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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 1947-1950

Title and author (if document is unnumbered)

Water Survey Analyses 1947-1950

From Box 4-3-1-1

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Date request received 7/18/95

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

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Signature

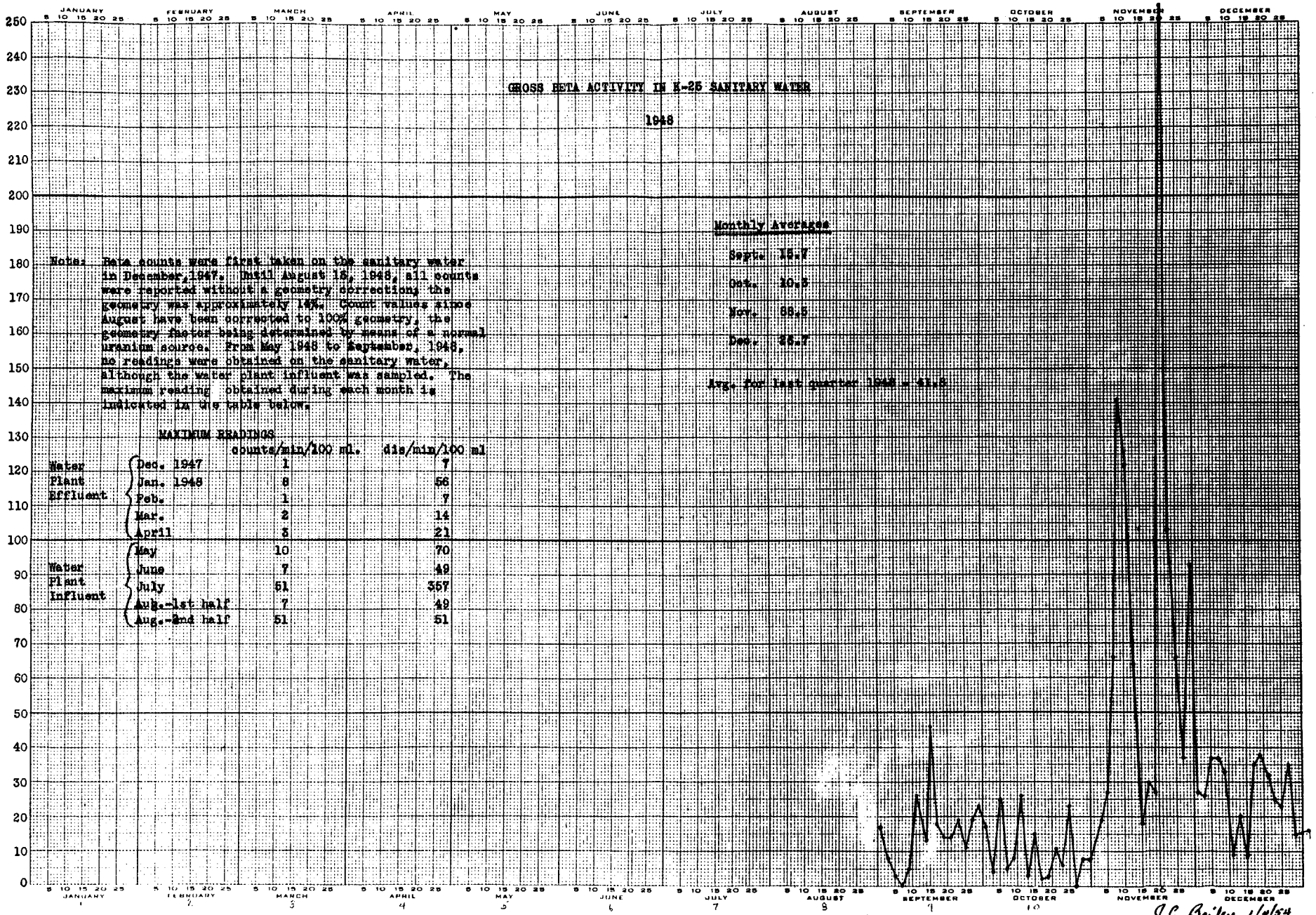
ChemRisk Document No. 1653

WATER SURVEY ANALYSES
1947-1950

This document has been approved for release
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.



