K-1002 Drinking water spot check	0.0		7.1	0.4 ± 1.1	52 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All ' Results per gram dry weight.

Supervisor T. Kwasnoski Date 12/4/52

WCX-1012 (3-
Laboratory Ce . iles K25RC
Works Laboratory Department
Special Analysis Section

Report No. 480
Distribution: H. F. Henry
K. M. Jones
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DC	11/5/52	10:00 am	Gallahar Bridge Pumphouse Effluent					5 ± 21
"	11/7/52	11:45 am	" " " "					27 ± 21
"	11/9/52	11:30 am	" " " "					22 ± 21
"	11/10/52	11:30 am	" " " "					23 ± 21
"	11/11/52	11:45 am	" " " "					58 ± 21
"	11/12/52	11:45 am	" " " "					76 ± 21
24 DE	11/5/52	10:15 am	Effluent from K-25 Water Purification Plant					8 ± 21
"	11/7/52	12:00 am	" " " " "					18 ± 21
"	11/9/52	11:45 am	" " " " "					18 ± 21
"	11/10/52	11:45 am	" " " " "					22 ± 21
"	11/11/52	12:00 am	" " " " "					12 ± 21
"	11/12/52	12:00 am	" " " " "					35 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski Date 12/4/52

WCX-1184 (2-52) K-25 NRC

RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 9-19-52
Type of Sample Water - Specials

TO: Mr. Kingsbury; Central Files, K-25 RC

Sample Number	Alpha Cts/min.	Beta Cts/min.	Remarks
2	145 ±	±	
3	240 ±	±	
4	30 ±	±	
5	31 ±	±	
6	25 ±	±	
7	35 ±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

1. The limit of error at the 95% certainty level has been estimated from the precision of control samples.

2. The alpha counting rates have been corrected to 50% geometry by comparison of results obtained by counting unaltered uranium with the published alpha specific activity.

3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

RECEIVED SEP 29 1952

APPROVED: Frank S Voss

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WCX-1184 (2-52) K-25 NRC

RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 10-13-52
Type of Sample Water

TO: Mr. Kingsbury; Central Files, K-25 RC

Sample Number	Alpha Cts/min/100 ml	Beta cts/min.	Remarks
1	2160 ±	±	
9	565 ±	±	✓
12	59 ±	±	✓
14	80 ±	±	✓
20	2018 ±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

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2. The alpha counting rates have been corrected to 50% geometry by comparison of results obtained by counting unaltered uranium with the published alpha specific activity.

3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

RECEIVED OCT 1952

APPROVED: Frank S. Voss 157

WCX-1184 (2-52) K-25 NRC

RADIOACTIVITY ANALYSIS REPORT

File No. 912 J
Issued 10-4-52
Type of Sample Water

TO: S. A. Kingsbury; Central Files, K-25 RC

Sample Number	Alpha Cts/min/100ml.	Beta Cts/min.	Remarks
8	1840 ±	±	✓
10	1050 ±	±	✓
11	56 ±	±	✓
21	222 ±	±	
22	385 ±	±	
23	59 ±	±	
24	18 ±	±	
25	13 ±	±	
26	15 ±	±	
27	25 ±	±	
28	1 ±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	
	±	±	

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3. The beta counting rates have been corrected to 100% geometry by comparison of results obtained by counting unaltered uranium with the published specific beta activity of normal uranium.

APPROVED: Frank S. Voss

158

WCX-1012 (3-5
Laboratory Ce ples K25RC
Works Laboratory Department
Special Analysis Section

Report No. 49
Distribution: H. F. Henry
D. M. Lang M. F. Schwenn
S. Katz H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
30 W	11/5/52	8:30 am	K-1004-J "Normally Cold" drum before dumping				6.6 ± 1.1	82 ± 21
			Total volume 5000 gallons					
			Total millicuries .007					

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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Supervisor T. Kusonoki Date 11/19/52

WCX-1012 (3-5
Laboratory Co: Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 478
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DC	10/18/52	1:30 pm	Gallaher Bridge pumphouse influent					10 ± 21
"	10/19/52	1:30 pm	" " " "					22 ± 21
"	10/20/52	2:15 pm	" " " "					36 ± 21
"	10/21/52	12:15 pm	" " " "					21 ± 21
"	10/22/52	3:00 pm	" " " "					6 ± 21
"	10/23/52	3:20 pm	" " " "					22 ± 21
"	10/24/52	10:15 am	" " " "					17 ± 21
"	10/25/52	11:30 am	" " " "					13 ± 21
"	10/26/52	-------	" " " "		Sample lost			
"	10/27/52	12:15 pm	" " " "					30 ± 21
"	10/28/52	12:10 pm	" " " "					26 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Results per gram dry weight.

Supervisor T. Kwasnoski Date 11/10/52

NOV 20 1952

WCX-1012 (3-5
Laboratory Cer. ...les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 476
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
16 W	10/8/52	2:30 p.m.	Drinking water spot check K-1005	0.0		7.9	0.0 ± 1.1	16 ± 21
"	10/18/52	3:34 p.m	" " " " K-1413	0.0		7.0	0.3 ± 1.1	13 ± 21
"	10/24/52	12:00 p.m.	" " " " K-1024	0.0		7.2	0.0 ± 1.1	4 ± 21
"	10/31/52	4:00 p.m	" " " " K-1301	0.0		6.9	0.4 ± 1.1	4 ± 21

NOV 13 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight

Supervisor T. Kwasoski Date 11/11/52

WCX-1012 (3-5
Laboratory Ce Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 475
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
Files (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DE	10/29/52	1:30 pm	Effluent from K-25 Water Purification Plant					19 ± 21
"	10/30/52	2:45 pm	" " " " " "					18 ± 21
"	10/31/52	"	" " " " " "					8 ± 21
"	11/1/52	2:30 pm	" " " " " "					3 ± 21
"	11/2/52	12:15 pm	" " " " " "					3 ± 21
"	11/3/52	12:30 pm	" " " " " "					11 ± 21
24 DC	10/29/52	1:15 pm	Gallaher Bridge Pumphouse Influent					31 ± 21
"	10/30/52	2:30 pm	" " " "					5 ± 21
"	10/31/52	"	" " " "					2 ± 21
"	11/1/52	2:15 pm	" " " "					5 ± 21
"	11/2/52	12:00 pm	" " " "					3 ± 21
"	11/3/52	1:00 pm	" " " "					6 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All [illegible] Results per gram dry weight.

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Supervisor T. Kwasnoski Date 11/11/52

WCX-1012 (3-5
Laboratory Co ... les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 474
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
16W	9-17-52	3:30 PM	Drinking Water Spot Check - K-1131 Change House	0.0		7.0	0.0 ± 1.1	31 ± 21
16W	9-25-52	9:10 AM	Drinking Water Spot Check - K-1004-B	0.0		7.7	0.0 ± 1.1	18 ± 21
16W	10-1-52	12:45 PM	Cafeteria Cooking Water	0.0		8.0	0.0 ± 1.1	17 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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ORIGINAL SIGNED BY
T. KWASNOSKI

WCX-1012 (3-5
Laboratory Co Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 473
Distribution: H. F. Henry ✓
S. Katz M. F. Schwenn
D. M. Lang H. W. Carnes
Files (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
30 W	9/26/52	1:00 p.m	K-1004-J "Normally cold" tank before dumping.				8.8 ± 1.1	217 ± 87
			0.019 millicuries total					
			5000 gallons.					

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All μ ' Results per gram dry weight.

Supervisor T. Kwasowski Date 11/7/52

WCX-1012 (3-5
Laboratory Ce. ...es K25RC
Works Laboratory Department
Special Analysis Section

Report No. 477
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
Files (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DE	10/18/52	2 p.m.	Effluent from K-25 Water Purification Plant					14 ± 21
"	10/19/52	1:45 pm	" " " " " "					11 ± 21
"	10/20/52	2:20 pm	" " " " " "					12 ± 21
"	10/21/52	12:30 pm	" " " " " "					18 ± 21
"	10/22/52	3:15 pm	" " " " " "					16 ± 21
"	10/23/52	3:40 pm	" " " " "					5 ± 21
"	10/24/52	10:30 am	" " " " " "					0 ± 21
"	10/25/52	11:45 am	" " " " " "					10 ± 21
"	10/26/52	11:45 a.m	" " " " " "					17 ± 21
"	10/27/52	12:30 am	" " " " " "					8 ± 21
"	10/28/52	12:25 pm	" " " " " "					8 ± 21

NOV 14 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kuzanoski Date 11/13/52

WCX-1012 (3-5
Laboratory Cer Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 472
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24DE	10-11-52	12:30 PM	Effluent from K-25 Water Plant					7 ± 21
24DE	10-12-52	12:30 PM	Effluent from K-25 Water Plant					15 ± 21
24DE	10-13-52	12:30 PM	Effluent from K-25 Water Plant					14 ± 21
24DE	10-14-52	12:30 PM	Effluent from K-25 Water Plant					22 ± 21
24DE	10-15-52	12:30 PM	Effluent from K-25 Water Plant					29 ± 21
24DE	10-16-52	1:30 PM	Effluent from K-25 Water Plant					22 ± 21
24DE	10-17-52	2:15 PM	Effluent from K-25 Water Plant					20 ± 21
24DC	10-11-52	12:45 PM	Gallahar Bridge Pumphouse Influent					24 ± 21
24DC	10-12-52	12:45 PM	Gallahar Bridge Pumphouse Influent					22 ± 21
24DC	10-13-52	12:45 PM	Gallahar Bridge Pumphouse Influent					35 ± 21
24DC	10-14-52	12:45 PM	Gallahar Bridge Pumphouse Influent					60 ± 21
24DC	10-15-52	12:45 PM	Gallahar Bridge Pumphouse Influent					16 ± 21
24DC	10-16-52	1:45 PM	Gallahar Bridge Pumphouse Influent					22 ± 21
24DC	10-17-52	2:00 PM	Gallahar Bridge Pumphouse Influent					16 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All N Results per gram dry weight.

ORIGINAL SIGNED BY
T. KWASNOSKI

RECEIVED
NOV 3 1952

WCX-1012 (3-5
Laboratory Ce[illegible] [illegible]les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 471
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
13ME	9-5-52	10:45 AM	Clinch River mud - one mile downstream	0.5 micrograms/gram			2.8 ± 1.1	192
43ME	9-5-52	11:30 AM	Poplar Creek mud at junction with Clinch	1.5 micrograms/gram				192
42ME	9-5-52	11:45 AM	Poplar Creek mud below Power House effluent	1.0 micrograms/gram				88
41ME	9-5-52	12:10 PM	Poplar Creek mud at bridge below K-31	7.5 micrograms/gram				117
11ME	9-5-52	12:20 PM	Poplar Creek mud below K-27 drain	20.0 micrograms/gram				398
1ME	9-5-52	2:20 PM	Poplar Creek mud, Holding Pond exit from K1300	50.0 micrograms/gram				187
1ME	10-1-52	10:40 AM	Poplar Creek mud, Holding Pond exit from K1300	15.0 micrograms/gram				102
✓	10-1-52	11:00 AM	Mud from West Drain North of K-1300	15.0 micrograms/gram				38
✓	10-1-52	11:15 AM	Mud from Middle Drain North of K-1300	6.25 Mg./g.				4636
✓	10-1-52	11:30 AM	Mud from East Drain North of K-1300	2.0 Mg./g.				135

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

T. Kwasnoski

OCT 28 1952

WCX-1012 (3-5
Laboratory Cer. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 470
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24DE	August	Composite	Effluent from K-25 Water Plant	0.0	0.2		0.0 ± 1.1	
16W	August	Composite	Drinking Water Spot Check		0.2			
13M	9-5-52	10:45 AM	Clinch River water - one mile downstream	0.5				50 ± 21
43M	9-5-52	11:00 AM	Poplar Creek water at junction with Clinch	0.5				
42M	9-5-52	11:45 AM	Poplar Creek water below Powerhouse Effluent	0.5				
11M	9-5-52	12:30 PM	Poplar Creek water opposite K-27 Drain	2.0				
1M	9-5-52	2:15 PM	Poplar Creek at Holding Pond Exit below K-1300	3.0				
1M	10-1-52	10:30 AM	Poplar Creek at Holding Pond Exit below K-1300	2.0		7.3		
24DE	Sept.	Composite	Effluent from K-25 Water Plant	0.0			0.0 ± 1.1	
24DC	Sept.	Composite	Gallahar Bridge Pumphouse influent	0.0			0.0 ± 1.1	
16W	Sept.	Composite	Drinking water spot check		0.14			
26M	Sept.	Composite	Drainage from Labs A, B, C, and D	0.5			3.1 ± 1.1	8 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All [illegible] Results per gram dry weight.

T. Kwasovski

OCT 28 1952

WCX-1012 (3-5
Laboratory Cer. ..les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 470
Distribution: H. F. Henry
H. W. Carnes
M. F. Schwenn
K-25RC File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DE	10/3/52	12:30 p.m.	Effluent from K-25 Purification Plant					20 ± 21
	10/4/52	"	" " " " "					4 ± 21
	10/5/52	"	" " " " "					6 ± 21
	10/6/52	"	" " " " "					5 ± 21
	10/7/52	"	" " " " "					8 ± 21
	10/8/52	1:30 p.m.	" " " " "					0 ± 21
	10/9/52	"	" " " " "					7 ± 21
	10/10/52	1:15 p.m	" " " " "					10 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski Date

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WCX-1012 (3-5
Laboratory Cor. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 469
Distribution: H. F. Henry
H. W. Carnes
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DC	10/2/52	8:30 a.m	Gallahar bridge pumphouse effluent					13 ± 21
	10/3/52	12:45 pm	" " " "					13 ±b21
	10/4/52	"	" " " "					6 ± 21
	10/5/52	"	" " " "					1 ± 21
	10/6/52	"	" " " "					14 ± 21
	10/7/52	12:30 p.m	" " " "					9 ± 21
	10/8/52	1:45 p.m	" " " "			95		11 ± 21
	10/9/52	1:45 p.m.	" " " "					9 ± 21
	10/10/52	1:15 p.m.	" " " "					9 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M Results per gram dry weight.

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Supervisor T. Kwasnoski Date 10/22/52

WCX-1012 (3-5
Laboratory Cen. .les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 468
Distribution:- H. F. Henr,
H. W. Carnes
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
13 ME	8/6/52	10:30 a.m.	Clinch River mud one mile downstream	0.19	Micrograms/gram		2.1 ± 0.2	48 ± 21
43 ME	"	11:30 a.m.	Poplar Creek mud at junction with Clinch R.	1.13	"	"		137 ± 21
42 ME	"	11:45 a.m.	" " below pond for powerhouse effluent	2.00	"	"		182 ± 21
41 ME	"	12:00 p.m.	" " at bridge below K-31	2.00	"	"		83 ± 21
11 ME	"	12:20 p.m.	" " opposite K-27 drain	1.38	"	"		90 ± 21
1 ME	8/18/52	10:15 a.m.	" " at K-1300 holding pond exit	7.5	"	"		82 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwoneski Date 10/7/52

WCX-1012 (3-5
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 467
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DC	9/16/52	10:15 a.m.	Gallaher Bridge pumphouse influent					70 ± 28
"	9/18/52	12:45 m.	" " " "					20 ± 21
"	9/20/52	8:45 a.m.	" " " "					27 ± 21
"	9/22/52	8:45 a.m.	" " " "					69 ± 28
"	9/23/52	7:30 a.m.	" " " "					40 ± 21
"	9/24/52	10:20 a.m.	" " " "					30 ± 21
"	9/25/52	8:45 a.m.	" " " "					19 ± 21
"	9/26/52	1:45 p.m.	" " " "					11 ± 21
"	9/27/52	8:45 a.m.	" " " "					25 ± 21
"	9/28/52	8:45 a.m.	" " " "					24 ± 21
"	9/29/52	10:30 a.m.	" " " "					17 ± 21
"	9/30/52	12:45 p.m.	" " " "					18 ± 21
"	10/1/52	10:00 a.m.	" " " "					5 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All N Results per gram dry weight.

Supervisor ORIGINAL SIGNED BY T. KWASNOSKI Date 10/7/52

WCX-1012 (3-5
Laboratory Co .les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 466
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	9/16/52	10:00 a.m	Effluent from K-25 Water Purification Plant					34 ± 21
"	9/18/52	12:30 p.m.	" " " " " "					32 ± 21
"	9/20/52	8:30 a.m.	" " " " " "					16 ± 21
"	9/22/52	"	" " " " " "					24 ± 21
"	9/23/52	7:20 a.m.	" " " " " "					21 ± 21
"	9/24/52	10:00 a.m.	" " " " " "					20 ± 21
"	9/25/52	8:30 a.m.	" " " " " "					22 ± 21
"	9/26/52	1:30 p.m.	" " " " " "					12 ± 21
"	9/27/52	8:30 a.m.	" " " " " "					22 ± 21
"	9/28/52	"	" " " " " "					13 ± 21
"	9/29/52	10:15 a.m.	" " " " " "					21 ± 21
"	9/30/52	12:30 p.m.	" " " " " "					13 ± 21
"	10/1/52	9:50 a.m.	" " " " " "					16 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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Supervisor T. Kwanoski Date 10/7/52

WCX-1012 (3-5
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 465
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K-25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
26M	7-30-52	Composite	Drainage from Labs A, B, C, and D	6.0			5.0 ± 1.1	21 ± 21
13M	8-6-52	10:30 A.M.	Clinch River, one mine downstream	0.0		6.8		0 ± 21
43M	8-6-52	11:30 A.M.	Poplar Creek water at Junction with Clinch	1.0				
42M	8-6-52	11:45 A.M.	Poplar Creek water below pond for Power House					
			Effluent	0.0				
11M	8-6-52	12:20 P.M.	Poplar Creek water opposite K-27 Drain	0.0	9.8			
1M	8-18-52	10:10 A.M.	Poplar Creek water at mouth of K-1300 Drain	2.0		7.4		
26M	9-2-52	Composite	Drainage from Labs A, B, C, and D	3.0			3.0 ± 1.1	99 ± 40

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All results per gram dry weight.