Monthly Averages

Sept. 15.7

Oct. 10.5

Nov. 88.5

Dec. 26.7

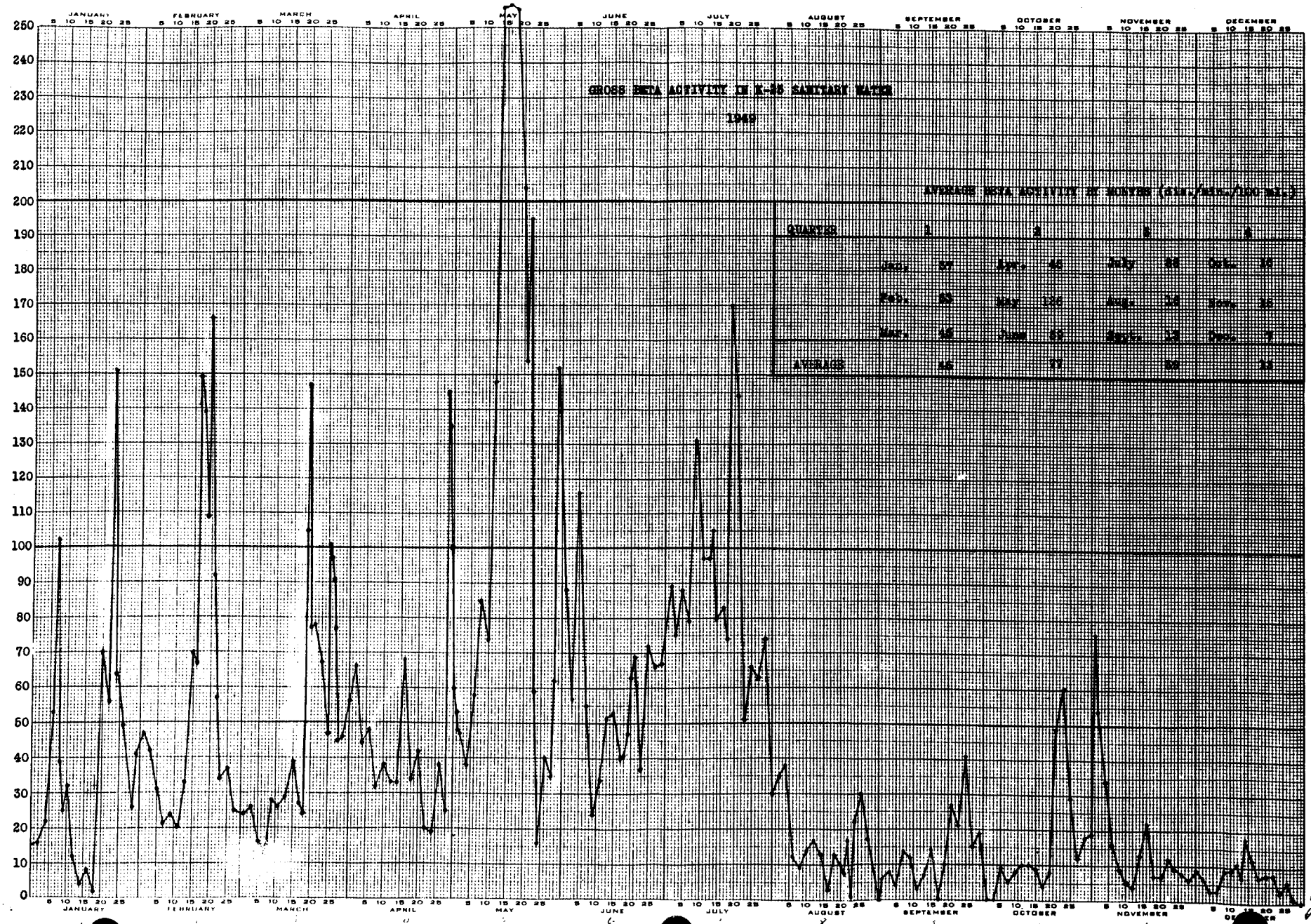
Avg. for last quarter 1948 = 41.5

Notes: Beta counts were first taken on the sanitary water in December, 1947. Until August 18, 1948, all counts were reported without a geometry correction; the geometry was approximately 16%. Count values since August have been corrected to 100% geometry, the geometry factor being determined by means of a normal uranium source. From May 1948 to September, 1948, no readings were obtained on the sanitary water, although the water plant influent was sampled. The maximum reading obtained during each month is indicated in the table below.

MAXIMUM READINGS

		counts/min/100 ml.	dis/min/100 ml
Water Plant Effluent	Dec. 1947	1	7
	Jan. 1948	8	56
	Feb.	1	7
	Mar.	2	14
	April	3	21
Water Plant Influent	May	10	70
	June	7	49
	July	51	357
	Aug.-1st half	7	49
	Aug.-2nd half	51	51

J.C. Bailey 1/4/54



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

QUARTER	1	2	3	4
	Jan. 57	Apr. 45	July 55	Oct. 36
	Feb. 53	May 126	Aug. 34	Nov. 26
	Mar. 45	June 69	Sept. 23	Dec. 7
AVERAGE	56	77	50	24

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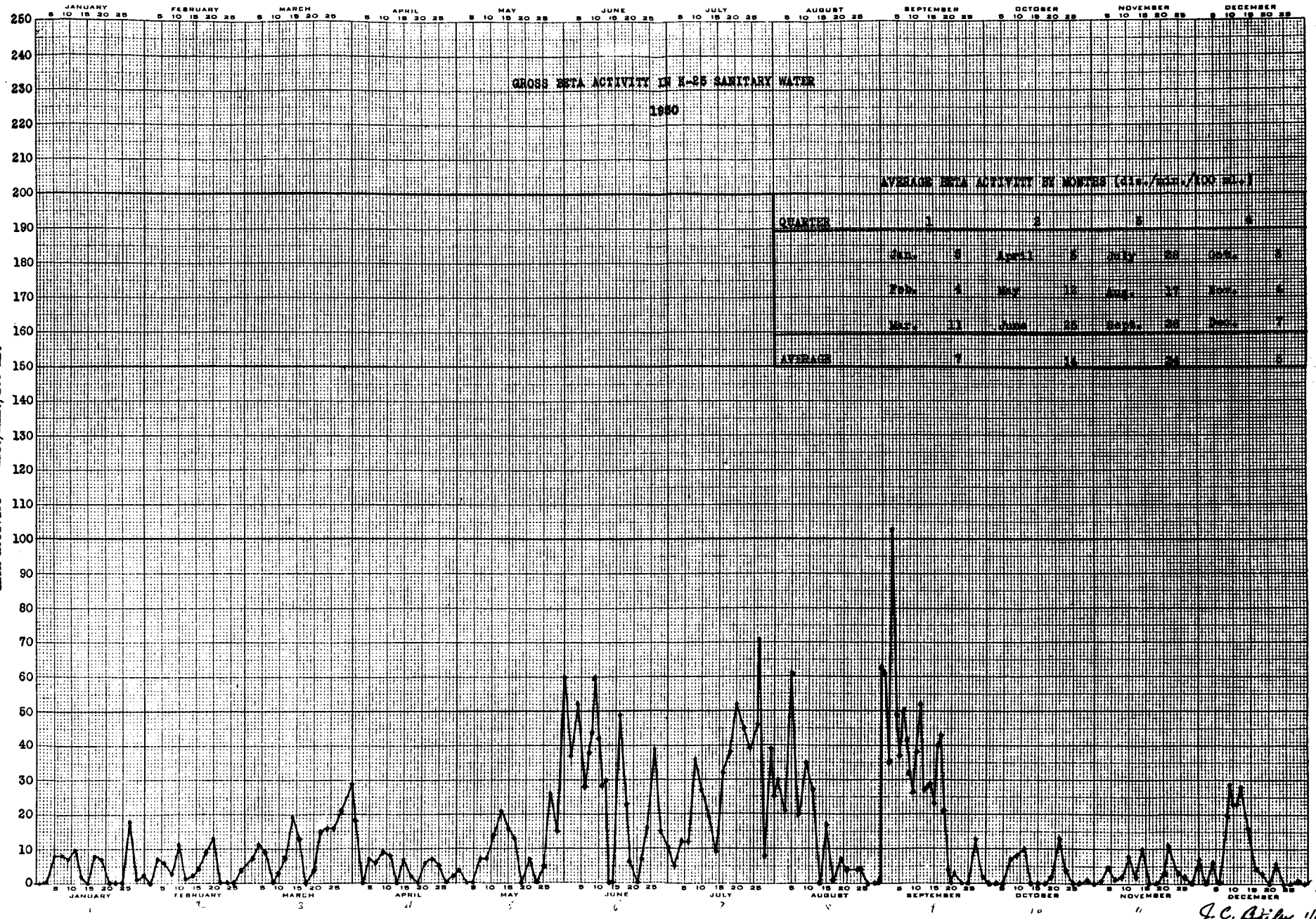
J. C. [illegible] 1/4/54



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

QUARTER	1		2		3		4	
	Jan.	5	April	5	July	28	Oct.	8
	Feb.	4	May	12	Aug.	17	Nov.	6
	Mar.	11	June	25	Sept.	26	Dec.	7
AVERAGE		7		14		23		8

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J. C. Bailey 1/4/54

NO. 341D-T2 DIETZGEN GRAPH
1 YEAR BY DAYS
EUGENE DIETZGEN
MADE IN U.S.A.

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REPORT NO. 33

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
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J. P. Murray Laboratory Central Files K25RC

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	11-30-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	12-2-50	9:15 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	12-4-50	9:15 a.m.	Effluent from Water Purification Plant	-	-	-	6 ± 21
24 D	12-6-50	8:45 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	12-8-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	20 ± 21
24 D	12-9-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	29 ± 21
24 D	12-10-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	23 ± 21
24 D	12-11-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	23 ± 21
Note: Beta counts per minute			per 100 ml. at 100% geometry.				

SUPERVISOR T. Kwasnoski DATE 12-19-50

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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
30 W	12-11-50	9:15 a.m.	K-1004-J "Normally Cold" drum before dumping	-	-	7.1 ± 1.1	4633
Volume of liquid in tank when sampled = 3680 gallons							
Total millicuries in tank when sampled = 0.291							
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. Kwoonoshi DATE 12-19-50

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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	10-30-50	8:30 a.m.	K-25 Cafeteria Cooking Water	0	-	0.0 ±1.1	0 ± 21	7.
16 W	11/7-50	8:00 a.m.	Drinking Water from K-1004-D	0	-	0.2 ±1.1	0 ±21	7.
16 W	11-15-50	8:40 a.m.	Drinking Water from K-1401	0	-	0.1 ±1.1	0 ±21	[illegible]
16 W	11-24-50	10:00 a.m.	Drinking Water from K-1515	0	-	0.0 ±1.1	6 ±21	7.
16 W	11-28-50	9:05 a.m.	Drinking Water from K-1004-A	0	-	0.4 ±1.1	2 ±21	7.
16 W	10/30-11/28	Composite	Drinking Water spot check	-	0.3	-	-	-
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. Kwanoski DATE 12-5-50

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION	COUNTS PER MINUTE PER gram	
					ALPHA	BETA
13 ME	11-1-50	1:30 p.m.	Bottom Mud from 13 M Sampling Point	0.40 micrograms per gram	1.1	88
1 ME	11-1-50	1:45 p.m.	Poplar Creek inlet N.E. of K-303-8	0.78 micrograms per gram		45
22 ME	11-1-50	2:45 p.m.	Poplar Creek immediately before junction with Clinch River	1.00 micrograms per gram		100

Note: Alpha counts per minute per gram dry wt. at 50% geometry.
Beta counts per minute per gram dry wt. at 100% geometry.
Uranium concentration given as micrograms u / gram dry wt.

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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
22 W	10/30-11/3	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	9±21	8.
22 W	11/6-11/10	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	4±21	7.
22 W	11/13-11/17	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0±21	7.
22 W	11/20-11/24	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	6±21	7.
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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						ALPHA	BETA	pH
13 M	11-1-50	1:30 p.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
26 M	10/30 - 11/28	Composite	Drainage from Labs A, B, C, and D	1	-	2.1 ± 1.1	17 ± 21	
Note: Alpha counts per minute per 100 ml. at 50% geometry.								
Beta counts per minute per 100 ml. at 100% geometry.								