T. Kwasnoski

WCX-1012 (3-5
Laboratory Ce. iles K25RC
Works Laboratory Department
Special Analysis Section

Report No. 464
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K-25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
16W	8-20-52	10:00 A.M.	Drinking Water Spot Check - K-305-9	0.0		7.3	0.1 ± 1.1	41 ± 21
16W	8-28-52	9:35 A.M.	Drinking Water Spot Check - K-1401	0.0		7.4	0.0 ± 1.1	31 ± 21
16W	9-4-52	9:30 A.M.	Drinking Water Spot Check - K-711	0.0		7.4	0.2 ± 1.1	31 ± 21
16W	9-10-52	12:30 P.M.	Drinking Water Spot Check - K-1002	0.0		7.3	0.0 ± 1.1	19 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

T. Kwasnoski

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WCX-1012 (3-5
Laboratory Co Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 463
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K-25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24DE	8-30-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					26 ± 21
24DE	9-2-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					23 ± 21
24DE	9-4-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					25 ± 21
24DE	9-6-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					47 ± 21
24DE	9-8-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					48 ± 21
24DE	9-10-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					42 ± 21
24DE	9-12-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					27 ± 21
24DE	9-14-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					6 ± 21
24DC	9-1-52	2:00 P.M.	Gallahar Bridge pumphouse influent					24 ± 21
24DC	9-2-52	9:20 A.M.	Gallahar Bridge pumphouse influent					48 ± 21
24DC	9-4-52	8:45 A.M.	Gallahar Bridge pumphouse influent					44 ± 21
24DC	9-6-52	8:45 A.M.	Gallahar Bridge pumphouse influent					88 ± 21
24DC	9-8-52	8:45 A.M.	Gallahar Bridge pumphouse influent					85 ± 21
24DC	9-10-52	8:45 A.M.	Gallahar Bridge pumphouse influent					42 ± 21
24DC	9-12-52	8:45 A.M.	Gallahar Bridge pumphouse influent					17 ± 21
24DC	9-14-52	8:45 A.M.	Gallahar Bridge pumphouse influent					47 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Results per gram dry weight.

T. Kwasnoski

WCX-1012 (3-5
Laboratory Co. .les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 462
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K-25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24DE	8-19-52	4:30 P.M.	Effluent from K-25 Water Purification Plant					31 ± 21
24DE	8-20-52	8:45 A.M.	Effluent from K-25 Water Purification Plant					27 ± 21
24DE	8-21-52	7:00 A.M.	Effluent from K-25 Water Purification Plant					33 ± 21
24DE	8-22-52	9:00 A.M.	Effluent from K-25 Water Purification Plant					25 ± 21
24DE	8-24-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					28 ± 21
24DE	8-26-52	8:30 A.M.	Effluent from K-25 Water Purification Plant					23 ± 21
24DE	8-28-52	9:00 A.M.	Effluent from K-25 Water Purification Plant					23 ± 21
24DC	8-19-52	4:45 P.M.	Gallahar Bridge Pumphouse Influent					46 ± 21
24DC	8-20-52	9:00 A.M.	Gallahar Bridge Pumphouse Influent					19 ± 21
24DC	8-21-52	7:15 A.M.	Gallahar Bridge Pumphouse Influent					26 ± 21
24DC	8-22-52	9:20 A.M.	Gallahar Bridge Pumphouse Influent					30 ± 21
24DC	8-24-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					28 ± 21
24DC	8-26-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					53 ± 21
24DC	8-28-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					20 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

T. Kwasnowski

WCX-1012 (3-5
Laboratory Co. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 461
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File (K-25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
16W	7-10-52	9:20 A.M.	Drinking Water Spot Check - K-31	0.0		7.0	0.0 ± 1.1	8 ± 21
	7-16-52	10:15 A.M.	Drinking Water Spot Check - K-1001	0.0		7.7	0.2 ± 1.1	10 ± 21
	7-24-52	10:30 A.M.	Drinking Water Spot Check - K-1005	0.0		7.0	0.0 ± 1.1	17 ± 21
	7-30-52	10:00 A.M.	Drinking Water Spot Check - K-601	0.0		7.5	0.0 ± 1.1	6 ± 21
	8-14-52	10:00 A.M.	Drinking Water Spot Check - K-1002	0.0		7.3	0.0 ± 1.1	32 ± 21
	8-7-52	7:00 A.M.	Cafeteria Cooking Water	0.0		6.8	0.0 ± 1.1	0 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All N Results per gram dry weight.

T. Kwasowski

nCA-1012 (3-
Laboratory Co. les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 460
Distribution:
H. W. Carnes D. M. Lang
H. F. Henry M. F. Schwenn
S. Katz File (K-25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
30W	8-14-52	10:30 A.M.	K-1004-J "Normally Cold" Drum before dumping				3.6 ± 1.1	331
			Total Millicuries - .023					
			Volume - 4050 gals.					

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

T. Kwanoski

WCX-1012 (3·
Laboratory Ce Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 459
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	8/13/52	10:00am	Effluent from Water Purification Plant					33 ± 21
"	8/14/52	9:00 "	" " " " "					32 ± 21
"	8/15/52	8:30 am	" " " " "					34 ± 21
"	8/16/52	"	" " " " "					39 ± 21
"	8/17/52	"	" " " " "					15 ± 21
"	8/18/52	9:00 am	" " " " "					15 ± 21
24 DC	8/13/52	10:15am	Gallahar Bridge Pumphouse Influent					88 ± 23
"	8/14/52	9:20 "	" " " "					42 ± 21
"	8/15/52	8:45 a.m.	" " " "					58 ± 21
"	8/16/52	"	" " " "					24 ± 21
"	8/17/52	"	" " " "					24 ± 21
"	8/18/52	9:15 am	" " " "					34 ± 21

RECEIVED SEP 2 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M · Results per gram dry weight.

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Supervisor T. Kuranoshi Date 8/27/52

WCX-1012 (3-5
Laboratory Cor. les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 458
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File K-25RC

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
18 ME	7/3/52	10:30 am	Clinch River mud one mile downstream	0.3	micrograms/gram		1.7 ± 0.2	89 ± 21
43 ME	"	11:40 am	Poplar Creek mud before junction with Clinch	1.3	"	"		163 ± 21
42 ME	"	12:10 am	" " " below powerhouse effluent	5.0	"	"		198 ± 21
41 ME	"	12:30 pm	" " " at bridge below K-31	1.8	"	"		62 ± 21
11 ME	"	12:45 pm	" " " opposite K-27 drain	0.3	"	"		90 ± 21
1 ME	"	1:05 pm	" " " from K-1300 holding pond exit	20.0	"	"		139 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski Date 8/15/52

WCX-1012 (3-5
Laboratory Co: Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 457
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
K25RC

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DE	8/6/52	8:30 a.m.	Effluent from water purification plant					0 ± 21
"	8/7/52	"	" " " " "					0 ± 21
"	8/8/52	"	" " " " "					0 ± 21
"	8/9/52	"	" " " " "					2 ± 21
"	8/10/52	"	" " " " "					11 ± 21
"	8/11/52	"	" " " " "					14 ± 21
"	8/12/52	"	" " " " "					16 ± 21
24 DC	8/5/52	8:45 am	Gallaher Bridge Pumphouse influent					2 ± 21
"	8/6/52	"	" " " "					7 ± 21
"	8/7/52	"	" " " "					5 ± 21
"	8/8/52	"	" " " "					8 ± 21
"	8/9/52	"	" " " "					9 ± 21
"	8/10/52	"	" " " "					19 ± 21
"	8/11/52	"	" " " "					13 ± 21
"	8/12/52	"	" " " "					34 ± 21

RECEIVED AUG 1952 W.S.

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All I Results per gram dry weight.

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Supervisor T. Kwasnoski Date 8/15/52

WCX-1012 (3-5
Laboratory Cer. les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 456
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File K25RC

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
16 W	July	Composite	Drinking Water Spot Check		0.1			
24 DE	July	"	Effluent from K-25 water purification plant		0.1			
1 M	7/22/52	1:00 pm	Poplar Creek below K-1300 holding pond exit	0.5				
11 M	7/3/52	12:45 pm	Poplar Creek opposite K-27 drain	0.5				
42 M	7/3/52	12:10 p.m	Poplar Creek below Powerhouse effluent	0.0				
43 M	7/3/52	11:40 pm	Poplar Creek at junction with Clindh	0.0				
24 DE	June	Composite	Effluent from K-25 water purification plant		< 0.5			
16 W	June	Composite	Drinking Water Spot Check		< 0.5			

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski Date 8/15/52

WCX-1012 (3-5
Laboratory Cor. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 455
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	7/20/52	8:30 a.m.	Effluent from K-25 Water Purification Plant					116 ± 21
"	7/22/52	"	" " " " " "					2 ± 21
"	7/24/52	"	" " " " " "					11 ± 21
"	7/26/52	"	" " " " " "					2 ± 21
"	7/28/52	"	" " " " " "					3 ± 21
"	7/30/52	"	" " " " " "					4 ± 21
"	8/1/52	"	" " " " " "					0 ± 21
"	8/3/52	"	" " " " " " "					0 ± 21
"	8/5/52	"	" " " " " "					0 ± 21
24 DC	7/20/52	8:45 a.m.	Gallaher Bridge Pump house Influent					33 ± 21
"	7/22/52	"	" " " "					31 ± 21
"	7/24/52	"	" " "					24 ± 21
"	7/26/52	"	" " " "					15 ± 21
"	7/28/52	"	" " " "					19 ± 21
"	7/30/52	"	" " " "					13 ± 21
"	8/1/52	"	" " " "					0 ± 21
"	8/3/52	"	" " " "					5 ± 21

RECEIVED AUG 1 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Results per gram dry weight.

Supervisor T. Kwasnoski Date 8/11/52

WCX-1012 (3-5
Laboratory Cer. les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 424
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
13M	5-2-52	2:00 P.M.	Clinch River water one mile downstream	0.0		7.3		0 ± 21
24DE	May Composite		K-25 water purification plant effluent		0.16			
26M	May Composite		Drainage from Labs A, B, C, and D	0.3			1.0 ± 1.1	13 ± 21
13M	6-3-52	10:40 A.M.	Clinch River water one mile downstream	0.0				
43M	6-3-52	11:20 A.M.	Poplar Creek water at junction with Clinch	0.0				
42M	6-3-52	11:50 A.M.	Poplar Creek water just below Power House Effluent.	0.0				
11M	6-3-52	12:40 P.M.	Poplar Creek water opposite K-27 Drain	0.5				
1M	6-6-52	1:30 P.M.	Poplar Creek water at mouth of K-1300 Drain	6.0				
26M	7-1-52	9:30 A.M.	Drainage from Labs A, B, C, and D	2.0			1.7 ± 1.0	34 ± 21
13M	7-3-52	10:30 A.M.	Clinch River water one mile downstream	0.0		7.0		20 ± 21
13ME	6-3-52	10:40 A.M.	Mud from one mile downstream Clinch	0.4 micrograms/gram			3.4 ± 0.4	103 ± 21
43ME	6-3-52	11:20 A.M.	Mud from Poplar Creek before junction with Clinch.	1.8 micrograms/gram				148 ± 21
42ME	6-3-52	11:50 A.M.	Mud from Poplar Creek below Power House Effluent	6.3 micrograms/gram				182 ± 21
41ME	6-3-52	12:20 P.M.	Poplar Creek mud at K-31 Bridge	1.2 micrograms/gram				71 ± 21
11ME	6-3-52	12:40 P.M.	Poplar Creek mud opposite K-27 Drain	15.0 micrograms/gram				146 ± 21
1ME	6-3-52	1:30 P.M.	Poplar Creek mud at Holding Pond exit	18.8 micrograms/gram				123 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

RECEIVED AUG 7 1952

T. Kwasowski 8/7/52

WCX-1012 (3-5
Laboratory Co Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 453
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
16W	5-28-52	9:20 A.M.	Drinking water spot check - K-1005	0.0		7.4	0.0 ± 1.1	15 ± 21
16W	May Composite		Drinking water spot check - K-1005		0.2			
16W	6-5-52	9:40 A.M.	Cafeteria cooking water	0.0		7.4	0.0 ± 1.1	68 ± 21
16W	6-11-52	9:00 A.M.	Drinking water spot check - K-702	0.0		7.5	0.2 ± 1.1	55 ± 21
16W	6-15-52	10:15 A.M.	Drinking water spot check - K-1024	0.0		7.4	0.3 ± 1.1	45 ± 21
16W	6-25-52	9:50 A.M.	Drinking water spot check - K-1085	0.0		7.5	0.0 ± 1.1	31 ± 21
16W	7-3-52	9:20 A.M.	Cafeteria cooking water	0.0		7.4	0.3 ± 1.1	10 ± 21

RECEIVED AUG 7 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Results per gram dry weight.

T. Kwasowski 8/7/52

WCX-1012 (3-5
Laboratory Cer. .les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 452
Distribution: H. W. Carnes
H. F. Henry
M. F. Schwenn
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24DE	7-3-52	8:30 A.M.	K-25 Water Purification Plant Effluent					3 ± 21
	7-5-52	8:30 A.M.	K-25 Water Purification Plant Effluent					16 ± 21
	7-7-52	8:30 A.M.	K-25 Water Purification Plant Effluent					15 ± 21
	7-10-52	8:30 A.M.	K-25 Water Purification Plant Effluent	(72 hour sample)				19 ± 21
	7-12-52	8:30 A.M.	K-25 Water Purification Plant Effluent					16 ± 21
	7-14-52	8:30 A.M.	K-25 Water Purification Plant Effluent					3 ± 21
	7-16-52	8:30 A.M.	K-25 Water Purification Plant Effluent					9 ± 21
	7-18-52	8:30 A.M.	K-25 Water Purification Plant Effluent					10 ± 21
24DC	7-1-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					13 ± 21
	7-3-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					20 ± 21
	7-5-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					28 ± 21
	7-7-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					15 ± 21
	7-10-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					18 ± 21
	7-12-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					18 ± 21
	7-14-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					16 ± 21
	7-16-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					17 ± 21
	7-18-52	8:45 A.M.	Gallahar Bridge Pumphouse Influent					10 ± 21

RECEIVED AUG 7 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

T. Kuwanoshi 8/7/52

WCX-1012 (3-5
Laboratory Co: Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 450
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	6/15/52	8:30 a.m.	Effluent from K-25 Water Purification Plant					20 ± 21
" "	6/17/52	"	" " " " " "					21 ± 21
" "	6/19/52	"	" " " " " "					44 ± 21
" "	6/21/52	"	" " " " " "					40 ± 21
" "	6/23/52	"	" " " " " "					57 ± 21
" "	6/25/52	"	" " " " " "					39 ± 21
" "	6/27/52	"	" " " " " "					19 ± 21
" "	6/29/52	"	" " " " " "					8 ± 21
" "	7/1/52	"	" " " " " "					11 ± 21
24 DC	6/13/52	8:45 a.m	Gallahar Bridge Pump house influent					25 ± 21
"	6/15/52	"	" " " " "					57 ± 21
"	6/17/52	"	" " " " "					38 ± 21
"	6/19/52	"	" " " " "					49 ± 21
"	6/21/52	"	" " " " "					59 ± 21
"	6/23/52	"	" " " " "					58 ± 21
"	6/25/52	"	" " " " "					37 ± 21
"	6/27/52	"	" " " " "					10 ± 21
"	6/29/52	"	" " " " "					15 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M Results per gram dry weight.

Supervisor T. Kwasnoski Date 7/16/52

WCX-1012 (3-5
Laboratory Cer. 'les K25RC
Works Laboratory artment
Special Analysis Section

Report No. 44
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DE	5/30/52	8:30 a.m	Effluent from K-25 Water Purification Plant					25 ± 21
"	6/1/52	"	" " " " "					54 ± 22
"	6/3/52	"	" " " " " "					61 ± 24
"	6/5/52	"	" " " " "					94 ± 21
"	6/7/52	"	" " " " "					52 ± 21
"	6/9/52	"	" " " " "					52 ± 21
"	6/11/52	"	" " " " " "					40 ± 21
"	6/13/52	"	" " " " "					18 ±21
24 DC	5/30/52	8:45 a.m	Gallaher Bridge Pumphouse Influent					21 ± 21
"	6/1/52	"	" " " "					59 ± 21
"	6/3/52	"	" " " "					120 ± 21
"	6/5/52	"	" " " "					150 ± 21
"	6/7/52	"	" " " "					60 ± 21
"	6/9/52	"	" " " "					208 ± 21
"	6/11/52	"	" " " "					47 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski Date 6/24/52

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WCX-1012 (3-'
Laboratory Co . Files K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. 447
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
11 ME	5/2/52	12:30 p.m.	Poplar Creek mud opposite K-27 Drain	3.8 micrograms/gram				62 ± 21
41 ME	"	12:45 p.m.	Poplar Creek Mud at bridge below K-31	3.8	"	"		73 ± 21
42 ME	"	1:10 p.m.	Poplar Creek Mud from Powerhouse Effluent	2.5	"	"		132 ± 21
43 ME	"	1:30 p.m.	Poplar Creek Mud before junction with Clinch	1.9	"	"		156 ± 21
13 ME	"	2:00 p.m.	Clinch River Mud one mile downstream from K-25	0.8	"	"	3.0 ± 1.0	182 ± 21
1 ME	5/8/52	9:05 a.m.	Holding Pond exit to Poplar Creek from 1300	12.5	"	"		100 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All / Results per gram dry weight.