SUPERVISOR T. Kusonoki DATE 12-5-50

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						ALPHA	BETA
24 D	11-18-50	10:45 a.m	Effluent from Water Purification Plant	-	-	-	0±21
24 D	11-20-50	10:45 a.m.	Effluent from Water Purification Plant	-	-	-	3±21
24 D	11-22-50	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	11±21
Special 24 D	11-22-50	1:30 p.m.	From White Oak Lake	8	-	-	3525
24 D	11-24-50	3:45 p.m.	Effluent from Water Purification Plant	-	-	-	3±21
24 D	11-26-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	2±21
24 D	10/25-11/27	Composite	Effluent from Water Purification Plant	0	less than 0.2	0.1±1.1	-
24 D	11-28-50	8:45 a.m	Effluent from Water Purification Plant	-	-	-	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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						ALPHA	BETA
24 D	10-27-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	10-29-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
24 D	10-31-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	11-2-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
24 D	11-4-50	8:45 a.m.	Effluent from Water Purification Plant	-	-	-	5 ± 21
24 D	11-6-50	8:45 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
24 D	11-8-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	2 ± 21
24 D	11-10-50	2:15 p.m.	Effluent from Water Purification Plant	-	-	-	8 ± 21
24 D	11-12-50	4:00 p.m.	Effluent from Water Purification Plant	-	-	-	2 ± 21
24 D	11-14-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	10 ± 21
24 D	11-16-50	1:30 p.m.	Effluent from Water Purification Plant	-	-	-	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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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	10-23-50	9:30 a.m.	K-1004-J "Normally Cold" drum before				
			dumping	-	-	2.6±1.6	1014
Volume of liquid in tank when sampled = 3540 gallons							
Total millicuries in tank when sampled = 0.06							
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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						ALPHA	BETA	pH
13 M	10-2-50	1:30 p.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.9
26 M	10/2-10/25	Composite	Drainage from Labs. A, B, C and D	5	-	*	5±21	

Note: Alpha counts per minute per 100 ml. at 50% geometry.

Beta counts per minute per 100 ml. at 100% geometry.

* No result due to operational error.

SUPERVISOR T. Kusanoski DATE 11-3-50

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						ALPHA	BETA	pH
16 W	10-9-50	4:20 p.m.	Drinking Water from K-1004-D	0	-	0.0 ± 1.1	3 ± 21	7.4
16 W	10-13-50	9:30 a.m.	Cafeteria Cooking Water	0	-	0.2 ± 1.1	0 ± 21	7.4
16 W	10-17-50	8:30 a.m.	Drinking Water from K-711	0	-	0.0 ± 1.1	0 ± 21	7.4
16 W	10-23-50	8:45 a.m.	Drinking Water from K-1515	0	-	0.0 ± 1.1	9 ± 21	7.6
16 W	10/9-10/25	Composite	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.

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						ALPHA	BETA	pH
22 W	9/25-9/29	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0±21	8.
22 W	10/2 thru 10/6	Composite	Poplar Creek immediately below Power-house effluent	1	-	-	0±21	7.
22 W	10/9-10/13	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0±21	7.
22 W	10/16 thru 10/20	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0±21	7.
22 W	10/23 thru 10/27	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0±21	7.
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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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	10-17-50	8:15 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	10-19-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	2 ± 21
24 D	10-21-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
24 D	10-23-50	8:15 a.m.	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	10-25-50	8:10 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	9/27-10/25	Composite	Effluent from Water Purification Plant	0	Less than 0.2	*	-
24 D	~~10~~ 9-3-50	One month Recount	Effluent from Water Purification Plant	-	-	-	45 ± 21

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

* No results due to operational error.

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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 ~~XXXXX~~	~~XXXXXXX XXXXXXXXXXXX XXXXX~~	COUNTS PER MINUTE PER ~~XXXXXX~~ gram	
						ALPHA	BETA
13 ME	10-2-50	1:30 p.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.17 micrograms per gram		4.5 ±0.4	40
1 ME	10-2-50	2:30 p.m.	Mud from Poplar Creek inlet N.E. of K-303-8	7.50 micrograms per gram		-	94
22 ME	10-2-50	3:00 p.m.	Mud from Poplar Creek immediately below Powerhouse effluent	2.00 micrograms per gram		-	128
11 ME	10-3-50	3:00 p.m	Mud from Poplar Creek opposite K-27 drain	0.50 micrograms per gram		-	73
Note: All mud results per gram dry weight.							

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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	9-27-50	8:35 a.m.	Effluent from Water Purification Plant	-	-	-	13±21
24 D	9-29-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	2±21
24 D	10-1-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	10-3-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	10-5-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	10-7-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7±21
24 D	10-9-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	8±21
24 D	10-11-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	10±21
24 D	10-13-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	10-15-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
Note: Beta counts per minute per 100 ml. at 100% geometry.							

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						ALPHA	BETA	pH
22 W	8/28-9/1	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	0 ± 21	7.[illegible]
22 W	9/5-9/8	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	51 ± 21	7.[illegible]
22 W	9/11-9/15	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	26 ± 21	7.[illegible]
22 W	9/18-9/22	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	4 ± 21	7.[illegible]
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. Kwasowski DATE 9-29-50

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 32

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION

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J. P. Murray Laboratory Central Files K25RC

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
10 M	9-5-50	9:25 a.m	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
13 M	9-5-50	10:30 a.m	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.[illegible]
26 M	9/5-9/25	Composite	Drainage from Labs. A, B, C, D	2	-	1.9 ± 1.1	8 ± 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. Kwasnoski DATE 9-29-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 3.