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Supervisor T. Kurowski Date 6/12/52

WCX-1012 (3-
Laboratory Co. les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 440
Distribution: H. F. Henry
M. F. Schwerm
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
16 W	5/8/52	9:40 a.m.	K-1413 Drinking Water spot check	0.00		7.3	0.6 ± 1.1	13 ± 21
"	5/16/52	8:45 a.m.	K-1100 " " " "	0.00		7.2	0.3 ± 1.1	12 ± 21
"	5/22/52	9:30 a.m.	K-1001 " " " "	0.00		7.6	0.0 ± 1.1	13 ± 21

RECEIVED JUN 5 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasovski Date 6/6/52

WCX-1012 (3-
Laboratory Ce l Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 445
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File (K25RC)

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DE	5/22/52	8:30 a.m.	Effluent from K-25 Water Purification Plant					2 ± 21
"	5/24/52	"	" " " " " "					21 ± 21
"	5/26/52	"	" " " " " "					25 ± 21
"	5/28/52	"	" " " " " " "					23 ± 21
24 DC	5/22/52	8:45 a.m.	Gallaher Bridge Pumphouse influent					21 ± 21
"	5/24/52	"	" " " "					29 ± 21
"	5/26/52	"	" " " " "					50 ± 21
"	5/28/52	"	" " " "					45 ± 21

RECEIVED JUN 9 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All [illegible] Results per gram dry weight.

SUPERVISOR T. Kwasnoski Date 6/6/52

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WCX-1012 (3-5
Laboratory Ce... ...iles K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. ~~x-4~~
Distribution: H. F. Henry
D. M. Lang M. F. Schwenn
S. Katz H. W. Carnes
File (K25RC)

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
30 W	5/26/52	4:15 p.m.	K-1004 J "Normally cold" drum before dumping.					185 ± 21
			Total gallons - 5000					
			Total millicuries - .015					

RECEIVED JUN 9 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwasnoski Date 6/6/52

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WCX-1012 (3-5
Laboratory Cer. Files K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. 443
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
24 DC	5/3/52	8:45 a.m.	Gallaher Bridge pump house influent					20 ± 21
"	5/5/52	"	" " " " "					34 ± 21
"	5/7/52	"	" " " " "					17 ± 21
"	5/9/52	"	" " " " "					24 ± 21
"	5/11/52	"	" " " " "					11 ± 21
"	5/13/52	"	" " " " "					22 ± 21
"	5/16/52	"	" " " " "	(72 hour sample)				20 ± 21
"	5/18/52	"	" " " " "					4 ± 21
"	5/20/52	"	" " " " "					37 ± 21

RECEIVED MAY 2[illegible] 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M ' Results per gram dry weight.

Supervisor T. Kwasnoski Date 5/28/52

WCX-1012 (3-
Laboratory Ce iles K25RC
Works Laboratory Department
Special Analysis Section

Report No. 442
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	5/3/52	8:30 a.m	Effluent from K-25 Water Purification Plant					11 ± 21
"	5/5/52	"	" " " " " "					22 ± 21
"	5/7/52	"	" " " " " "					11 ± 21
"	5/9/52	"	" " " " " "					15 ± 21
"	5/11/52	"	" " " " " "					11 ± 21
"	5/13/52	"	" " " " " "					17 ± 21
"	5/16/52	"	" " " " " "					18 ± 21
"	5/18/52	"	" " " " " "					12 ± 21
"	5/20/52	"	" " " " " "					9 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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Supervisor T. Kwanoski Date 5/28/52

RECEIVED MAY 29 1952 WS

WCX-1012 (3-5
Laboratory Co... Files K25RC
Works Laborat... Department
Special Analysis Section

Report No. 441
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
11 M	5/2/52	12:30 p.m.	Poplar Creek opposite K-27 drain	3.0				
42 M	5/2/52	1:10 p.m.	Poplar Creek below powerhouse effluent	20.0				
43 M	5/2/52	1:30 p.m.	Poplar Creek at junction with Clinch River	0.0				
1 M	5/8/52	9:00 a.m.	Poplar Creek at K-1300 Holding Pond Exit	3.0				

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All [illegible] Results per gram dry weight.

Supervisor [signature] Date 5/14/52

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WCX-1012 (3-5
Laboratory Cer. ...les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 440
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
16 W	Monthly March	Composite	Drinking water spot check		0.0			
"	April "	"	" " " "		0.0			
24 DE	March "	"	Effluent from K-25 Water Purification Plant	0.0	0.0		0.3 ± 1.1	
"	April "	"	" " " " " "	0.0	0.0		0.4 ± 1.1	
26 M	March "	"	Drainage from Labs A, B, C, and D	6.0			2.4 ± 1.1	19 ± 21
"	April "	"	" " " " " "	8,0			15.5 ± 1.1	47 ± 21
11 M	4/9/52	12:20 p.m.	Poplar Creek opposite K-27 drain	0.5				
42 M	4/9/52	12:50 p.m.	" " below powerhouse effluent	0.0				
43 M	4/9/52	1:00 p.m.	" " at junction with Clinch River	0.0				
13 M	4/9/52	1:30 p.m.	Clinch River one mile downstream	0.0		8.4		8 ± 21
1 M	4/9/52	2:15 p.m.	Poplar Creek at Holding Pond exit from K-1300	6.0				

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor [signature] Date 5/15/52

WCX-1012 (3-5
Laboratory Cor. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 439
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
11 ME	4/9/52	12:20 p.m	Poplar Creek Mud opposite K-27 drain	1.5 Micrograms/gram				80 ± 21
41 ME	"	12:30 p.m	" " " at K-31 bridge	6.3	"	"		101 ± 21
42 ME	"	12:50 p.m.	" " " below powerhouse effluent	7.5	"	"		177 ± 21
43 ME	"	1:00 p.m.	" " " before junction with Clinch	3.1	"	"		124 ± 21
13 ME	"	1:30 p.m.	Clinch River Mud one mile downstream	1.0	"	"		150 ± 21
1 ME	"	2:15 p.m	Poplar Creek Mud at holding pond exit from K-1300	12.5	"	"		101 ± 21

RECEIVED MAY 19 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Results per gram dry weight.

Supervisor [signature] Date 5/15/52

WCX-1012 (3-5
Laboratory Cor. ...les K25RC
Works Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Report No. 438
Distribution: H. F. Henry
D. M. Lang M. F. Schwenn
S. Katz H. W. Carnes
File

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
30 W	4/23/52	9:45 a.m	"Normally Cold" drum before dumping. K-1004 J				2.5 ± 1.1	3279 ± 21
			Total Gallons 1960					
			Total millicuries .11					

RECEIVED MAY 15 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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Supervisor [signature] Date 5/15/52

WCX-1012 (3-5
Laboratory Cor. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 437
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	4/19/52	8:30 a.m	Effluent from K-25 Water Purification Plant					6 ± 21
"	4/21/52	"	" " " " " "					6 ± 21
"	4/23/52	"	" " " " " "					9 ± 21
"	4/25/52	"	" " "					8 ± 21
"	4/27/52	"	" " " " " "					17 ± 21
"	4/29/52	"	" " " " "					9 ± 21
"	5/1/52	"	" " " " " "					12 ± 21
24 DC	4/19/52	8:45 a.m.	Gallahar Bridge influent to pump house					8 ± 21
"	4/21/52	"	" "					8 ± 21
"	4/23/52	"	" " " " "					12 ± 21
"	4/25/52	"	" " " " "					13 ± 21
"	4/27/52	"	" " " " "					12 ± 21
"	4/29/52	"	" " " " " "					5 ± 21
"	5/1/52	"	" " " " "					10 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All R Results per gram dry weight.

200

Supervisor [signature] Date 5/15/52

WS

WCX-1012 (3-5
Laboratory Cer. ,les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 42
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
File

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
22 W	3/7/52	Weekly Composite	Poplar Creek below powerhouse effluent	0.00		8.1		9 ± 21
16 W	3/6/52	3:00 p.m.	Cafeteria Cooking Water - K-1002	0.50		7.3	0.0 ± 1.1	58 ± 21
"	4/4/52	4:10 p.m.	" " " "	0.00		7.5	0.5 ± 1.1	13 ± 21
"	5/1/52	9:20 a.m.	" " " "	0.00		7.5	0.0 ± 1.1	6 ± 21
"	3/14/52	9:30 a.m.	Drinking water spot Check - K-1004 D	0.00		7.1	0.0 ± 1.1	8 ± 21
"	3/21/52	1:00 p.m.	" " " " K-1303	1.00		7.1	0.0 ± 1.1	2 ± 21
"	3/28/52	1:00 p.m.	" " " " K-1001	0.00		7.2	0.1 ± 1.1	0 ± 21
"	4/11/52	9:40 a.m.	Drinking " " " K-1003	0.00		8.0	0.3 ± 1.1	8 ± 21
"	4/17/52	10:00 a.m.	" " " " K-1085	0.50		7.7	0.6 ± 1.1	16 ± 21
"	4/25/52	10:30 a.m.	" " " " K-1021	0.00		7.4	0.2 ± 1.1	8 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor [signature] Date 5/15/52

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X-1012 (3-5
Laboratory Cor I Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 435
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
Central Files

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
1 M	3/13/52	1:00 p.m	Poplar Creek water at K-1300 holding pond exit.	0.0				
11 M	"	1:30 p.m	" " " Opposite K-27 drain	0.5				
42 M	"	2:00 p.m	" " " below powerhouse effluent	0.0				
43 M	"	2:30 p.m	" " " at junction with Clinch River	0.0				
13 M	3/17/52	1:00 p.m	Clinch River water 1 mile downstream	0.0		8,0		1 ± 21
1 ME	3/13/52	1:00 p.m	Poplar Creek mud at K-1300 holding pond exit	7.5 micrograms/gram				86 ± 21
11 ME	"	1:30 p.m	" " " opposite K-27 drain	1.5	" "			35 ± 21
41 ME	"	1:45 p.m.	" " " at K-31 bridge	2.0	" "			68 ± 21
13 ME	3/17/52	1:05 p.m	Clinch River mud one mile downstream	1.0	" "		3.4 ± 0.4	172 ± 21
43 ME	3/13/52	2:30 p.m	Poplar Creek mud before junction with Clinch	1.9	" "			149 ± 21
42 ME	"	2:00 p.m	" " " below powerhouse effluent	3.8	" "			182 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

202

Supervisor T. Kwasowski Date 4/30/52

WCX-1012 (3-5
Laboratory Con.. ...les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 45
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes
~~Central Files~~

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	4/13/52	8:30 a.m.	Effluent from K-25 water purification plant					8 ± 21
"	4/15/52	" "	" " " " " "					10 ± 21
"	4/17/52	" "	" " " " " " "					19 ± 21
24 DC	4/11/52	8:45 a.m.	Gallaher Bridge pumphouse influent					17 ± 21
"	4/13/52	" "	" " " "					14 ± 21
"	4/15/52	" "	" " " "					29 ± 21
"	4/17/52	"	" " " "					8 ± 21

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NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kwamoohe Date 4/29/52

203

WCX-1012 (Mar'48)

REPORT No. 432

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

K-25RC Lab. Central Files.
Distribution: H. F. Henry D. M. Lang
M. F. Schwenn S. Katz
H W. Carnes Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30 W	4/11/52	10:15 alm	K-1004 J "Normally cold drum before				
			dumping			2.9 ± 1.1	618 ± 21
			Total gals. in tank 4100				
			Total millicuries .043				
			Alpha counts per minute per 100 ml. water at 50% geometry.				
			Beta counts per minute per 100 ml. water at 100% geometry.				

204

SUPERVISOR T. Kwasnoski DATE 4/52

WCX-1012 (3-
Laboratory Co Files K25RC
Works Laborator Department
Special Analysis Section

Report No. 1
Distribution: H F. Henry
M. F. Schwenn
H. W. Carnes
Central Files

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	3/26/52	8:30 a.m	Effluent from K-25 Water Purification Plant					12 ± 21
" "	3/28/52	"	" " " " " "					3 ± 21
" "	3/30/52	"	" " " " " "					12 ± 21
"	4/1/52	"	" " " " " "					6 ± 21
"	4/3/52	"	" " " " " "					0 ± 21
"	4/5/52	"	" " " " " "					10 ± 21
"	4/7/52	"	" " " " " "					11 ± 21
"	4/9/52		" " " " " "					16 ± 21
"	4/11/52	"	" " " " " "					16 ± 21
24 DC	3/26/52	8:45 a.m	Gallaher Bridge Pumphouse influent					14 ± 21
"	3/28/52	"	" " " "					11 ± 21
"	3/30/52	"	" " " "					10 ± 21
"	4/1/52	"	" " " "					15 ± 21
"	4/3/52	"	" " " " "					2 ± 21
"	4/5/52	"	" " " " "					10 ± 21
"	4/7/52	"	" " " "					25 ± 21
"	4/9/52	"	" " " "					21 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

205

Supervisor T. Kwasowski Date 4/24/52

TORY DEPARTMENT

alysis Section

ANALYSIS REPORT

ater Samples from Poplar Creek — SEQUENCE NO. 2535

4/14/52 — REQUEST NO. 9091

RESULTS

Sample	pH	F ppm
plar Creek Water at Bridge	7.55	0.3
o Blair Gate.	6.62	2.6
pplar Creek Water north of K-631	8.20	12
mall creek near K-1302		

Spectrographic Analysis

Small creek near K-1302	Ca	200 ppm
	Cu	10 ppm
	Mg	50 ppm
	Na	50 ppm

RKS

Since the sodium content of sample No. 3 is high, the pH of 8.20 would be due the presence of sodium hydroxide.

BMITTED BY L. L. Anthony, Jr. LOCATION K-303-7

ESULTS APPROVED BY T. Kwasnoski DATE 4/22/52

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K-25RC

WCX-1012 (3-5
Laboratory Co. ...les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 450
Distribution:
H. F. Henry
M. F. Schwenn
H. W. Carnes
Central Files

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
13 ME	12/4/51	3:00 p.m	Bottom mud from 1 mile downstream of Clinch	0.4 micrograms U/gram mud				
41 ME	2/15/52	1:00 p.m.	Mud from center of Poplar Creek at K-31 Bridge	3.8	"	"	"	119 ± 21
1 ME	2/18/52	9:20 a.m.	Holding pond exit to Poplar Creek Below 303-8	16.3	"	"	"	124 ± 21
13 ME	2/18/52	8:45 a.m.	Bottom mud from Clinch one mile downstream	0.75	"	"	"	168 ± 2:
11 ME	2/15/52	12:45 a.m	Poplar Creek opposite K-27 drain	7.5	"	"	"	120 ± 21
43 ME	2/15/52	2:15 p.m.	Poplar Creek before junction with Clinch	1.3	"	"	"	183 ± 21
42 ME	2/15/52	2:00 p.m.	Poplar Creek Below Powerhouse effluent	2/5	"	"	"	199 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T. Kurosaki Date 4/10/52

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WCX-1012 (3-5
Laboratory Co Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 429
Distribution:
B. M. Perry
H. F. Henry
Central Files
M. F. Schwenn
H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
	3/26/52	9:00 a.m	Water from storm sewer drain below 1300 area	80	0.0	8.2		

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NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M Results per gram dry weight.

Supervisor T. Kusanoski Date 1 0/52

WCX-1012 (3-5
Laboratory Co[illegible]les K25RC
Works Laboratory Department
Special Analysis Section

Report No. 428
Distribution:
H. F. Henry
M. F. Schwenn
H. W. Carnes
Central Files

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
16 W	2/29/52	9:20 a.m.	K-1028 -42 Guard portal drinking water	0.0		7.5	0.0 ± 1.1	8 ± 21
22 W	week ending 2/29/52	Composite		0.0		7.7		754 ± 21 (?)
11 M	2/15/52	12:40 p.m	Water from Poplar Creek opposite K 27 drain	10.0				
43 M	2/15/52	2:20 p.m.	Poplar Creek water before junction with Clinch	0.0				
1M	2/18/52	9:20 a.m.	1300 drain exit to Poplar Creek	30.0				
13 M	2/18/52	8:50 a.m.	Clinch River one mile downstream	0.0		7.7		9 ± 21
24 DE	February	Composite	Effluent from K-25 Water purification plant	0.0	*0.1		0.0 ± 1.1	
26 M	"	"	Drainage from Labs A, B, C, and D	4.0			3.2 ± 1.1	30 ± 21
16 W	"	"	Drinking water spot check		*0.1			
13 M	12/4/51	3:00 p.m.	Clinch River one mile downstream	0.0		7.7		

* Less than

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

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Supervisor T. Kwasnoski Date 4/10/52

WCX-1012 (3-5
Laboratory Cer. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 427
Distribution:
H. F. Henry Central Files
M. F. Schwenn
H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DC	3/12/52	8:45 a.m.	Gallaher Bridge pump house influent	(X-10 overflow)				38 ± 21
"	3/14/52	" "	" " " " "					14 ± 21
"	3/16/52	" "	" " " " "					8 ± 21
"	3/18/52	" "	" " " " "					59 ± 21
"	3/20/52	"	" " " " "					2 ± 21
"	3/22/52	1:30 a.m	" " " " "	(41 hour sample - X-10 overflow)				7 ± 21
"	3/24/52	8:45 a.m	" " " " "	(55 hour sample - X-10 overflow)				33 ± 21

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APR 1 3 1952

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All M Results per gram dry weight.

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Supervisor T. Kurosaki Date 4/10/52

WCX-1012 (3-5
Laboratory Cor. iles K25RC
Works Laboratory Department
Special Analysis Section

Report No. 426
Distribution:
H. F. Henry Central Files
M. F. Schwenn
H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	Counts per min/100 ml. BETA
24 DE	3/11/52	12:30 a.m	Effluent from K-25 water purification plant	(16 hour	sample -	X-10	overflow)	10 ± 21
" "	3/12/52	8:30 a.m.	" " " " " "	(32 hour	sample -	X-10	overflow)	8 ± 21
" "	3/14/52	8:30 a.m.	" " " " " "					9 ± 21
" "	3/16/52	8:30 a.m.	" " " " " "					8 ± 21
" "	3/18/52	8:30 a.m.	" " " " " "					8 ± 21
" "	3/20/52	8:30 a.m.	" " " " " "					0 ± 21
" "	3/22/52	8:30 a.m.	" " " " " "	(41 hour	sample -	X-10	overflow)	6 ± 21
" "	3/24/52	8:30 a.m.	" " " " " "	(55 hour	sample -	X-10	overflow)	10 ± 21

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All Mud Results per gram dry weight.

Supervisor T Kwasnoski Date 4/10/52

WCX-1012 (3-5
Laboratory Cor. Files K25RC
Works Laboratory Department
Special Analysis Section

Report No. 425
Distribution:
H. F. Henry D. M. Lang
M. F. Schwenn S. Katz
H. W. Carnes Central Files

REPORT OF WATER SURVEY ANALYSES

PLOT NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM ppb.	FLUORIDES ppm.	pH	Counts per min/100 ml. ALPHA	BETA
30 W			K-1004 J, "Normally cold" drum before dumping				11± 1.1	8433
			Total millicuries = .59					
			4100 gallons					

NOTE: *Alpha counts per minute per 100 ml. water at 50% geometry.*
Beta counts per minute per 100 ml. water at 100% geometry.
All N Results per gram dry weight.

2/2

Supervisor T. Kwasnoski Date 4/10/52

WORKS LABORATORY DEPARTMENT

SPECIAL ANAL 5 SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K 25RC

Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
24 DE	2/29/52	8:30 a.m.	Effluent from K-25 Water Purification Plant				20 21
24 DE	3/2/52	8:30 a.m.	" " " " "	"			26 21
24 DE	3/4/52	12:40 p.m.	" " " " "	"			29 21
24 DE	3/6/52	8:30 a.m.	" " " " "	"			44 21
24 DE	3/8/52	8:30 a.m.	" " " " "	"			50 21
24 DE	3/10/52	3:30 a.m.	" " " " "	"			14 21
24 DC	2/29/52q	8:45 a.m.	Gallaher Bridge Pump House Influent				37 21
24 DC	3/2/52	8:45 a.m.	" " " " "				46 21
24 DC	3/4/52	12:30 a.m.	" " " " "				55 22
24 DC	3/6/52	8:45 a.m.	" " " " "				124 21
24 DC	3/8/52	8:45 a.m.	" " " " "				33 21
24 DC	3/10/52	8:45 a.m.	" " " " "				31 21

Note: Beta counts are per minute/100 ml. at 100% geometry.

2/3

SUPERVISOR T. Kwasnoski DATE 3/26/52

WCX-1012 (Mar'49)

REPORT No. 423

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K25:C
Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
41 ME	1/2/52	1:10 p.m.	Center of Poplar Creek at Bridge crossing - K-31	6.25 micrograms per gram mud			160 21
42 ME	1/2/52	1:50 p.m.	Poplar Creek Just Below Power house Effluent	2.5 "	" " "		232 2
43 ME	1/2/52	2:05 p.m.	Poplar Creek Before Junction with Clinch	1.3 "	" " "	[illegible]	270 21
13 ME	1/2/52	2:40 p.m.	Mud from 13 M Sampling Point - 1 mile downstream	.25 "	" "	[illegible]	174 21
1 ME	1/5/52	9:00 a.m.	Holding Pond Exit to Clinch Below K - K-303-8	16.4 "	" "		201 21
11 ME	1/2/52	1:00 p.m.	Poplar Creek opposite K-27 Drain	.75 "	" " "		73 21

NOTE: Mud results are per gram dry weight

Beta counts are per minute per gram at 100% geometry.

Alpha counts are per minute per gram at 50% geometry.

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SUPERVISOR T. Kwasowski DATE 3/12

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WCX-1012 (Mar'48)

REPORT No. 421

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry ✓ Central Files
S. Katz M. F. Schwenn Section File
D. M. Lang H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
30 W	2/19/52	4:10 p.m.	K-1004 J, "Normally Cold" drum before dumping			7.2 1.1	36,300 21
			5000 gallons				
			3.09 millicuries total.				

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2151

SUPERVISOR T. Kwasowski DATE 3/10/52

WCX-1012 (Mar'

REPORT NO. [illegible]

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K/25RC
Distribution: H. F. Henry ✓ Central Files
M. F. Schwenn
H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta	pH
22 W	Week ending 2/4/52	Weekly Composite	Poplar Creek Below Powerhouse Effluent	0.0			7 21	7.5
" "	2/8/52	"	" " " "	0.5			12 21	[illegible].4
" "	2/15/52	"	" " " "	0.0			5 21	7.7
" "	2/22/52	"	" " " "	0.0			7 21	7.0
16 W	1/30/52	2:55 p.m.	Drinking water check: change house 1410	0.0		0.0 1.1	0 21	[illegible].7
"	2/7/52	9:30 a.m.	" " " K-1002, cooking water	0.0		0.0 1.1	12 21	7.6
"	2/13/52	9:00 a.m.	" " " Laundry	0.0		0.0 1.1	0 21	7.2
"	2/22/52	3:30 p.m.	" " " K-1231	0.0		0.0 1.1	6 21	7.4

NOTE: Alpha counts are per minute per 100 ml. water at 50% geometry.
Beta counts are per minute per 100 ml. water at 100% geometry.

2/5

SUPERVISOR T. Kwasnoski DATE 3/10/52

WCX-1012 (Mar'[illegible])
K-25RC

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

Distribution: H.F. Henry
M.F. Schwern
H.W. Carres
Lab central files
Section File

REPORT NO. 4[illegible]

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	2/22/52	1:00 a.m.	Effluent from K-25 Water Purification Plant	18 hour sample			5 ± 21
" "	2/22/52	9:15 a.m.	" " " "	8 hour sample			3 ± 21
" "	2/23/52	8:30 a.m.	" " " "				0 ± 21
" "	2/25/52	8:30 a.m.	" " " "				7 ± 21
" "	2/27/52	8:30 a.m.	" " " "				21 ± 21
24 DC	2/21/52	9:00 a.m.	Gallaher Bridge Pumphouse influent				4 ± 21
" "	2/22/52	1:00 a.m.	" " " "				7 ± 21
" "	2/22/52	9:45 a.m.	" " " "				0 ± 21
" "	2/23/52	9:00 a.m.	" " " "				7 ± 21
" "	2/25/52	9:00 a.m.	" " " "				16 ± 21
" "	2/27/52	8:45 a.m.	" " " "				4 ± 21
NOTE:	Beta counts are per minute per 100 ml. at 100% geometry.						

RECEIVED MAR 11 1952

SUPERVISOR T. Kwasnoski DATE 3/10/52

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WCX-1012 (Mar'48)

REPORT NO. 41

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC

Distribution: H. F. Henry Central Files
M. F. Schwenn Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	2/5/52	8:30 a.m.	Effluent from K-25 Water Purification Plant				8 ± 21
" "	2/7/52	" "	" " " "				12 ± 21
" "	2/9/52	" "	" " " "				2 ± 21
" "	2/11/52	" "	" " " "				12 ± 21
" "	2/13/52	" "	" " " "	No sample - system plugged			
" "	2/15/52	" "	" " " "				0 ± 21
" "	2/17/52	" "	" " " "				4 ± 21
" "	2/19/52	" "	" " " "				0 ± 21
" "	2/21/52	" "	" " " "				16 ± 21
24 DC	2/7/52	9:00 a.m.	Gallaher Bridge Pumphouse Influent				16 ± 21
" "	2/11/52	8:45 a.m.	" " " "				15 ± 21
" "	2/13/52	" "	" " " "				0 ± 21
" "	2/15/52	9:00 a.m.	" " " "				0 ± 21
" "	2/17/52	8:45 a.m.	" " " "				0 ± 21
" "	2/19/52	" "	" " " "				0 ± 21

NOTE: Beta counts are per minute per 100 ml. water at 100% geometry.

FEB 23 1952

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SUPERVISOR T. Kwasnoski DATE 2/26/52

WCX-1012 (Mar'

REPORT No. 410

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory central Files, K-25RC
Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
11 ME	12/4/51	1:30 p. m.	Poplar Creek Mud, Opposite K-27 Drain	6.3	Micrograms/gram	Mud	
41 ME	d "	2:00 p. m.	Poplar Creek Mud, At Bridge Below K-31	7.5	" "	"	
1 ME	12/5/51	9:10 p. m.	Holding Pond Exit to Poplar Creek N.E. of K-303-8	12.5	" "	"	
42 ME	12/4/51	2:20 p. m.	Poplar Creek just below Pond for Powerhouse effluent	1.5	" "	"	
43 ME	12/4/51	2:35 p. m.	Poplar Creek before Junction with Clinch	1.3	" "	"	
13 ME	12/4/51	3:00 p.m.	Mud 1 mile downstream of last K-25 Effluent	0.4	" "	"	
		NOTE:	All mud results per gram dry weight.				

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SUPERVISOR T. Kwasnoski DATE 2/18/52

WCX-1012 (Mar'ur'

REPORT No. 417

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC

Distribution: H. F. Henry, M. F. Schwenn, H. W. Carnes, Central Files, Section File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
11 M	12-4-51	1:30 P.M.	Water from Poplar Creek opposite	1.0			
			K-27 drain.				
16 W	December 1951	Composite	Drinking water spot check.		0.1		
24 DE	December 1951	Composite	Effluent from K-25 Water Purification	0.0	0.0	0.0 ± 1.0	
			Plant.				
24 DE	January 1952	Composite	Effluent from K-25 Water Purification	0.0	0.0	0.9 ± 1.1	
			Plant.				
16 W	January 1952	Composite	Drinking water spot check.		0.1		
			Note: Alpha counts are per minute per 100 ml. water at 50% geometry.				
			Beta counts are per minute per 100 ml. water at 100% geometry.				

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SUPERVISOR T. Kwasnoski DATE February 19, 1952

WCX-1012 (Mar'[illegible])

REPORT NO. 41

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC

Distribution: H. F. Henry, H. W. Carnes, M. F. Schwenn — Central Files, Section File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA		COUNTS PER MINUTE PER 100 ML. BETA		pH
43 M	12/4/51	2:35 p.m.	Poplar Creek at Junction with Clinch River	1.0						
1 M	12/5/51	9:10 a. m.	Poplar Creek at drain from K-1300 Area	4.0						
26 M	12/29/51	Composite	Drainage from Labs A, B, C, and D.	4.0		1.8	1.0	13	21	
11 M	1/2/52	1:00 p. m.	Poplar Creek opposite K-25 Drain	0.0						
43 M	1/2/52	2:05 p.m.	Poplar Creek at junction w. Clinch R.	0.0				2	21	7.5
13 M	1/2/52	2:40 p. m.	Clinch River 1 mile downstream from K-25.	0.0				2	21	7.5
1 M	1/5/52	9:00 a.m.	Poplar Creek at Drain from K-1300 area	0.00						
26 M	1/29/52	Composite	Drainage from Labs A, B, C, and D	3.0		4.9	1.1	13	21	

RECEIVED FEB [illegible]

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SUPERVISOR T. Kwasnoski DATE 2/18/52

WCX-1012 (Mar'[illegible])

REPORT NO. 415

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central F les, K 25RC

Distribution: H. F. Henry Central Files
M. F. Schwenn Office File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	pH
16 W	12/19/51	9:30 a.m.	Drinking Water, spot check K-1004 A	0.0		0.0 ± 1.0	13 ± 21	7.4
16 W	12/29/51	9:50 a. m.	" " " " K-1030	0.0		0.1 ± 1.0	2 ± 21	7.2
16 W	1/11/52	9:20 a.m.	" " " " K-1213	0.0		0.0 ± 1.0	0 ± 21	[illegible]
16 W	1/17/52	10:45 a.m.	" " " " K-1004 D	0.0		0.0 ± 1.0	4 ± 21	7.0
16 W	1/23/52	2:05 p. m.	" " " " K-31	0.0		0.4 ± 1.1	9 ± 21	7.2
16 W	1/4/52	9:15 a.m.	Cafeteria Cooking water	0.0		0.0 ± 1.0	0 ± 21	7.3
22 W	12/21/51	Composite	Poplar Creek Below Powerhouse Effluent	0.0			13 ± 21	7.5
22 W	12/29/51	"	" " " "	0.00			2 ± 21	7.5
22 W	1/5/52	"	" " " "	0.0			6 ± 21	7.6
22 W	1/11/52	"	" " " "	0.0			5 ± 21	7.9
22 W	1/18/52	"	" " " "	0.0			15 ± 21	7.2
22 W	1/25/52	"	" " " "	0.0			0 ± 21	7.3

NOTE: Alpha counts are per minute per 100 ml. water at 50% geometry.
Beta counts are per minute per 100 ml. water at 100% geometry.

222

SUF ISOR T. Kwasnoski DATE 2/1 '52

FEB 13 1952

WCX-1012 (Mar'49)

REPORT No. 414

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC

Distribution: H. F. Henry Central Files
M. F. Schwenn Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
24 DC	1/4/52	8:45 a.m.	Gallaher Bridge Pumphouse influent				0 ± 21
" "	1/8/52	9:00 a.m.	" " " "	(96 hour sample)			8 ± 21
" "	1/10/52	9:00 a.m.	" " " "				20 ± 21
" "	1/14/52	8:45 a.m.	" " " "	(96 hour sample)			33 ± 21
" "	1/16/52	9:10 a.m.	" " " "				42 ± 21
" "	1/18/52	8:45 a.m.	" " " "				14 ± 21
" "	1/22/52	8:50 a.m.	" " " "	(96 hour sample)			14 ± 21
" "	1/24/52	8:55 a.m.	" " " "				8 ± 21
" "	1/28/52	9:30 a.m.	" " " "	(96 hour sample)			25 ± 21
" "	1/30/52	9:40 a.m.	" " " "				26 ± 21
" "	2/1/52	8:50 a.m.	" " " "				0 ± 21
" "	2/5/52	8:45 a.m.	" " " "	(96 hour sample)			17 ± 21
24 DE	2/1/52	8:40 a.m.	Effluent from K-25 Water Purification Plant				3 ± 21
" "	2/3/52	8:30 a.m.	" " "				11 ± 21

NOTE: Beta counts are per minute per 100 ml. water at 100% geometry

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SUPERVISOR T. Kwasnoski DATE 2/11/52

WCX-1012 (Mar'50)

REPORT No. 413

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	1/4/52	8:30 a. m.	Effluent from K-25 Water Purification Plant				2 ± 21
" "	1/6/52	8:15 a. m.	" " " "				0 ± 21
" "	1/8/52	8:20 a. m.	" " " "				5 ± 21
" "	1/10/52	8:45 a. m.	" " " "				3 ± 21
" "	1/12/52	8:45 a.m.	" " " "				0 ± 21
" "	1/14/52	8:45 a. m.	" " " "				7 ± 21
" "	1/16/52	9:00 a. m.	" " " "				1 ± 21
" "	1/18/52	8:30 a. m.	" " " "				12 ± 21
" "	1/20/52	9:15 a. m.	" " " "				2 ± 21
" "	1/22/52	9:15 a. m.	" " " "				6 ± 21
" "	1/24/52	8:45 a. m.	" " " "				4 ± 21
" "	1/26/52	8:25 a. m.	" " " "				0 ± 21
" "	1/28/52	8:30 a. m.	" " " "				22 ± 21
" "	1/30/52	12:45 p.m.	" " " "				19 ± 21
NOTE: Beta counts are per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwasnoski DATE 2/11/52

WCX-1012 (Mar'' 9)

REPORT No. 412

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F.,Henry Central Files
M. F. Schwenn Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
24 DC	12/19/51	8:45 a.m.	Gallaher Bridge pump house influent				1 ± 21
24 DC	12/21/51	" "	" " " " "				20 ± 21
24 DC	12/23/51	" "	" " " " "				10 ± 21
24 DC	12/25/51	" "	" " " " "				3 ± 21
24 DC	12/27/51	" "	" " " " "				0 ± 21
24 DC	12/29/51	" "	" " " " "				2 ± 21
24 DC	1/2/52	" "	" " " " "				10 ± 21
		Note: Beta counts are per minute per 100 ml water at 100 % geometry					

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225

SUPERVISOR T. Kwasowski DATE 1/16/52

WCX-1012 (Mar '8)

REPORT No. 412

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution; H. F. Henry ✓ D. M. Lang Section File
M. F. Schwenn S. Katz
H. W. Carnes Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30 W	1/10/52	4:00 p.m.	K-1004 J, Normally cold drum before				
			dumping. Total millicuries	0.033		9.1 ± 1.1	391 ± 156
			Total liquid in/drum when sampled	5000 gal.			
			NOTE: Alpha counts per minute per 100 ml. at 50% geometry				
			Beta counts per minute per 100 ml. at 100% geometry.				

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SUPERVISOR T. Kwasnoski DATE 2/1/52

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REPORT OF WATER S

SPECIAL ANALYSIS SECTION
Laboratc Central Files, K-25RC
Distribution: H. F. Henry
M. F. Schwenn
H. W. Carnes

Central Files
Section File

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration p.p.b.	Fluoride Concentration p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta	pH
16 W	11/21/51	10:00 a.m.	K-1015 Drinking Water	0.0		0.0 ± 1.1	19 ± 21	7.2
22 W	11/23/51	Composite	Poplar Creek below Powerhouse Effl.	0.0			23 ± 21	7.3
16 W	11/29/51	10:30 a.m.	K-1008 D, Canteen drinking water	5.0			6 ± 21	7.5
22 W	11/30/51	Composite	Poplar creek below Powerh'se Effl.	10.0			20 ± 21	7.7
16 W	12/7/51	10:00 a.m.	K-1002 cafeteria cooking water	0.0		0.2 ± 1.1	8 ± 21	7.6
22 W	12/7/51	Composite	Poplar Creek below Powerh'se Eff.	0.0			11 ± 21	7.8
16 W	12/12/51	10:00 a.m.	K-1401 Vacuum pump shop drinking water.	0.0		0.1 ± 1.1	6 ± 21	7.3
22 W	12/14/51	Composite	Poplar creek below Powerh'se Effl.	0.0			7 ± 21	7.5
13 M	10/10/51	9:15 a.m.	Clinch River one mile downstream of K-25	1.0			3 ± 21	7.6

NOTE: Alpha counts per minute per 100 ml. water at 50% geometry.
Beta counts per minute per 100 ml. water at 100% geometry.