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION
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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	9-5-50	9:45 a.m.	Drinking Water from K-1024	0	-	0.0 ± 1.1	50 ± 21	7.
16 W	9-13-50	9:00 a.m.	Cafeteria Cooking Water	0	-	0.3 ± 1.1	20 ± 21	7.
16 W	9-18-50	9:00 a.m.	Drinking Water from K-1301	0	-	0.1 ± 1.1	14 ± 21	7.
16 W	9-25-50	12:30 p.m.	Drinking Water from K-631	0	-	0.1 ± 1.1	0 ± 21	7.
16 W	9/5-9/25	Composite	K-25, K-27 Drinking Water	-	0.3	-	-	-

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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SPECIAL ANALYSIS SECTION

REPORT NO. 319

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	9-12-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	27 ± 21
24 D	9-13-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	28 ± 21
24 D	9-14-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	29 ± 21
24 D	9-15-50	8:45 a.m.	Effluent from Water Purification Plant	-	-	-	23 ± 21
24 D	9-16-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	40 ± 21
24 D	9-17-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	43 ± 21
24 D	9-18-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	21 ± 21
24 D	9-19-50	8:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	9-20-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	9-21-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21
24 D	9-23-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	9-25-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	8/29-9/25	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.0 ± 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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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION		COUNTS PER MINUTE PER gram	
						ALPHA	BETA
22 ME	9-5-50	9:30 a.m	Mud from Poplar Creek immediately below Powerhouse effluent	1.50 micrograms per gram			229
13 ME	9-5-50	10:30 a.m.	Mud from Clinch River one mile down stream of last K-25 effluent	0.35 micrograms per gram		2.4±0.2	60
1 ME	9-5-50	10:50 a.m.	Mud from Poplar Creek N.E. of K-303-8	5.00 micrograms per gram		-	76

Note: All mud results per gram dry weight.

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SUPERVISOR T. Kwasnoski DATE 9-26-50

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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	8-31-50	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	63 ± 25
24 D	9-1-50	8:15 a.m.	Effluent from Water Purification Plant	-	-	-	61 ± 24
24 D	9-2-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	35 ± 21
24 D	9-3-50	9:00 a.m.	Effluent from Water Purification Plant	0	-	0.1 ± 1.6	103
24 D	9-4-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	49 ± 21
24 D	9-5-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	37 ± 21
24 D	9-6-50	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	50 ± 21
24 D	9-7-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	42 ± 21
	9-7-50	2:00 p.m.	"Grab" sample of finished water from K-1515	-	-	-	29 ± 21
	9-7-50	3:30 p.m.	"Grab" sample of finished water from K-1515	-	-	-	26 ± 21
24 D	9-8-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	32 ± 21
	9-8-50	3:30 p.m.	"Grab" sample of finished water from K-1515	-	-	-	27 ± 21
24 D	9-~~10~~9-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	26 ± 21
24 D	9-10-50	9:00 .am.	Effluent from Water Purification Plant	-	-	-	38 ± 21
24 D	9-11-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	52 ± 21

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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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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	9-5-50	12:30 p.m.	K-1004-J, "Normally Cold" drum				
			before dumping	-	-	833	2.0 ± 1.4
Volume of liquid in tank when sampled = 4200 gal.							
Total millicuries			= 0.06				
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 E. B. Olszewski DATE 9-12-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 315

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	8-17-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	1 ±21
24 D	8-19-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ±21
24 D	8-21-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ±21
24 D	8-24-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	4 ±21
24 D	8-25-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ±21
24 D	8-27-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	7/27-8/27	Composite	Effluent from Water Purification Plant	0	less than 0.2	Sample Destroyed	-
24 D	8-29-50	12:30 p.m	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	8-30-50	5:15 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	8-30-50	2:00 p.m.	Effluent from Water Purification Plant	-	-	-	2 ±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 E. B. Olszewski DATE 9-7-50

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REPORT NO. 31

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	p
22 W	7/24-7/28	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	46 ± 21	7.
16 W	7-31-50	9:10 a.m.	Drinking water from K-1048-42	0	-	0.0 ± 1.1	42 ± 21	7.
22 W	7/31-8/4	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	41 ± 21	7.
16 W	8-7-50	1:40 p.m.	Cafeteria cooking water	0	-	0.1 ± 1.1	29 ± 21	6.
22 W	8/7-8/11	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	12 ± 21	7.
16 W	8-17-50	9:15 a.m.	Drinking water from K-1030	0	-	0.0 ± 1.0	0 ± 21	7.
22 W	8/14-8/18	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	0 ± 21	7.
16 W	8-24-50	9:00 a.m.	Drinking water from K-1004-B	0	-	0.0 ± 1.0	9 ± 21	7.
22 W	8/21-8/25	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	2 ± 21	8.
16 W	7/31-8/27	Composite	K-25, K-27 Drinking Water	-	Less than 0.2	-	-	-
16 W	8-28-50	9:00 a.m.	Drinking Water from K-1401	0	-	0.2 ± 1.0	1 ± 21	7.
14 W	8/1-8/28	Composite	Influent to Sewage Disposal Plant	0	-	-	-	-
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 9-1-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 3-

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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	p
13 M	8-2-50	9:25 a.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
10 M	8-7-50	9:20 a.m.	Clinch River immediately at S-50 sewer outfall	0	-	-	-	-
26 M	8/1-8/28	Composite	Drainage from Labs. A, B, C, D	2	-	3.6 ±1.1	4 ±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. Kusanobori DATE 9-1-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 2

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION	COUNTS PER MINUTE PER gram	
					ALPHA	BETA
13 ME	8-2-50	9:25 a.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.25 micrograms per gram	4.1	76
22 ME	8-2-50	1:50 p.m.	Mud from Poplar Creek immediately below powerhouse effluent	1.75 micrograms per gram	-	142
11 ME	8-8-50	2:30 p.m.	Mud from Poplar Creek opposite K-27 drain	1.38 micrograms per gram	-	82
1 ME	8-8-50	2:30 p.m.	Mud from Poplar Creek inlet N.E. of K-303-8	3.75 micrograms per gram	-	80
All mud results per gram dry weight.						