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SUPERVISOR T. Kwasowski DATE 1/2/52

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WCX-1012 (Mar'[illegible])

REPORT NO. 413

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K 25RC

Distribution: H. F. Henry Central Files
H. W. Carnes Section File
M. F. Schwenn

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	12/19/51	8:30 a.m.	Effluent from K-25 Water Purification Plant				0 ± 21
" "	12/21/51	" "	" " " "				9 ± 21
" "	12/23/51	" "	" " " "				2 ± 21
" "	12/25/51	" "	" " " "				8 ± 21
" "	12/27/51	" "	" " " "				0 ± 21
" "	12/29/51	" "	" " " "				1 ± 21
" "	12/31/51	" "	" " " "				0 ± 21
" "	1/2/52	" "	" " " "				0 ± 21
		NOTE: Beta counts are per minute per 100 ml. water at 100% geometry.					

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SUF ISOR T. Kwasnoski DATE 1/1[illegible]2

Distribution: H. F. Henry ✓ Office File
M. F. Schwenn
H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per ml. Alpha	Counts per Minute per ml. Beta
24 DE	12/5/51	8:30 a.m.	Effluent from K-25 Water Purification Plant				2 ± 21
" "	12/7/51	8:30 a.m.	" " " "				4 ± 21
" "	12/9/51	8:30 a.m.	" " " "				8 ± 21
" "	12/11/51	8:30 a.m.	" " " "				11 ± 21
" "	12/13/51	8:30 a.m.	" " " "				0 ± 21
" "	12/14/51	9:05 a.m.	" " " "	(X-10 overflow, 33 hour sample)			0 ± 21
" "	12/17/51	8:30 a.m.	" " " "	(X-10 overflow, 63 hour sample)			1 ± 21
24 DC	12/5/51	8:45 a.m.	Gallaher Bridge Pump house influent				16 ± 21
"	12/7/51	8:45 a.m.	" " " "				0 ± 21
"	12/9/51	9:00 a.m.	" " " "				16 ± 21
"q	12/11/51	9:00 a.m.	" " " "				17 ± 21
"	12/13/51	8:45 a.m.	" " " "				6 ± 21
"	12/14/51	8:45 a.m.	" " " "	(X-10 overflow, 33 hour sample)			17 ± 21
"	12/17/51	9:00 a.m.	" " " "	(X-10 overflow, 63 hour sample)			60 ± 21
	NOTE: Beta counts per minute per 100 ml. water at 100% geometry.						

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SUPERVISOR T. Kwasowski DATE 1/2/52

SPECIAL ANALYSIS SECTION
Laboratory Central Files, K-25KC
Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
24 DC	11/11/51	8:30 a.m.	Gallaher Bridge Pump House Influent				37 ± 21
"	11/13/51	8:30 a.m.	" " " " "				29 ± 21
"	11/15/51	8:40 a.m.	" " " " "				24 ± 21
"	11/17/51	9:30 a.m.	" " " " "				56 ± 21
"	11/19/51	9:30 a.m.	" " " " "				54 ± 21
"	11/21/51	9:15 a.m.	" " " " "				23 ± 21
"	11/23/51	8:45 a.m.	" " " " "				18 ± 21
"	11/25/51	9:30 a.m.	" " " " "				49 ± 21
"	11/27/51	9:30 a.m.	" " " " "				44 ± 21
"	11/29/51	9:00 a.m.	" " " " "				47 ± 21
"	12/1/51	8:30 a.m.	" " " " "				12 ± 21
"	12/3/51	8:30 a.m.	" " " " "				15 ± 21

NOTE: Alpha counts per minute per 100 ml. water at 50% geometry.
Beta counts per minute per 100 ml. water at 100% geometry.

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SUPERVISOR T. Kwasowski DATE 12/12/51

WORKS LABOR/ 'Y DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER RVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	11/11/51	8:45 a.m.	Effluent from K-25 Water Purification Plant.				12 ± 21
"	11/13/51	8:20 a.m.	" " " "				7 ± 21
"	11/15/51	8:30 a.m.	" " " "				10 ± 21
"	11/17/51	9:00 a.m.	" " " "				13 ± 21
"	11/19/51	9:00 a.m.	" " " "				13 ± 21
"	11/21/51	9:00 a.m.	" " " "				18 ± 21
"	11/23/51	8:30 a.m.	" " " "				10 ± 21
"	11/25/51	9:00 a.m.	" " " "				10 ± 21
"	11/27/51	9:00 a.m.	" " " "				16 ± 21
"	11/29/51	8:30 a.m.	" " " "				12 ± 21
"	12/1/51	8:30 a.m.	" " " "				5 ± 21
"	12/3/51	8:30 a.m.	" " " "				6 ± 21
	NOTE:	Beta counts per minute per 100 ml. water at 100% geometry.					

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DEC 13 1951

23/

SUPERVISOR T. Kwanoshi DATE 12/12/51

WCX-1012 (Mar'49)

REPORT No. 406

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry ✓ D. M. Lang
M. F. Schwenn S. Katz Section File
H. W. Carnes Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30 W	11/19/51	10:45 a.m.	K-1004-J, Normally cold drum before				
			dumping			3.2 ± 1.1	492 ± 197
			Total millicuries:	0.042			
			Total liquid in drum when sampled:	5000 gallons.			
			NOTE: Alpha counts per minute per 100 ml. at 50% geometry				
			Beta counts per minute per 100 ml. at 100% geometry.				

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SUPERVISOR T. Kusumoto DATE 12/11/51

WCX-1012 (Mar'48)

REPORT No. 1

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry ✓ Central Files
M. F. Schwenn Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
X 13 M	11/8/51	2:10 p.m.	Clinch River one mile downstream.	0.0 ppb			29 ± 21
X 11 ME	11/8/51	1:15 p.m.	Mud from Poplar Creek opposite K-27 drain.	10.0 micrograms/gram			200 ± 21
X 13 ME	11/8/51	2:10 p.m.	Clinch River mud one mile downstream	0.25 "	"	1.2 ± 1.1	112 ± 21
X 41 ME	11/8/51	1:25 pm.	Poplar Creek mud bridge below K-31.	10.0 "	"		83 ± 21
X 42 ME	11/8/51	1:40 p.m.	Poplar Creek mud just below Powerhouse effluent.	2.5 "	"		153 ± 21
X 43 ME	11/8/51	1:45 p.m.	Poplar Creek mud just before junction with Clinch River	1.3 "	"		170 ± 21
X 1 ME	11/12/51	9:45 a.m.	Mud from Holding Pond exit to Poplar Creek below K-303-8	16.3 "	"		103 ± 21
X 1 M	11/12/51	9:40 a.m.	Poplar Creek at exit from 1300 Area	3.0 ppb			
X 16 W	11/30/51	Composite	Drinking water, spot check		Less than 0.2		
X 24 DE	11/30/51	"	Water from K-25 Purification Plant effluent		Less than 0.2		
X 26 M	11/30/51	"	Drainage from Labs A, B, C, and D	0.0		2.1 ± 1.6	6 ± 21
		NOTE:	Alpha counts are per minute per gram mud at 50% geometry.				
			Beta counts are per minute per gram mud at 100% geometry.				
			All mud results per gram dry weight. Beta counts on water are per minute per 100 ml at 100% geometry.				

RECEIVED JAN 7 1952

233

SUPERVISOR T. Kwasnoski DATE 1/5/52

WCX-1012 (Mar'

REPORT NO. 1

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry ✓ Section File
M. F. Schwenn
H. W. Cannes
Lab. Central Files

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta	pH
16 W	10-26/51	8:30 a.m.	K-27 Canteen Drinking water spot check	0.0		0.1 ±1.1	8 ±21	7.7
16 W	11/1/51	8:45 a.m.	K-1515 sanitary water plant drinking water	0.0		0.0 ±1.1	1 ±21	7.6
16 W	11/9/51	8:00 a.m.	Cafeteria cooking water pump	0.0		0.0 ±1.1	39 ±21	7.5
16 W	11/15/51	9:00 a.m.	Vacuum/shop drinking water	20.0		0.0 ±1.1	10 ±21	7.5
22 W	10/26/51	Composite	Powerhouse immediately below powerhouse effluent	0.0			5 ±21	7.7
22 W	11/2/51	"	" " " "	0.0			32 ±21	7.5
22 W	11/9/51	"	" " " "	0.0			13 ±21	7.5
22 W	11/16/51	"	" " " "	0.0			29 ±21	7.3

NOTE: Alpha counts per minutes per 100 ml. water at 50% geometry

Beta counts per minutes per 100 ml. water at 100% geometry.

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SUPERVISOR T. Kwasnoski DATE 12/7/51

WCX-1012 (Mar'48)

REPORT No. 407

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25 RC
Distribution: H. F. Henry — Lab. Central Files
M. F. Schwenn — Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
1 ME	10/10/51	10:00 a.m.	Mud from Holding Pond Exit to Poplar Creek at 303-8	18.7 Micrograms U/gram Mud			158 ± 21
42 ME	10/9/51	2:50 p.m.	Mud from Poplar Creek just below Powerhouse Effluent	1.5 "	" " "		164 ± 2
11 ME	10/9/51	2:20 p. m.	Mud from Poplar Creek P Opposite K-27 Drain	8.8 "	" " "		202 ± 21
41 ME	10/9/51	2:30 p.m.	Mud from Poplar Creek Below K-31	0.5 "	" " "		28 ± 21
43 ME	10/9/51	3:15 p.m.	Mud from Poplar Creek Before Junction with Clinch River	0.6 "	" " "		169 ± 21
13 ME	10/10/51	9:15 a.m	Mud from Clinch River one mile downstream of K 25	0.1 "	" " "	1.9 ± 1.1	85 ± 21

NOTE: All mud results per gram dry weight

Alpha counts per minute per gram mud at 50% geometry

Beta counts per minute per gram mud at 100% geometry

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SUPERVISOR T. Kwoniski DATE 11/19/51

1012 (Mar'49)

REPORT NO. 400

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25 RC

Distribution: H. F. Henry, M. F. Schwenn, H. W. Carnes, Laboratory Central Files, Section File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
16 W	9/26/51	Composite	Drinking Water Spot Check		Less than 0.2		
24 DE	10/1/51	"	Effluent from K-25 Water Purification	0.0	0.0	0.0 ± 1.1	
16 W	10/31/51	"	Drinking water spot check		Less than 0.2		
24 DE	10/31/51	"	Effluent from K-25 Water Purification	0.0	0.0	0.0 ± 1.1	
26 M	10/31/51	"	Drainage from Labs A, B, C and D	8.0		2.5 ± 1.1	19 ± 21
11 W	11/8/51	1:15 p.m.	Poplar Creek opposite K-27 Drain	0.0			
43 W	11/8/51	1:45 p.m.	Poplar Creek immediately before junction with Clinch River	0.0			

NOTE: Alpha counts are per minute per 100 ml. at 50% geometry

Beta counts are per minute per 100 ml. at 100% geometry.

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SUPERVISOR T. Kwasnoski DATE 11/[illegible]/51

WORKS LABORATORY

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSIS

Laboratory Central Files,
K-25 RC

Distribution: H. F. Henry ✓
M. F. Schwenn
H. W. Carnes

Lab. Central Files
Section File

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
24 DE	10/24/51	8:30 a.m.	Effluent from K-25 Purification Plant				3 21
24 DE	10/26/51	8:45 a.m.	" " " " "				2 21
24 DE	10/28/51	8:30 a.m.	" " " " "				7 21
24 DE	10/30/51	9:00 a.m.	" " " " "				(21
24 DE	11/1/51	7:15 a.m*	" " " " "				(21
24 DE	11/3/51	8:30 a. m.	" " " " "				7 21
24 DE	11/5/51	8:30 a.m.	" " " " "				22 21
24 DE	11/7/51	2:00 a.m.*	" " " " "				11 21
24 DE	11/9/51	10:20 a.m.	" " " " "				18 21

NOTE: Alpha counts per minute/100 ml. at 50% geometry
Beta counts per minute/100 ml. at 100% geometry

* X-10 Overflow

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WS

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SUPERVISOR T. Kwasnoski DATE 11/15/51

SPECIAL ANALYSIS SECTION

Laboratory Central Files, K-25 RC

Distribution: H. F. Henry ✓ Lab. Central Files
M. F. Schwenn Section File
H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
24 DC	10/24/51	8:40 a.m.	Clinch River at pump house below Gallagher Bridge			7	21
24 DC	10/26/51	9:00 a.m.	" " " "			1	21
24 DC	10/30/51	9:20 a.m.	" " " "			2	21
24 DC	11/1/51	7:30 a.m.*	" " " "			21	21
24 DC	11/3/51	8:30 a.m.	" " " "			32	21
24 DC	11/5/51	9:00 a.m.	" " " "			38	21
24 DC	11/7/51	1:30 p.m.*	" " " "			9	21
24 DC	11/9/51	10:30 a.m.	" " " "			70	21
		NOTE:	Alpha counts per minute/hundred ml. at 50% geometry				
			Beta counts per minute/hundred ml. at 100% geometry.				
			* X-10 overflow				

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SUPERVISOR T. Kwasovski DATE 11/15/51

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WCX-1012 (Mar'

REPORT No. 40

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H.F.Henry
M.F.Schwenn
H.W.Carnes
Lab. Central Files K25 RC
Cetion Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	pH
22 W	10-5-51	composite	Poplar creek immediately below Power House effluent	0.00			0 ± 21	7.
" "	10-12-51	"	" " " " "	0.5			0 ± 21	7.7
" "	10-19-51	"	" " " " " '	0.0			0 ± 21	8.1
16 W	8-31-51	Composite	Drinking water spot check		<0.2			
" "	10-5-51	K-1002 Cafeteria cooking water	10:30 am	0.0		0.1 ± 1.1	0 ± 21	1.
" "	10-12-51	8:30 am	K-1086 Fire Dept. Station drinking water	0.0		0.0 ± 1.1	0 ± 21	1.
" "	10-19-51	11:00 am	Barrier Testing Lab. Drinking water	0.00		0.0 ± 1.1	0 ± 21	7.6
		NOTE: Beta counts per minute per 100 ml at 100 % geometry.						
			Alpha counts per minute per 100 ml at 50 % geometry.					

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SUPERVISOR T. Kwasnoski DATE 11-7-51

WCX-1012 (Mar'49)

REPORT NO. 40

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H.F.Henry
M.F.Schwenn
H.W.Carnes
Lab. Central Files K25 RC

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
24 DE	10-16-51	8:30am	Effluent from K-25 Water purification Plant				5 ± 21
" "	10-18-51	" "	" " " "				1 ± 21
" "	10-20-51	" "	" " " "				0 ± 21
" "	10-22-51	" "	" " " "				0 ± 21
24 DC	10-16-51	8:45 am	Clinch River at Pump House Below Gallahar Bridge				0 ± 21
" "	10-18-51	" "	" " " "				0 ± 21
" "	10-20-51	" "	" " " "				0 ± 21
" "	10-22-51	" "	" " " "				2 ± 21
	Note: Beta counts are per minute per 100 ml at 100% geometry.						

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SUPERVISOR T. Kusunoki DATE 11-7-51

WCX-1012 (Mar'

REPORT No. 401

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H.F.Henry
M.F.Schwenn
H.W.Carnes
S. Katz

D. Lang
Lab. Central Files (K25 Rc)
Section Files

PLOT PLAN REFERENCE No.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30-W	10-4-51	10:00 am	K-1004J "Normally Cold" Drum				
			Before Dumping			11 ± 1.1	906
	Total Liquid in drum when sampled : 5000 Gals.						
	Total millicuries:		.077				
	Note: Alpha counts per minute per 100 ml at 50 % geometry.						
	Beta " " " " " " 100 % "						

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SUPERVISOR T. Kwasowski DATE 11-7-51

WCX-1012 (Mar'49)

REPORT NO. 400

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC
Distribution: H. F. Henry — Central Files
M. F. Schwenn — Section File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
24 DE	10/2/51	8:30 a.m.	Effluent from K-25 Water Purification Plant				2 ± 21
" "	10/4/51	" "	" " " "				0 ± 21
" "	10/6/51	" "	" " " "				8 ± 21
" "	10/8/51	9:30 a.m.	" " " "				0 ± 21
" "	10/10/51	8:30 a.m.	" " " "				0 ± 21
24 DC	10/10/51	8:45 a.m.	Clinch River at Pump House Below Gallaher Bridge				0 ± 21
" "	10/12/51	8:10 a.m.	" " " "				0 ± 21
" "	10/14/51	8:30 a.m.	" " " "				0 ± 21
24 DE	10/12/51	8:45 a.m.	Effluent from K-25 Water Purification Plant				0 ± 21
" "	10/14/51		" " " "				0 ± 21

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SUPERVISOR T. Kwasnoski DATE 10/29/51

Distri[illegible]

H. F. [illegible]
H. W. Carnes

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Alpha	Beta
24 DE	9/22/51	8:30 am	Effluent from K-25 Water Purification Plant				0.0 ± 21
24 DE	9/24/51	"	" " " "				0.0 ± 21
24 DE	9/26/51	"	" " " "				0.0 ± 21
24 DE	9/28/51	"	" " " "				5.0 ± 21
24 DE	10/1/51	"	" " " "				0.0 ± 21
16 W	9/14/51	9:30 am	I-1004 J Drinking Water	0.00		0.1 ± 1.1	2.0 ± 21
22 W	8/31/51	Composite	Poplar Creek immediately below Powerhouse effluent	0.50			0.0 ± 21
22 W	9/7/51	"	" " " "	0.50			0.0 ± 21
22 W	9/14/51	"	" " " "	0.50			10.0 ± 21
22 W	9/21/51	"	" " " "	0.00			0.0 ± 21
22 W	9/28/51	"	" " " "	0.00			10.0 ± 21

NOTE: Alpha counts per minute per 100 ml at 50% geometry.
Beta counts per minute per 100 ml at 100% geometry.

WFL

SUPERVISOR T. Kwasnoski DATE 10/10/51

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13 H	9/5/51	Composite Drainage from [illegible]		1.0 ppm		0.0 ± 1.1	[illegible]
26 H	9/26/51	" " " " " " "		0.00 ppb		0.0 ± 1.1	0.0 ± 21
26 H	8/31/51	"	Cafeteria Cooking Water	0.00 "			2.0 ± 21
16 W	8/31/51	9:20 am	K-1001 Drinking Water	0.00 "			
16 W	9/7/51	3:30 pm	K-1004-J Drinking Water			0.0 ± 1.0	0.0 ± 21
16 W	9/14/51	9:30 am	K-1131 change house drinking water	0.00 ppb		0.1 ± 1.1	8.0 ± 21
16 W	9/21/51	10:00am		0.00			
16 W	9/26/51	9:10am	K-1002 drinking water				
	NOTE:	Alpha counts/minute per 100 ml at 50% geometry.					
		Beta counts/minute per 100 ml at 100% geometry.					

SUPERVISOR T. Kwamorki DATE 10/10/51

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1 ME	9/6/51	[illegible]	Poplar Creek, [illegible]				10[illegible]±31
41 ME	"	3:25 pm	" " Junction with Clinch River	1.25 "	" "		
43 ME	"	2:40 pm	Poplar Creek, below Powerhouse effluent	.62 "			45±21
42 ME	"	2:15 pm	Clinch River one mile downstream of last K-25 effluent.	.13 "	" "		
13 ME	"	8:20 am					

NOTE: All mud results per gram dry weight.
Alpha counts per minute per gram mud at 50% geometry.
Beta counts per minute per gram mud at 100% geometry.

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SUPERVISOR T. Kwamoshi DATE 10/10/

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PLOT PLAN REFERENCE No.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION				
24 DE	9/16/51	8:30 am	Effluent from K-25 Water Purification Plant				9.0 ± 21
24 DE	9/18/51	8:30 am	" " " "				1.0 ± 21
24 DE	9/20/51	8:30 am	" " " "				
24 DE	8/31/51	Composite	" " " "	.5	0.3	0.1 ± 1.1	

NOTE: Alpha counts per minute per 100 ml at 50% Geometry.
Beta counts per minute per 100 ml at 100% Geometry.

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SUPERVISOR T. Kusnoski DATE 10/9/51

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WORKS LABORATORY DEPARTMENT

SPECIAL ANA IS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25RC

Distribution:

H. F. Henry Central Files

M. F. Schwenn Office File

H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	8/25/51	8:30 am	Effluent from K-25 Water Purification Plant				0.0 ± 21
24 DE	8/27/51	8:30 am	" " " "				0.0 ± 21
24 DE	8/28/51	8:30 am	" " " "				3.0 ± 21
24 DE	8/31/51	8:30 am	" " " "				1.0 ± 21
24 DE	9/2/51	8:30 am	" " " "				0.0 ± 21
24 DE	9/4/51	8:30 am	" " " "				2.0 ± 21
24 DE	9/6/51	8:30 am	" " " "				2.0 ± 21
24 DE	9/8/51	8:30 am	" " " "				5.0 ± 21
24 DE	9/10/51	8:30 am	" " " "				[illegible] ± 21
24 DE	9/12/51	8:30 am	" " " "				0.0 ± 21
24 DE	9/14/51	9:00 am	" " " "				1.0 ± 21
NOTE:	Beta counts per minute per 100 ml at 100% geometry.						

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SUPERVISOR T. Kwasnoski DATE 10/9/51

Lab. Central F

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	P.P.B.				
22 W	8-10-51	composite	Poplar Creek immediately below Power House Effluent	0.00			0 ± 21	
16 W	8-10-51	8:30 am	Dispensary drinking water spot check	0.00			0 ± 21	7.5
16 W	8-16-51	8:45 am	K-1021 Fire Hall drinking water spot check	0.50		0.0 ± 1.1	5 ± 21	7.4
22 W	8-17-51	composite	Poplar Creek immediately below Power House effluent	0.50			6 ± 21	6.8
16 W	8-23-51	9:15 am	Power house drinking water spot check	0.50			0 ± 21	7.5
22 W	8-24-51	composite	Poplar Creek immediately below power house effluent	0.50			0 ± 21	7.4

NOTE: Alpha counts per minute per 100 ml at 50 % geometry
Beta counts per minute per 100 ml at 100 % geometry

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SUPERVISOR T. Kwamoshi DATE 9-7-51

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WORKS LABORATORY DEPARTMENT

SPECIAL ANA IS SECTION

REPORT OF WATER SURVEY ANALYSES

Dr. H.F.Henry ✓
Mr. M.F.Schwenn
Mr. H.W.Carnes
Lab. Central Files K25 RC
File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA
24 DE	6-29-51	composite	Effluent from K-25 water Purification Plant	0.00		0.0 ± 1.1	
24 DE	8-8-51	8:30 am	" " " " "				0 ± 21
24 DE	8-10-51	8:10 am	" " " " "				0 ± 21
24 DE	8-12-51	8:30 am	" " " " "				0 ± 21
24 DE	8-14-51	8:30 am	" " " " "				5 ± 21
24 DE	8-16-51	8:30 am	" " " " "				8 ± 21
24 DE	8-18-51	8:30 am	" " " " "				0 ± 21
24 DE	8-20-51	8:30 am	" " " " "				2 ± 21
24 DE	8-22-51	10:30 am	" " " " "				1 ± 21
24 DE	8-24-51	7:30 am	" " " " "				0 ± 21

NOTE: Beta counts are per minute per 100 ml at 100 % geometry
Alpha counts are per minute per 100 ml at 50 % geometry

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SUPERVISOR T. Kwasnoski DATE 9-7-51

PLOT PLAN REFERENCE NO.	DATE SAMPLED	SAMPLED					
						4.5	38 ± 21
13 ME	8-1-51	9:30 am	Bottom mud from Clinch River one mile downstream	0.5 micrograms/ gram mud			121 ± 21
1 ME	8-1-51	10:00 am	Holding Pond exit to Poplar Creek	13.7 micrograms/ gram mud			
42 ME	8-1-51	1:45 pm	Poplar Creek mud below Power House effluent	2.5 micrograms / gram mud			115 ± 21
43 ME	8-1-51	2:00 pm	Mud from Poplar Creek before junction with Clinch River	0.6 micrograms / gram mud			77 ± 21
41 ME	8-1-51	2:15 pm	Mud from Poplar Creek at bridge below K-31	1.5 micrograms / gram mud			45 ± 21
11 ME	8-1-51	2:30 pm	Poplar Creek opposite K-27 drain (K-131)	0.9 micrograms/ gram mud			33 ± 21

NOTE: All mud results per gram dry weight
Alpha counts per minute per gram mud at 50 % geometry
Beta counts per minute per gram mud at 100 % geometry

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250 WS.

SUPERVISOR T. Kuwamoshi DATE 9-7-51

WCX-1012 (Mar'50)

REPORT No. 391

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files K-25 RC
Distribution: Dr. H. F. Henry ✓ Central Files
Mr. H. F. Schwenn Office File
Mr. H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
16 W	7/31/51	Composite	Drinking water, spot check		Less than .02		
24 DE	7/31/51	"	Effluent from K-25 Purification Plant	0.0	" " .02	0.0 ± 1.1	
24 DE	8/2/51	8:20 a.m.	" " " "			[illegible]	5 ± 21
24 DE	8/4/51	8:15 a.m.	" " " "				0 ± 21
24 DE	8/6/51	8:30 a.m.	" " " "				0 ± 21
Note: Alpha counts per minute per 100 ml at 50% geometry.							
Beta counts per minute per 100 ml at 100% geometry.							

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SUPERVISOR T. Kwamoishi DATE August 20, 1951

WCX-1012 (Mar'50)

REPORT No. 3[illegible]

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25 RC

Distribution: Dr. H. F. Henry ✓ Central Files
Mr. H. F. Schwenn Office File
Mr. H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	pH
16 W	7/13/51	8:30 a.m.	K-1004 D, Drinking water spot check	0.5		0.0 ± 1.1	0 ± 21	
22 W	7/13/51	Composite	Poplar Creek immediately below Power house effluent.	0.0			23 ± 21	7.2
16 W	7/20/51	8:45 a.m.	K-1003 Drinking water spot check.	0.0		0.0 ± 1.1	0 ± 21	7.4
22 W	7/20/51	Composite	Poplar Creek immediately below Power house effluent	0.0			0 ± 21	7.4
16 W	7 /27/51	8:45 a.m.	K-1001, Drinking water spot check	0.0		0.0 ± 1.1	4 ± 21	7.2
22 W	7/27/51	Composite	Poplar Creek, immediately below Power house effluent	0.0			2 ± 21	7.6
16 W	8/3/51	8:30 a.m.	Cafeteria Cooking water	0.0		0.0 ± 1.1	0 ± 21	6.9
22 W	8/3/51	Composite	Poplar Creek immediately below Power house effluent	0.0			8 ± 21	6.9
		NOTE:	Alpha counts per minute per 100 ml at 50% geometry.					
			Beta counts per minute per 100 ml at 100% geometry.					

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SUPERVISOR T. Kwiecinski DATE August 20, 1951

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WCX-1012 (Mar

REPORT No. 389

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25 RC
Distribution: Dr. H. F. Henry Central Files
Mr. M. F. Schwenn Office File
Mr. H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.		pH
						ALPHA	BETA	
26 M	6/25/51	Composite	Drainage from Labs A, B, C, and D	6.0		3.7 ± 1.4	22 ± 21	
26 M	7/31/51	"	" " " " " " " "	3.0		1.5 ± 1.1	3 ± 21	
13 M	8/1/51	9:30 a.m.	Clinch River one mile downstream of last K-25 Effluent	0.0				6.8
		Note:	Alpha counts per minute per 100 ml at 50% geometry					
			Beta counts per minute per 100 ml at 100% geometry.					

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SUPERVISOR T. Kwasnoski DATE August 20, 1951

WCX-1012 (Mar'' ')

REPORT No. 388

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25 RC
Distribution: Dr. H. F. Henry ✓ Lab. Central Files
Mr. H. F. Schwenn Office File
Mr. H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	
1 ME	7/6/51	1:20 p.m.	Mud from holding pond exit to Poplar Creek N.E. of K-303-8	20 micrograms/gram mud			100	pH
13 ME	7/6/51	1:45 p.m.	Mud from bottom of 13 M Sampling point	.5 "	" "	1.1 0	41	
42 ME	7/6/51	2:30 p.m.	Mud from Poplar Creek at 22 - W Sampling Point	.5 "	" "		105	
43 ME	7/6/51	2:45 p.m.	Mud from Poplar Creek before junction with Clinch River	2.5 "	" "		67	
41 ME	7/6/51	3:00 p.m.	Mud from center of Poplar Creek at bridge below K-31	.5 "	" "		61	
11 ME	7/6/51	3:10 p.m.	Poplar Creek opposite K-27 drain	1.0 "	" "		73	
13 M	7/6/51	1:45 p.m.	Clinch River one mile downstream of last K-25 effluent.	4.0 ppb				7.3
			NOTE: All mud results per gram dry weight.					
			Alpha counts per minute per gram of mud at 50% geometry. Beta counts per minute per gram of mud at 100% geometry.					

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REPORT No. 87

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Laboratory Central Files, K-25 RC
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Mr. H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	7/23/51	8:30 a.m.	Effluent from K-25 water purification plant				3 21
24 DE	7/25/51	" "	" " " " "				4 21
24 DE	7/27/51	" "	" " " " "				3 21
24 DE	7/28/51	" "	" " " " "				0 21
24 DE	7/31/51	" "	" " " " "				0 21
24 DC	7/23/51	8:45 a.m.	Clinch River at Pump house below Gallaher Bridge				0 21
			Beta counts per minute per 100 ml at 100% geometry.				

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WCX-1012 (Mar')

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Laboratory Central Files, K-25 RC
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Mr. H. W. Carnes Office File
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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30 W	7/17/51	11:45	K-1004 J "Normally cold" drum before dumping			1.2± 1.1	2634
			Total liquid in drum before dumping 4660 gallons.				
			Total millicuries, .209				
			Alpha counts per minute per 100 ml at 50% geometry.				
			Beta counts p r minute per 100 ml at 100% geometry.				

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REPORT OF WATER SURVEY ANALYSES

Laboratory Central Files, K-25 RC
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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 DE	7/13/51	9:00 a.m.	Effluent from K-25 water purification plant				7 ± 21
24 DE	7/16/51	8:30 a.m.	" " "				0 ± 21
24 DE	7/17/51	"	" " "				0 ± 21
24 DE	7/19/51	9:00 a.m.	" " "				0 ± 21
24 DC	7/13/51	9:15 a.m.	Clinch River at Pump house below Galleher Bridge				4 ± 21
24 DC	7/16/51	8:45 a.m.	" " "				0 ± 21
24 DC	7/17/51	"	" " "				1 ± 21
24 DC	7/19/51	9:15 a.m.	" " "				1 ± 21
			Beta counts per minute per 100 ml at 100% geometry.				

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.		
						ALPHA	BETA	
16 W	7/6/51	8:30 a.m.	Cafeteria Cooking Water Check	2		0.1 ± 1.0	30 ± 21	pH 7.0
22 W	7/6/51	Composite	Poplar Creek immediately below Powerhouse effluent	2			28 ± 21	7.1
			Alpha counts per minute per 100 ml at 50% geometry					
			Beta counts per minute per 100 ml at 100% geometry.					

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
24 DE	7/3/51	8:30 a.m.	Effluent from K-25 water purification plant				10 ± 21
24 DE	7/5/51	"	" " "				13 ± 21
24 DE	7/7/51	"	" " "				30 ± 21
24 DE	7/9/51	"	" " "				56 ± 21
24 DE	7/11/51	"	" " "				31 ± 21
24 DE	7/11/51	8:45 a.m.	Clinch River at pump house below Gallaher Bridge				13 ± 21
24 DC	7/9/51	"	" " "				20 ± 21
24 DC	7/5/51	"	" " "				22 ± 21
24 DC	7/3/51	"	" " "				10 ± 21
			Beta counts per minute per 100 ml at 100% geometry				

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REPORT OF WATER SURVEY ANALYSES

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
13 M	5/9/51	12:15 p.m.	Clinch River, one mile downstream from K-25.	0.0				7.4
13 M	6/18/51	10:30 a.m.	" " " " " " "	0.0				7.5
13 ME	6/18/51	10:30 a.m.	Bottom mud from 12 M Sampling point	.38 Micrograms/gram		2	43	
1 ME	6/19/51	1:52 p.m.	Holding pond exit to Poplar Creek	10 "	"		80	
41 ME	6/19/51	2:10 p.m.	Poplar Creek at Bridge below K-31	2 "	"		87	
11 ME	6/19/51	2:25 p.m.	" " opposite K-27 drain	.58 "	"		86	
42 ME	6/19/51	2:45 p.m.	Bottom mud from 22W sampling point	1.25 "	"		74	
43 ME	6/19/51	3:05 p.m.	Poplar Creek before junction with					
			Clinch River.	1.6 "	"		100	
		NOTE:	All mud results per gram dry weight.					
			Alpha counts per minute per gram of mud at 50% geometry					
			Beta counts per minute per gram of mud at 100% geometry.					