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RADIATION HAZARDS DEPARTMENT

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SUPERVISOR T. Kwasnoski DATE 9-1-50

WCX-1012 (Mar)

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SPECIAL ANALYSIS SECTION

REPORT NO. 310

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	7-28-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ±21
24 D	7-30-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	39± 21
24 D	7-31-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	25 ±21
24 D	8-1-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	30 ±21
24 D	8-3-50	8:25 a.m.	Effluent from Water Purification Plant	-	-	-	21 ±21
24 D	8-5-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	61 ±24
24 D	8-7-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	20 ±21
24 D	8-9-50	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	35 ±21
24 D	8-11-50	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	27 ±21
24 D	8-13-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	8-15-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	17 ±21
Note: Beta counts per minute			per 100 ml. at 100% geometry.				

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RADIATION HAZARDS DEPARTMENT

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SUPERVISOR T. Kozorovski DATE 7-50

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SPECIAL ANALYSIS SECTION

REPORT NO. -

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
30 W	8-8-50	8:30 a.m.	K-1004-J, "Normally Cold" drum				
			before dumping	-	-	1.4 ± 1.1	1614
Volume of liquid in tank when sampled = 4100 gallons							
Total millicuries = .114							
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. Kusonoki DATE 8-21-50

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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	pH
22 W	6/26-6/30	Composite	Poplar Creek immediately below power-house effluent	0	-	-	5 ± 21	8.
16 W	7-5-50	2:20 p.m.	K-25, K-27 Drinking Water from K-1030 Building	0	-	0.0 ± 1.1	8 ± 21	7.
22 W	7/5-7/8	Composite	Poplar Creek immediately below power-house effluent	0	-	-	30 ± 21	7.
16 W	7-10-50	9:20 a.m.	K-25, K-27 Drinking Water from K-1004-D	0	-	0.4 ± 1.1	37 ± 21	7.
22 W	7/10-7/14	Composite	Poplar Creek immediately below power-house effluent	0	-	-	16 ± 21	7.
16 W	7-17-50	1:45 p.m.	K-25, K-27 Drinking Water from guard house at gate #115	0	-	0.0 ± 1.1	39 ± 21	7.
22 W	7/17-7/21	Composite	Poplar Creek immediately below power-house effluent	0	-	-	41 ± 21	7.
16 W	7-25-50	8:45 a.m.	K-25, K-27 Drinking Water from K-303-4	0	-	0.0 ± 1.1	34 ± 21	7.
16 W	7/5-7/26	Composite	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.

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SUPERVISOR T. Kwasnocki DATE 8

WCX-1012 (Mar' ^)

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SPECIAL ANALYSIS SECTION

REPORT NO. 3

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	7-20-50	8:15 a.m.	Effluent from Water Purification Plant	-	-	-	52 ± 21
24 D	7-22-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	45 ± 21
24 D	7-24-50	8:35 a.m.	Effluent from Water Purification Plant	-	-	-	39 ± 21
24 D	7-26-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	46 ± 21
24 D	6/28-7/26	Composite	Effluent from Water Purification Plant	0	less than 0.2	0.6 ± 1.1	-
24 D	7-26-50	9:45 a.m.	Effluent from Water Purification Plant	-	-	-	71 ± 28
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. Kwanoshi DATE 8-1-50

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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
13 M	7-5-50	10:15 a.m	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
10 M	7-5-50	2:00 p.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
26 M	7/4-7/26	Composite	Drainage from Labs. A, B, C and D	10	-	63	34 ±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. Kwasowski DATE 8-1-50

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 30

REPORT OF WATER SURVEY ANALYSES

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION		COUNTS PER MINUTE PER gm.	
						ALPHA	BETA
22 M-E	7-5-50	8:55 a.m.	Mud from Poplar Creek immediately below powerhouse effluent	0.63 micrograms per gram		-	50
13 M-E	7-5-50	10:15 a.m	Mud from Clinch River one mile down stream of last K-25 effluent	0.25 micrograms per gram		2.7 ± 0.2	39
1 M-E	7-5-50	10:40 a.m	Mud from Poplar Creek inlet N.E. of K-303-8	5.00 micrograms per gram		-	113
13 M-E	7-11-50	10:50 a.m	Mud from Clinch River one mile down stream of last K-25 effluent	0.25 micrograms per gram		-	-
22 M-E	7-11-50	1:00 p.m.	Mud from Poplar Creek immediately below powerhouse effluent	1.88 micrograms per gram		-	-
22 M-E	7-11-50	2:00 p.m.	Mud from Poplar Creek at junction with Clinch River	0.63 micrograms per gram		-	-
11 M-E	7-11-50	3:00 p.m.	Mud from Poplar Creek opposite K-131 drain	1.50 micrograms per gram		-	-
All mud results per gram dry weight.							

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SUPERVISOR T. Kusnoski DATE 7-27-50

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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	6-28-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	15 ± 21
24 D	6-30-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	10 ± 21
24 D	7-2-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	5 ± 21
24 D	7-4-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	12 ± 21
24 D	7-6-50	8:20 a.m.	Effluent from Water Purification Plant	-	-	-	12 ± 21
24 D	7-8-50	8:20 a.m.	Effluent from Water Purification Plant	-	-	-	36 ~~38~~ ± 21 WS
24 D	7-10-50	8:20 a.m.	Effluent from Water Purification Plant	-	-	-	27 ± 21
24 D	7-12-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	19 ± 21
24 D	7-14-50	8:25 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	7-16-50	8:20 a.m.	Effluent from Water Purification Plant	-	-	-	32 ± 21
24 D	7-18-50	10:30 a.m	Effluent from Water Purification Plant	-	-	-	38 ± 21
Note: Beta counts per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwasowski DATE 7-25-50

WCX-1012 (Mar[illegible])

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes J. C. Barton File
J. P. Murray D. M. Lang Laboratory Central Files K25RC

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	7-13-50	10:45 a.m.	K-1004-J "Normally Cold" drum before				
			dumping			3.6 ± 1.1	204
Volume of liquid in tank when sampled = 3580 gallons							
Total millicuries in tank =			0.012				
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

37

SUPERVISOR T. Kwasowski DATE 7-18-50

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. -2

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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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	6-13-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	6-14-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	6-16-60	8:20 a.m.	Effluent from Water Purification Plant	-	-	-	49 ±21
24 D	6-18-50	10:00 a.m.	Effluent from Water Purification Plant	-	-	-	23 ±21
24 D	6-19-50	8:35 a.m.	Effluent from Water Purification Plant	-	-	-	6 ± 21
24 D	6-21-50	8:28 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	6-22-50	8:25 a.m.	Effluent from Water Purification Plant	-	-	-	~~10~~ ±21
24 D	6-24-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	16 ±21
24 D	6-26-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	39 ±21
24 D	5/27-6/26	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.3 ±1.1	-

Note: Alpha count per minute per 100 ml. at 50% geometry.
Beta count per minute per 100 ml. at 100% geometry.

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38

SUPERVISOR T. Kwanowski DATE 7-5-50

WCX-1012 (Ma)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 30

REPORT OF WATER SURVEY ANALYSES

Distribution:

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J. P. Murray — Laboratory Central Files K25RC

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
13 M	6-5-50	9:35 a.m	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
10 M	6-5-50	3:00 p.m.	Clinch River immediately at S-50 Outfall	0	-	-	-	-
26 M	6-5/6-26	Composite	Drainage from Labs A, B, C and D	20	-	3.3 ± 1.1	26 ± 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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39

SUPERVISOR T. Kwasowski DATE 7-5-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 3.

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	pH
22 W	5/31-6/3	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	65±26	7.
16 W	6-3-50	9:00 a.m.	K-25 Cafeteria Cooking Water	0	-	0.0±1.1	55±22	7.
22 W	6/5-6/9	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	35±21	7.
16 W	6-9-50	9:00 a.m.	K-25, K-27 Drinking Water from K-1021	0	-	0.2±1.1	76±30	7.
16 W	6-14-50	9:00 a.m.	K-25, K-27 Drinking Water from K-704	0	-	0.0±1.1	50±21	7.
22 W	6/12-6/16	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	43±21	7.
16 W	6-19-50	9:55 a.m.	K-25, K-27 Drinking Water from K-402-6	0	-	0.1±1.1	19±21	7.
22 W	6-19/6-23	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	27±21	7.
16 W	5/31-6/26	Composite	K-25, K-27 Drinking Water	-	Less than 0.2	-	-	-
16 W	6-22-50	-	K-25, K-27 Drinking Water from K-1002	0	-	0.5±1.1	42±21	7.
14 W	6/5-6/26	Composite	Influent to Sewage Disposal Plant	0	-	-	-	-
Note: Alpha count per minute per 100 ml. at 50% geometry.								
Beta count per minute per 100 ml. at 100% geometry.								

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SPECIAL ANALYSIS SECTION

REPORT NO. _____

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
30 W	6-20-50	8:00 a.m.	K-1004-J, "Normally Cold" drum				
			before dumping	-	-	4.9 ± 1.1	355
Volume of liquid in tank when sampled 3500 gallons							
Total millicuries in tank = 0.002							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kurosaki DATE 6-26-50

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 3

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray Laboratory Central Files K25RC

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION ~~XXXXXX~~	~~XXXXXXX XXXXXXXXXXXX XXXXXX~~	COUNTS PER MINUTE PER ~~XXXXX~~ gram ALPHA	BETA
13 M-E	6-5-50	9:35 a.m.	Mud from Clinch River, one mile downstream of last K-25 effluent	0.25 micrograms per gram		3.9 ± 0.3	28
1 M-E	6-5-50	10:00 a.m	Mud from Poplar Creek inlet N.E. of K-303-8	3.75 micrograms per gram			92
22 M-E	6-5-50	3:45 p.m	Mud from Poplar Creek immediately below Powerhouse effluent	0.63 micrograms per gram			82
11 M-E	6-12-50	1:30 p.m	Mud from Poplar Creek opposite K-27 Drain	0.50 micrograms per gram			85

All mud results per gram dry weight

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SUPERVISOR T. Kuesnel

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REPORT NO. _____

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	5-27-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	26 ± 21
24 D	5-29-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	15 ± 21
24 D	5-31-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	60 ± 21
24 D	6-2-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	37 ± 21
24 D	6-4-50	8:00 a.m.	Effluent from Water Purification Plant	-	-	-	52 ± 21
24 D	6-6-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	28 ± 21
24 D	6-7-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	38 ± 21
24 D	6-8-50	8:40 a.m.	Effluent from Water Purification Plant	-	-	-	44 ± 21
24 D	6-9-50	8:25 a.m.	Effluent from Water Purification Plant	-	-	-	60 ± 24
24 D	6-10-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	42 ± 21
24 D	6-11-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	28 ± 21
24 D	6-12-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	30 ± 21
Note: Beta counts per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kuwanoki DATE 6-14-50

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SPECIAL ANALYSIS SECTION

REPORT NO. -97

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray 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
32 D	6-8-50	8:30 a.m.	Influent to Water Purification Plant	-	-	-	50 ± 21

Note: Beta counts per minute per 100 ml. at 100% geometry.

Sample requested by telephone call from Radiation Hazards.