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Laboratory Central Files, K-25 RC

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
16 W	4/30/51	Composite	Drinking Water Spot Check		100			
16 W	5/31/51	"	" " " "		Less than 100			
16 W	6/22/51	8:30 a. m.	" " " " (K-1401)	0		0.0 ± 1.1	10 ± 21	
16 W	6/29/51	Composite	" " " "		Less than 100			
22 W	6/22/51	"	Poplar Creek immediately below power-house.	0			3 ± 21	7.4
22 W	6/29/51	"	Effluent	0			8 ± 21	7.4

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REPORT OF WATER SURVEY ANALYSES

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
24 - D	5/31/51	Composite	Effluent from K-25 Water Purification plant	0.0	Less than 100	010 ± 1.1	
24 - D	6/28/51	8:45 a. m.	" " " " " "				4 ± 21
24 - D	6/29/51	3:15 p. m.	" " " " " "				~~4 ± 21~~
24 - D	7/1/51	8:30 a. m.	" " " " " "				5 ± 21

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Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml.	
						Alpha	Beta
26 M	5/31/51	Composite	Drainage from A, B, C, and D Labs.	6 ppb		3.2 ± 1.1	10 21
1 ME	5/8/51	12:45 p. m.	Holding Pond Exit to Poplar Creek N. E. of K-303-8	2.5 ppm			65/g. mu
13 ME	5/9/51	12:15 p. m.	Bottom mud from 13 M Sampling Point	0.37 ppm		2.2 ± 0.2	55 "
43 ME	5/9/51	1:45 p. m.	Poplar Creek Before junction with Clinch River	1.25 ppm			30 "
41 ME	6/9/51	1:00 p. m.	Center of Poplar Creek at Bridge Crossing below K-31	.75 ppm			53 "
11 ME	5/8/51	1:15 p. m.	Poplar Creek opposite K-27 Drain	1.25 ppm			58 "
42 ME	5/9/51	2:00 p. m.	Bottom mud from 22-W sampling point	.5 ppm			123 "

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA	PH
16 W	6/1/51	3:00 p. m.	Cafeteria Cooking Water	0.0		0.9 ± 1.1	0 ± 21	6.9
22 W	6/1/51	Composite	Poplar Creek Below Powerhouse effluent	0.0			0 ± 21	7.1
22 W	6/8/51	"	" " " " "	0.0			6 ± 21	7.1
16 W	6/8/51	8:30 a. m.	Drinking Water Spot Check - W. Corridor K-1004 D	0.0		0.2 ± 1.1	0 ± 21	7.2
16 W	6/15/51	9:00 a. m.	Drinking Water Spot Check - K-1004 D	0.0		0.0 ± 1.1	1 ± 21	7.4
22 /w	6/15/51	Composite	Poplar Creek Below Power house effluent	0.0			0 ± 21	7.1

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA
30 W	6/5/51	1:15 p. m.	K-1004 J, "Normally Cold"			0.2 ± 1.1	.136 Millicuries
30 W	6/27/51	10:00 a. m.	Drum Before Dumping			2.0 ± 1.1	.243 Millicuries

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 D	5/31/51	8:30 a. m.	Effluent From Water Purification Plant				10 ± 21
"	6/1/51	8:30 A. M.	" " " " "				8 ± 21
"	5/31/51	Composite	" " " " "	0.0		0.0 ± 1.1	
"	6/3/51	8:30 a. m.	" " " " "				0 ± 21
"	6/5/51	8:30 a. m.	" " " " "				4 ± 21
"	6/7/51	8:30 a. m.	" " " " "				3 ± 21
"	6/9/51	8:45 a. m.	" " " " "				0 ± 21
"	6/11/51	8:45 a. m.	" " " " "				0 ± 21
"	6/13/51	9:00 a. m.	" " " " "				12 ± 21
"	6/15/51	8:30 a. m.	" " " " "				9 ± 21
"	6/17/51	8:30 a. m.	" " " " "				5 ± 21
"	6/19/51	8:30 a. m.	" " " " "				0 ± 21
"	6/21/51	8:30 a. m.	" " " " "				0 ± 21
"	6/25/51	9:00 a. m.	" " " " "				0 ± 21

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SUPERVISOR T. Kurowski DATE July 6, 1951

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REPORT OF WATER S VEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
22 W	5/4/51	Composite	Poplar Creek immediately below Power house effluent.	0.0			7 ± 21	6.8
22 W	5/11/51	"	" " "	0.0			3 ± 21	7.2
22 W	5/18/51	"	" " "	0.0			5 ± 21	7.3
22 W	5/25/51	"	" " "	0.0			1 ± 21	7.4

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SUPERVISOR T. Kwasnoski DATE June 4, 1951

16 W		8:45 a.m.	"	"					
16 W	5/11/51	8:15 a.m.	"	"	"				
16 W	5/18/51	9:00 a.m.							
16 W	5/25/51								

SUPERVISOR T. Kwasnoski

DATE June 4, 19

W.S.

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PLOT PLAN REFERENCE N	DATE SAMPLED	SAMPLED					
24 D	5/26/51	8:30 a.m.	Effluent from K-25 Water Purification Plant				
24 D	5/28/51	8:30 a.m.	" " " "				

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DATE June 4, 1951

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H. P. [illegible]
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Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per 100 ml. Alpha	Counts per 100 ml. Beta
24 D	4/30/51	Composite	Effluent from K-25 Water Purification Plant	0.0		0.2 ± 1.1	11 ± 21
24 D	5/2/51	8:30 a.m.	" " " " "				0 ± 21
24 D	5/4/51	8:45 a.m.	" " " " "				0 ± 21
24 D	5/8/51	8:30 a.m.	" " " " "				5 ± 21
24 D	5/10/51	8:45 a.m.	" " " " "				0 ± 21
24 D	5/12/51	8:30 a.m.	" " " " "				5 ± 21
24 D	5/14/51	8:30 a.m.	" " " " "				1 ± 21
24 D	5/16/51	8:30 a.m.	" " " " "				1 ± 21
24 D	5/18/51	8:30 a.m.	" " " " "				0 ± 21
24 D	5/19/51	8:30 a.m.	" " " " "				0 ± 21
24 D	5/21/51	8:30 a.m.	" " " " "				1 ± 21
24 D	5/22/51	8:30 a.m.	" " " " "				[illegible] ± 21
24 D	5/24/51	8:30 a.m.	" " " " "				

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REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
13 M	4/12/51	9:20	Clinch River one mile downstream of last K-25 effluent	0.00	micrograms/ml		PH 6.8
26 M	4/30/51	Composite	Drainage from Labs A, B, C, And D	0.00	" "	1.9 ± 1.6	15 ± 2

SUPERVISOR T. Kwasnoski DATE June 1, 1951

WCX-1012 (Mar' ^)

REPORT NO. . 9

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REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
1 ME	4/12/51	11:00 a.m.	Mud from holding pond, exit to Poplar Creek. N. E. 303-8	1.25 Micrograms/gram			42
42 ME	"	10:45 a.m.	Mud from Poplar Creek just below pond for powerhouse effluent.	0	" "		139
43 ME	"	10:35 a.m.	Mud from Poplar Creek i mmediately before junction with Clinch River	0	" "		67
11 ME	"	10:15 a.m.	Mud from Poplar Creek opposite K-27 drain.	0	" "		73
41 ME	"	10:00 a.m.	Mud from center of Poplar Creek at bridge below K-31.	00	" "		75
113 ME	"	9:20 a.m.	Mud from bottom of 13 M Sampling point	.32	" "	1.6 ± 0.13	94

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REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30 W	4/17/51	1:45 p.m.	K-1004 J "Normally Cold" drum before	dumping.		1.1 ± 1.1	309
			Total liquid in drum when sampled:	3685 gallons			
			Total millicuries:	0.019			
		Note:	Alpha counts per minute per 100 ml. at 50% geometry				
			Beta counts per minute per 100 ml. at 100% geometry.				

W.H.S. 5-9-51

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K-25 RC

SUPERVISOR T. Kwasnoski DATE May 8, 1951

NOTE: Alpha counts per minute per 100 ml at 50 % geometry

Beta counts per minute per 100 ml at 100 % geometry

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SUPERVISOR T. Kwasnoski DATE May 17, 1951

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H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 D	4/15/51	9:00 a.m.	Effluent from Water purification plant				7 ± 21
24 D	4/17/51	8:30 a.m.	" " " " "				10 ± 21
24 D	4/19/51	8:30 a.m.	" " " " "				15 ± 21
24 D	4/21/51	8:30 a.m.	" " " " "				4 ± 21
24 D	4/23/51	8:30 a.m.	" " " " "				15 ± 21
24 D	4-25/51	8:30 a.m.	" " " " "				19 ± 21
24 D	4/27/51	8:40 a.m.	" " " " "				24 ± 21
24 D	4/28/51	8:30 a.m.	" " " " "				16 ± 21
24 D	4/30/51	8:30 a.m.	" " " " "				26 ± 21
		Note:	Beta counts per minute per 100 ml. at 100% geometry.				

W.S. 5951

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K-25 RC

SUPERVISOR T. Kwasnoski DATE May 8, 1951

WCX-1012 (Mar' '

REPORT No. 365

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H. F. Henry Central Files
J. P. Murray Office File
H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE No.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
1 ME	3-20-51	10:45 a.m.	Mud from Holding Pond exit to ~~Poplar Creek NE of K-303-8~~	10.0 Micrograms per gram			108
13 ME	3-20-51	10:15 a.m.	Clinch River mud from 13 M sampling point.	0.38 Micrograms per gram		2	119
15 ME	3-23-51	10:00 a.m.	Sludge from Sewage Disposal Plant	31.3 Micrograms per gram			458
41 ME	3-20-51	1:00 p.m.	Mud from center of Poplar Creek at Bridge Crossing below K-31.	10.0 Micrograms per gram			96
42 ME	3-20-51	12:40 p.m.	Mud from Poplar Creek just below pond for Power House Effluent.	3.5 Micrograms per gram			142
43 ME	3-20-51	12:00 N.	Mud from Poplar Creek immediately before Junction with Clinch River	2.5 Micrograms per gram			155
		NOTE:	Alpha counts per minute per gram of mud at 50% geometry				
			Beta counts per minute per gram of mud at 100% geometry				

[illegible] 5-9-51

K-25 RC

SUPERVISOR T. Kwanoski DATE ~~May 7 1951~~

WCX-1012 (Mar'

REPORT No. 364

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H. F. Henry
J. P. Murray
H. W. Carnes
Central Files
~~Section File~~

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE No.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
13 M	2-5-51	10:15 a.m.	Clinch River, one mile downstream	0				7.1
13 M	3-20-51	10:15 a.m.	" " " " "	0				6.7
26 M	2-27-51	Composite	Drainage from Labs A, B, C, and D	4		0.8 ±1.1	24 ± 21	
26 M	3-29-51	Composite	" " " " " " "	1		1.5 ±1.1	0 ± 21	
22W	4-6-51	Composite	Poplar Creek Below Power House	0			0 ±21	6.8
22 W	4-13-51	Composite	" " " " "	0			2 ±21	7.0
	Note:	Alpha Counts per minute per 100 ml. at 50% geometry						
		Beta counts per minute per 100 ml. at 100% geometry.						

W.H.S.
5-9-51

K-25 RC

SUPERVISOR T. Kwanoski DATE May 7, 1951

WCX-1012 (Mar'' ')

REPORT NO. [illegible]

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H. F. Henry Central Files
J. P. Murray Section File
H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
32 YE	4-10-51	1:10 p.m.	Acid dilution pit west of K-1024	0		0.0 ± 1.1	8 ± 21	7.1
32 YE	4-12-51	12:50 p.m.	Acid dilution pit west of K-1004 D	0		0.1 ± 1.1	5 ± 21	
32 YE	4-12-51	1:30 p.m.	Acid dilution pit north of K-1004 C	0		0.4 ± 1.1	0 ± 21	
32 YE	4-12-51	1:40 p.m.	Acid dilution pit south of K-1004 B	0		0.3 ± 1.1	3 ± 21	
32 YE	4-12-51	1:45 p.m.	Acid dilution pit west of K-1004 B	0		0.3 ± 1.1	4 ± 21	
32 YE	4-12-51	1:50 p.m.	Acid dilution pit southeast of K-1004 A	160		30	108	
32 YE	4-12-51	1:55 p.m.	Acid dilution pit north of K-1004 A	0.5		1.0 ± 1.1	214	
32 YE	4-12-51	2:00 p.m.	Acid dilution pit at K-1005	120		2.6 ± 1.1	5 ± 21	
		Note:	Alpha counts per minute per 100 ml. at 50% geometry					
			Beta counts per minute per 100 ml. at 100% geometry					

8440

W.H.S. 5-9-51

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K-25 RC

SUPERVISOR T. [illegible] DATE May 7, 1951

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION
H. F. Henry Central Files
J. P. Murray Section File
H. W. Carnes

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 362

RECEIVED WAY RADIATION HAZARDS DEPARTMENT

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA	PH
16 W	3-9-51	9:00 a.m.	Cafeteria Cooking Water	0		0.0 ± 1.1	2 ± 21	6.8
16 W	3-16-51	9:00 a.m.	Drinking water from K-1004 A	0		0.0 ± 1.1	7 ± 21	6.9
16 W	3-23-51	8:30 a.m.	Drinking water from K-1003	0		0.1 ± 1.1	0 ± 21	7.5
16 W	3-27-51	8:30 a.m.	Drinking water from K-1401	0		0.0 ± 1.1	0 ± 21	7.5
16 W	3-27-51	Composite	of Drinking water - Spot check		Less than 0.2			
16 W	4-4-51	8:10 a.m.	Cafeterial cooking water	0		0.0 ± 1.1	0 ± 21	6.1
16 W	4-13-51	9:15 a.m.	Drinking water from K-1004 D	0		0.1 ± 1.1	5 ± 21	7.1
		NOTE:	Alpha counts per minute per 100 ml. at 50% geometry.					
			Beta counts per minute per 100 ml. at 100% geometry.					

5-9-51

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K-25 RC

SUPERVISOR T. Kwasnoski DATE May 7, 1951

WCX-1012 (Mar' '

REPORT NO. 361

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H. F. Henry
J. P. Murray
H. W. Carnes
Central Files
~~Office File~~

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
24 D	4-1-51	8:30 a.m.	Effluent from water purification plant				0 ± 21
24 D	4-3-51	8:30 a.m.	" " " " "				0 ± 21
24 D	4-5-51	8:30 a.m.	" " " " "				0 ± 21
24 D	4-7-51	8:30 a.m.	" " " " "				0 ± 21
24 D	4-9-51	8:30 a.m.	" " " " "				0 ± 21
24 D	4-11-51	8:40 a.m.	" " " " "				0 ± 21
24 D	4-13-51	9:00 a.m.	" " " " "				2 ± 21
24 D	2-14-51	8:10 a.m.	" " " " "		Sample lost in counting		
		NOTE:	Beta counts per minute per 100 ml. at 100% geometry.				

WS
5-9-51

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K-25 RC

SUPERVISOR T. Kwanoshi DATE May 7, 51

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Concentration P.P.M.	Alpha	(21
24D	3-30-51	8:45 a.m.	Effluent From Water Purification Plant	0	0.3	0.0 ± 1.1	
24D	Composite	2-26-51	" " " " "				
		3-30-51	" " " " "				
Note:	Alpha Counts per minute per 100 ml at 50% geometry						
	Beta "	"	" " " " " 100% "				

DATE April 12, 1951

SUPERVISOR

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H. F. Henry ✓
J. P. Murray
H. W. Carnes
Central Files
File

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
24D	3-2-51	9:00 a.m.	Effluent from Water Purification Plant			9	4 ± 21
24D	3-4-51	6:00 p.m.	" " " " "				9 ± 21
24D	3-6-51	8:45 a.m.	" " " " "				4 ± 21
24D	3-8-51	8:30 a.m.	" " " " "				6 ± 21
24D	3-10-51	10:30 a.m.	" " " " "				0 ± 21
24D	3-12-51	8:15 a.m.	" " " " "				0 ± 21
24D	3-14-51	8:30 a.m.	" " " " "				17 ± 21
24D	3-16-51	8:30 a.m.	" " " " "				6 ± 21
24D	3-18-51	8:30 a.m.	" " " " "				6 ± 21
24D	3-20-51	8:45 a.m.	" " " " "				0 ± 21
24D	3-22-51	8:30 a.m.	" " " " "				0 ± 21
24D	3-24-51	10:00a.m.	" " " " "				0 ± 21
24D	3-26-51	8:30 a.m.	" " " " "				0 ± 21
24D	3-28-51	8:30 a.m.	" " " " "				0 ± 21

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APR 12 1951

SUPERVISOR W. R. Rossmann DATE 4/12/51

K25RC

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WCX-1012

WORKS LABORA Y DEPARTMENT

SPECIAL ANALYSIS SECTION

H. F. Henry ✓
J. P. Murray
H. W. Carnes
Central Files
File

REPORT OF WATER S VEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
22W	3-5-51 3-9-51	Composite	Poplar Creek below Powerhouse effluent.	0			1 ± 21	7.2
22W	3-12-51 3-16-51	"	" " " " "	0			4 ± 21	6.9
22W	3-19-51 3-23-51	"	" " " " "	0			0 ± 21	7.8
22W	3-26-51 3-30-51	"	" " " " "	0			0 ± 21	6.6

Note: Beta counts per minute per 100 ml at 100% geometry.

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K25RC

SUPERVISOR [signature] DATE April 12, 1951

WCX-1012 (Mar'49)

REPORT No. 58

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H. F. Henry ✓ S. Katz
J. P. Murray Lab Central Files
H. W. Carnes File
D. M. Lang

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
30W	3-26-51	1:15 P.M.	K-1004 J "Normally Cold" drum before dumping			0.7 ± 1.1	414
	Total liquid in drum when sampled: 3500 gallons						
	Total Millicuries: 0.025						
	Note: Alpha counts per 100 ml at 50% geometry						
	Beta counts per 100 ml at 100% geometry						

RECEIVED APR 12 1951

K25RC

SUPERVISOR [signature] DATE April 1951

MOX 1012 (Mar

REPORT NO. 357

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H.F.Henry
J.P.Murray
H.W.Carnes
Lab. Central Files K25RC
File

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA	pH
16W	2-5-41	2:45 pm	Drinking Water from K-303-8	0		0.0 ± 1.1	3 ± 21	6.7
16W	2-16-51	8:30 am	Drinking water from K-1004-A	0		0.0 ± 1.1	1 ± 21	6.8
16 W	2-20-51	8:50 am	Drinking water from K-1098	0		0.0 ± 1.1	0 ± 21	6.8
16 W	2-27-51	10:30 am	Drinking water from K-1004-D	0		0.1 ± 1.1	13 ± 21	6.9
16 W	1-26-51 2-27-51	Composite	of drinking water spot check		less than 0.2			

Note : Alpha counts per minute per 100 ml at 50 % geometry

Beta counts per minute per 100 ml at 100 % geometry

RECEIVED MAR 28 1951

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SUPERVISOR T. Kusonaski DATE 3-12-51

WCX-1012 (Mar)

REPORT NO. 356

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H.F.Henry
J.P.Murray
H.W.CARNES
Lab. Central Files K25 RC
File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA	pH
22 W	1-29-51 2-2-51		Composite Poplar Creek below Power House Effluent	0			10±21	6.9
22 W	2-5-51 2-9-51		Composite Poplar Creek below Power House Effluent	0			23±21	7.2
22 W	2-12-51 2-16-51		Composite Poplar Creek below Power House Effluent	0			0±21	7.1
22 W	2-19-51 2-23-51		Composite Poplar Creek below Power House Effluent	0			23±21	7.0
22 W	2-26-51 3-2-51		Composite Poplar Creek below Power House Effluent	0			5±21	7.2
	Note : Beta counts per minute per 100 ml per 100 % geometry							

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SUPE SOR T. Kwasnoski DATE 3-12-51

WCX-1012 (Mar

REPORT No. 35 5

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H.F.HENRY S. KATZ
J.P.MURRAY LAB. CENTRAL FILES K25RC
H.W CARNES FILE
D.M.LANG

PLOT PLAN REFERENCE No.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
30 W	2-27-51	9:45 am	K-1004-J "Normally Cold" drum before dumping			3.6±1.1	2885

Total Liquid in drum when sampled : 3600 gallons

Total Millicuries : 0.177

Note : Alpha counts per 100 ml at 50 % geometry

Beta counts per 100 ml at 100 % geometry

RECEIVED MAR 13 1951

SUPERVISOR T. Kwasnoski DATE 3-12-51

WCX-1012 (Mar

REPORT NO. 354

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

H.F.Henry
J.P.Murray
H.W.Carnes
Lab. Central Files K25 RC
File

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	
24 D	2-16-51	8:25 am	Effluent from water purification Plant				0.0±21	3
24 D	2-18-51	8:30 am	Effluent from water purification Plant				0.0±21	2
24 D	2-20-51	8:30 am	Effluent from water purificatiob Plant				0.0±21	1
24 D	2-21-51	5:15 am	Effluent from water purification Plant				4±21	1
24 D	2-24-51	10:30 am	Effluent from water purification Plant				16±21	2
24 D	2-22-51	8:20 am	Effluent from water purification Plant				3±21	2
24 D	2-26-51	9:00 am	Effluent from water purification Plant				7±21	2
24 D	1-26-51 2-26-51	Composite	Effluent from water purification Plant	0	less than 0.2	0.0±1.1		
24 D	2-28-51	8:30 am	Effluent from water purification Plant				16±21	2
NOTE: Alpha counts per minute per 100 ml at XXXX 50 % geometry								
Beta counts per minute per 100 ml at 100 % geometry								
The sample taken on 2-14-51 was lost in the laboratory								

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ORIGINAL SIGNED BY
T. KWASNOSKI

SUPERVISOR _____ DATE 3-1-51

WCX-1012 (Mar

REPORT NO. 3.

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H.F.Henry
J.P.Murray
H.W.Carnes
Lab. Central Files K25 RC
File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION * See diagram for exact location	URANIUM CONCENTRATION ~~XXXXXXX~~ micrograms per gram	~~XXXXXXXXX~~ ~~XXXXXXXXXXX~~ ~~XXXXX~~	COUNTS ~~PER MINUTE~~ PER ~~100 ML.~~ ~~XXXXX~~ gram mud ALPHA	BETA
SE 20	2-13-51	10:00 am Noon	Poplar Creek bank	0.75			74
SE 21	2-13-51	10:00 am Noon	Poplar Creek bank	0.75			53
SE 22	2-13-51	10:00am noon	Poplar Creek bank	0.46			49
SE 23	2-13-51	10:00am noon	Poplar Creek bed	1.33			54
SE 26	2-13-51	10:00 am Noon	Poplar Creek bed	2.50			80
SE 30	2-13-51	10:00 am Noon	Poplar Creek bank	1.38			49
SE 31	2-13-51	10:00 am Noon	Poplar Creek bank	1.12			51
SE 33	2-13-51	Noon 2:00 pm	Poplar Creek bank	1.75			107
SE 35	2-13-51	Noon 2:00 pm	Poplar Creek bank	2.50			76
SE 37	2-13-51	Noon 2:00 pm	Poplar Creek bed	0.75			49
SE 39	2-13-51	Noon 2:00 pm	Poplar Creek bed	1.00			50
SE 41	2-13-51	Noon 2:00 pm	Poplar Creek bank	1.00			46
SE 43	2-13-51	Noon 2:00 pm	Poplar Creek bank	1.50			55
NOTE: All mud results per gram dry weight.							

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SUPERVISOR T. Kwasnoski DATE 3-15-51

WCX-1012 (Mar' \

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

H.F.Henry
J.P.Murray
H.W.Carnes
Lab.Central Files K25 RC
File

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 352

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
13 ME	2-5-51	10:15 am	Clinch River Mud from 13M sampling point	0.33 micrograms per gram		1.8	72
1-ME	2-5-51	10:45 am	Mud from holding pond exit to Poplar Creek NE of K-303-8	9.24 micrograms per gram		-	94
42-ME	2-5-51	12:45 pm	Mud from Poplar Creek just below pond for Power House effluent	0.94 micrograms per gram		1	179
43-ME	2-5-51	1:00 pm	Mud from Poplar creek immediately before junction with Clinch River	1.60 micrograms per gram		-	124
11-ME	2-5-51	1:45 pm	Mud from Poplar Creek opposite K-27 drain	0.58 micrograms per gram		-	101
41-ME	2-5-51	2:30 pm	Mud from center of Poplar Creek at bridge crossing below K-31	0.54 microgram per gram		-	29
All mud results per gram dry weight							
Counts per minute per gram							

RECEIVED MAR 5 1951

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SUPER OR T. Kwasnoski DATE 2-27-51

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

H.F.Henry
J.P.Murray
H.W.Carnes
Lab. Central Files K25 Rc
File

REPORT OF WATER SURVEY ANALYSES

REPORT No. 351

PLOT PLAN REFERENCE No.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	
24-D	1-31-51	8:30 am	Effluent from water purification plant	-	-	-	3±21	
24-D	2-2-51	8:30 am	Effluent from water purification plant	-	-	-	13±21	2
24-D	2-4-51	9:00 am	Effluent from water purification plant	-	-	-	10±21	2
24-D	2-6-51	8:30 am	Effluent from water purification plant	-	-	-	0±21	2
24-D	2-8-51	8:30 am	Effluent from water purification plant	-	-	-	0±21	2
24-D	2-10-51	9:00 am	Effluent from water purification plant	-	-	-	11±21	2
24-D	2-12-51	8:30 am	Effluent from water purifiaction plant	-	-	-	10±21	3
Note: Beta counts per minute per 100 ml at 100 % geometry								

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SUPERVISOR T. Kwanoshi DATE 2-21-51

Plot Plan Reference No.	Date Sampled	Time Sampled					
24-D	1-16-51	8:30 am	Effluent from water purification plant	-	-	-	
24-D	1-17-51	8:30 am	Effluent from water purification plant	-	-	-	0 ± 21
24-D	1-19-51	8:30 am	Effluent from water purification plant	-	-	-	0 ± 21
24-D	1-21-51	8:30 am	Effluent from water purification plant	-	-	-	0 ± 21
24-D	1-23-51	8:30 am	Effluent from water purification plant	-	-	-	0 ± 21
24-D	1-25-51	8:15 am	Effluent from water purification plant	-	-	-	0 ± 21
24-D	12-24-50 1-26-51	composite	Effluent from water purification plant	0	0.2	0.2 ± 1.1	-
24-D	1-27-51	8:30 am	Effluent from water purification plant	-	-	-	0 ± 21
24-D	1-29-51	8:30 am	Effluent from water purification plant	-	-	-	2 ± 21

NOTE: Alpha count per minute per 100 ml at 50 % geometry

Beta count per minute per 100 ml at 100 % geometry

SUPERVISOR T. Kwasnoski DATE 2-16-51

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SPECIAL ANA 'SIS SECTION

ab. Central ..e K25RC

H.F.HENRY
J.P.MURRAY
H.W.CARNES
CENTRAL FILES
FILE

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration p.p.b.	Fluoride Concentration p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta	pH
13-M	1-2-51	10:25 am	Clinch River one mile down stream of last K-25 effluent	0				7.3
26-M	monthly composite		Drainage from labs. A,B,C, and D	1		1.6 ±1.1	14 ± 21	

NOTE. Alpha count per minute per 100 ml at 50% geometry

Beta counts per minute per 100 ml at 100% geometry

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FEB 19 1951

SUPERVISOR T. Kwasnoski DATE 2-15-51

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H.P.Kelly
J.P.Murray
H.W.Carnes
Lab. Central Files K25 RC
File

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	~~Fluoride Concentration P.P.M.~~	Per 100 ml. Alpha	Per 100 ml. Beta
1 ME	1-2-51	9:10 am	Mud from Poplar Creek inlet N.E. of K-303-8	1.25 micrograms per gram		-	169
22 ME	1-2-51	9:35 am	Mud from Poplar Creek immediately below power house effluent	1.88 micrograms per gram		-	157
13 ME	1-2-51	10:25 am	Mud from Clinch River one mile downstream of lastK-25 effluent	0.22 micrograms per gram		4.9 ± 1.4	130
41 ME	1-4-51	10:00 am	Mud from center of Poplar Creek at bridge crossing below K-31	0.88 micrograms per gram		-	55
42 ME	1-8-51	9:40 am	Mud from Poplar Creek just below pond for Power House effluent	0.13 micrograms per gram		-	138
43 ME	1-8-51	10:00 am	Mud from Poplar Creek just before junction with Clinch River	1.04 micrograms per gram		-	186

NOTE: All mud results per gram dry weight

SUPERVISOR T. Kwoonoski DATE 2-16-51

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SPECIAL ANALYS

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ! Alpha	Counts per Minute per 100 ! Beta	PH
16-W	12-28-50	8:40 a.m.	Drinking Water from K-1401.	0		0.3 ± 1.1	4 ± 21	72
16-W	1-3-51	8:40 a.m.	Cafeteria Cooking Water	0		0.0 ± 1.1	0 ± 21	7.0
16-W	1-9-51	8:45 a.m.	Drinking Water from K-1001	0		0.0 ± 1.1	0 ± 21	7.0
16-W	1-16-51	8:20 a.m.	Drinking Water from K-1036	0		0.1 ± 1.1	0 ± 21	7.0
16-W	1-26-51	8:15 a.m.	Drinking Water from K-1004-D	0		0.1 ± 1.1	0 ± 21	7.4
16-W	12-28-50-1-26-51		Composite Drinking Water spot check.		Less than 0.2			
16-W	1-29-51	8:15 a.m.	Cafeteria Cooking Water	0		0.1 ± 1.1	0 ± 21	73

NOTE: Alpha counts per minute per 100 ml at 50 % geometry.
Beta counts per minute per 100 ml at 100 % geometry.

W.S.

SUPERVISOR T. Kwaznoski DATE 2-9-51

295

WORKS LABORATORY DEPARTMENT Central Files
Section Files
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	PH
22-W	12-27 - 12-30-50	Composite	Poplar Creek below Power House effluent.	0			4 ± 21	7.3
"	1-2- - 1-5-51	"	" " " " " "	0			11 ± 25	7.2
"	1-8 - 1-12-51	"	" " " " " "	0			2 ± 21	7.2
"	1-15 - 1-19-51	"	" " " " " "	0			0 ± 21	7.1
"	1-22 - 1-26-51			0			0 ± 21	7.6

NOTE: Beta count per minute per 100 ml at 100 % geometry.

K-25 RC Lab. Div. Central Files

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SUPERVISOR T. Kwasowski DATE 2-9-51

W.S.

WORKS LABORA · DEPARTMENT
SPECIAL ANALYSIS SECTION

H. W. Carnes
D. M. Lang
S. Katz
Central Files
Section Files

REPORT OF WATER S VEY ANALYSES

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA
30-W	1-23-51	12:15 pm	K-1004-J, "Normally cold" drum before dumping.			1.7 ± 1.1	5364

Total volume of liquid in tank when sampled = 3500 gallons.

Total millicuries = 0.32

NOTE: Alpha count per minute per 100 ml at 50% geometry.

Beta count per minute per 100 ml at 100 % geometry.

WS-

SUPERVISOR T. Kwasnoski DATE 2-9-51

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LABORATORY DEPA...
S. .CIAL ANALYSIS SECTION

Section Files REPORT OF WATER SO...

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
						Date Counted:	
HPK-2X	1-11-51		Water from White Oak Lake			1-15-51	1626
						1-22-51	1695
						1-30-51	1585

NOTE: Discs were recounted after one week and two weeks.
Beta counts per minute per 100 ml at 100 % geometry.

W.J.S.

SUPERVISOR T. Kwasnoski DATE 2-9-51

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K-25 RC Lat Div. Central Files
WORKS LABORA Y DEPARTMENT
SPECIAL ANALYSIS SECTION

H.F.Henry
P. Murray
H.W.Carnes
Lab. C. Files
Section Files

REPORT OF WATER S VEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta	
980-D 24-D	12-24-50	9:00 a.m.	Effluent from Water Purification Plant.				0 ± 21	2
981-D 24-D	12-26-50	9:00 a.m.	" " " " "				0 ± 21	2
982-D 24-D	12-28-50	8:10 a.m.	" " " " "				1 ± 21	2
983-D 24-D	12-30-50	8:15 a.m.	" " " " "				0 ± 21	2
984-D 24-D	1-1-51	8:15 a.m.	" " " " "				1 ± 21	2
985-D 24-D	1-3-51	8:10 a.m.	" " " " "				1 ± 21	2
986-D 24-D	1-5-51	8:30 a.m.	" " " " "				1 ± 21	2
987-D 24-D	1-7-51	9:00 a.m.	" " " " "				2 ± 21	2
988-D 24-D	1-9-51	8:30 a.m.	" " " " "				0 ± 21	2
989-D 24-D	1-11-51	8:30 a.m.	" " " " "				4 ± 21	2
990-D 24-D	1-13-51	9:00 a.m.	" " " " "				0 ± 21	1
991-D 24-D	1-14-51	9:00 a.m.	" " " " "				3 ± 21	1
992-D 24-D	1-15-51	8:30 a.m.	" " " " "				3 ± 21	1
NOTE: Beta counts per minute per 100 ml. at 100% geometry.								

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SUPERVISOR T. Kwasnoski DATE 1-31-51

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SPECIAL ANALYSIS SECTION

Laboratory Central Files K25 RC

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION

H.F.Henry, K-1034
J.P.Murraym K-303-7
H.W.Carnes, K-303-8

Central Files
Section Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA
24 D	12-12-50	2:50 p.m.	Effluent from Water Purification Plant.	-	-	- -	28 ± 21
24 D	12-14-50	8:00 a.m.	" " " "	-	-	-	16 ± 21
24 D	12-16-50	9:00 a.m.	" " " "	-	-	-	4 ± 21
24 D	12-18-50	8:00 a.m.	" " " "	-	-	-	3 ± 21
24 D	12-20-50	8:30 a.m.	" " " "	-	-	-	0 ± 21
24 D	12-22-50	8:10 a.m.	" " " "	-	-	-	6 ± 21
24 D	11/28-12/22	Composite	" " " "	0	Less than 0.2	0.5 ± 1.1	-

Note: Alpha counts per minute per 100 ml at 50% geometry.
Beta counts per minute per 100 ml at 100% geometry.

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1-24-51

SUPERVISOR T. Kwasnoski DATE

300

WCX-1012 (Mar [illegible])

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REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION
H.F.Henry, K-1034
J.P.Murray, K-303-7
H.W.Carnes, K-303-8
Central Files
Section Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	pH
16 W	12-8-50	9:15 a.m.	Cafeteria cooking water	0	-	0.0 ± 1.1	18 ± 21	7.2
S W	12-11-50	9:30 a.m.	Drinking water from K-1021	0	-	0.0 ± 1.1	19 ± 21	7.2
16 W	12-20-50	9:00 a.m.	Drinking water from K-1030	0	-	no * result	0 ± 21	7.1
16 W	12/4-22/50	Composite	Drinking water spot check	-	0.2	-	-	-

* Operational error.

Note: Alpha counts per minute per 100 ml at 50% geometry.
Beta counts per minute per 100 ml at 100% geometry.

W.S.

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SUPERVISOR T. Kwonoski DATE 1-24-51

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

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REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION

H.F.Henry, K-1034 — Central Files

JR.Murray, K-303-7

H.W.Carnes, K-303-8 — Section Files

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta	pH
13 M	12-5-50	10:30 a.m.	Clinch River downstream of last K-25 effluent	0	-	-	-	7.6
26 M	12/4-22/50	Composite	Drainage from Labs. A, B, C, D	1	-	Sample destroyed	7 ± 21	

Note: Beta counts per minute per 100 ml at 100% geometry.

W.S.

SUPERVISOR T. Kwasnoski DATE 1-24-51

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...-1012 (Mar' ...)

REPORT NO. ...

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SPECIAL ANALYSIS SECTION

Laboratory Central Files K25 RC

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION

H.F.Henry, K-1034
J.P.Murray, K-303-7
H.W.Carnes, K-303-8

Central Files
Section Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION P.P.B.	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML. ALPHA	COUNTS PER MINUTE PER 100 ML. BETA	pH
22 W	11/27-12/1	Composite	Poplar Creek immediately below power house effluent	0	-	-	2 ± 21	7.8
22 W	12/4-8/50	"	" " " "	0	-	-	22 ± 21	7.4
22 W	12/11-12/50	"	" " " "	0	-	-	17 ± 21	7.2
22 W	12/18-22/50	"	" " " "	0	-	-	5 ± 21	7.8

Note: Alpha counts per minute per 100 ml at 50% geometry.
Beta counts per minute per 100 ml at 100% geometry.

W.S.

303

SUPERVISOR T. Kwasnoski DATE 1-24-51

SPECIAL ANALYSIS SECTION
Laboratory Central Files K25 RC

DISTRIBUTION

H.F.Henry, K-1034
J.P.Murray, K-303-7
H.W.Carnes, K-303-8
S.D.Schiffman, K-1005
File

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration		Counts per Minute per gram Alpha	Counts per Minute per gram Beta
13 ME	12-5-50	10:30 a.m.	Mud from Clinch river one mile downstream of last K-25 effluent	0.13 micrograms per gram		2.7 ± 0.2	11
22 ME	12-5-50	12:40 p.m.	Mud from poplar creek immediately before junction with Clinch river	5.83 "	" "	-	138
11 ME	12-5-50	1:20 p.m.	Mud from Poplar creek opposite K-27 drain	0.75 "	" "	-	58
1-ME	12-5-50	1:35 p.m.	Mud from Poplar creek inlet N.E. of K-303-8	1.25 "	" "	-	76

Note: All mud results per gram dry weight.

RECEIVED JAN 22 1951

SUPERVISOR T. Kwasnoski DATE 12-24-51

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