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44

SUPERVISOR T. Kwasnoski DATE 6-13-50

WCX-1012 (Ma)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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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 D	5-17-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
24 D	5-19-50	8:35 a.m	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	5-21-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	5-23-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	5-25-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	5 ± 21
24 D	4/27-5/25	Composite	Effluent from Water Purification Plant	0	less than 0.2	0.0 ± 1.1	-
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

8063

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SUPERVISOR T. Kwasnoski DATE 6-2-50

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 2

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray 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	pH
22 W	4/24-4/28	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	5 ± 21	8.
16 W	5-2-50	9:30 a.m	K-25 Cafeteria Cooking Water	0	-	0.2 ± 1.6	0 ± 21	7.
22 W	5/1-5/5	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	0 ± 21	7.
16 W	5-8-50	3:20 p.m	K-25, K-27 Drinking Water from K-1515	0	-	0.0 ± 1.1	16 ± 21	7.
22 W	5/8-5/12	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	5 ± 21	7.
16 W	5-15-50	12:30 p.m	K-25, K-27 Drinking Water from K-1001	0	-	0.2 ± 1.1	35 ± 21	7.
22 W	5/15-5/19	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	0 ± 21	7.
16 W	5-22-50	9:00 a.m	K-25, K-27 Drinking Water from K-802	0	-	0.0 ± 1.1	12 ± 21	7.
16 W	5/1-5/26	Composite	Drinking Water spot chedk	-	less than 0.2	-	-	-
22 W	5/22-5/26	Composite	Poplar Creek immediately below power-house effluent	0	-	-	10 ± 21	7.

Note: Alpha count per minute per 100 ml. at 50% geometry.

Beta count per minute per 100 ml. at 100% geometry.

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SUPERVISOR T. Kwasnoski DATE 2-50

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WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray Laboratory Central Files K25RC

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
13 M	5-1-50	12:15 p.m	Clinch River one mile downstream of last K25 effluent	0	-	-	-	7.[illegible]
10 M	5-1-50	1:15 p.m	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
26 M	5-1/5-25	Composite	Drainage from Labs. A, B, C and D	40	-	1 ± 1.1	4 ± 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. Kwasnoski DATE 6-2-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 25.

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray J. C. Barton
H. W. Carnes Laboratory Central Files K25RC

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
30 W	5-16-50	3:30 p.m.	K-1004-J "Normally Cold" drum before				
			dumping	-	-	3.1±1.1	2868
Volume of liquid in tank when sampled 3320 gallons							
Total millicuries in tank - 0.162							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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48

SUPERVISOR T. Kwiatkowski DATE 5-18-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 2

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	4-27-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	4-29-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	2 ±21
24 D	5-1-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ±21
24 D	5-3-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	5-5-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	0 ±21
24 D	5-7-50	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	7 ±21
24 D	5-9-50	8:40 a.m.	Effluent from Water Purification Plant	-	-	-	7 ±21
24 D	5-11-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	14 ±21
24 D	5-13-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	21 ±21
24 D	5-15-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	16 ±21

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49

SUPERVISOR [illegible] DATE 5-17-50

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WORKS LABORATORY DEPARTMENT

REPORT NO. 291

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

H. F. Henry
J. P. Murray
H. W. Carnes

Laboratory Central Files K25RC
File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXX	XXXXXXX XXXXXXXXXXXXX XXXXX	COUNTS PER MINUTE PER XXXXX gram	
						ALPHA	BETA
1 ME	5-1-50	1:25 p.m	Poplar Creek inlet N.E. of K-303-8 Mud	12.50 micrograms per gram			216
13 ME	5-1-50	10:30 a.m	Clinch River 1 mile downstream from last K25 effluent Mud	0.18 micrograms per gram		1.9 ± 0.2	53
22 ME	5-1-50	2:00 p.m	Poplar Creek before junction with Clinch River (at powerhouse effluent) Mud	1.88 micrograms per gram			47
All mud results are per gram dry wt.							

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50

SUPERVISOR T. Kwasnoski DATE 5-15-50

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REPORT NO. 29

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SPECIAL ANALYSIS SECTION

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	pH
22 W	3/27-3/31	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	30 ± 21	7.
16 W	4-3-50	12:50 p.m	K25, K27 Drinking Water from K-1035	0	-	0.2 ± 1.1	12 ± 21	7.
22 W	4/3-4/7	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	6 ± 21	7.
16 W	4-10-50	9:30 a.m.	K25 Cafeteria Cooking Water	0	-	0.1 ± 1.1	13 ± 21	7.
22 W	4/10-4/14	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	5 ± 21	7.
16 W	4-17-50	9:20 a.m	K25, K27 Drinking Water from K-1029	0	-	0.0 ± 1.1	0 ± 21	7.
22 W	4/17-4/21	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	5 ± 21	7.
14 W	4/3-4/26	Weekly Composite	Influent to Sewage Disposal Plant	0	-	-	-	-
16 W	4/26/50	9:00 a.m	K25, K27 Drinking Water from K-1004-D	0	-	0.0 ± 1.1	0 ± 21	7.
16 W	4/3-4/26	Weekly Composite	K25, K27 Drinking Water	-	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.

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51

SUPERVISOR T. Kwasnoski DATE 5-1-50

NCX-1012 (Mar'

REPORT NO. 28

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray — 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 D	4-19-50	9:00 a.m	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	4-21-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	6 ± 21
24 D	4-23-50	9:00 a.m	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	4-25-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	5 ± 21
24 D	3/30-4/25	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.0 ± 1.1	-
24 D	10/21/49		Effluent from Water Purification Plant	Six Month Recount			16 ± 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. Kusonoki DATE 5-1-50

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WCX-1012 (Mar'

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Concentration XXXXX	XXXXXXX XXXXXXXXXXX XXXXX.	Counts per Minute per XXXXXX gram	
						Alpha	Beta
13 ME	4-3-50	10:30 a.m	Mud from Clinch River one mile downstream of last K25 effluent	0.39 micrograms per gram		3.8 ± 0.4	175
22 ME	4-5-50	9:00 a.m	Mud from Poplar Creek immediately below powerhouse effluent	1.25 micrograms per gram		-	112
1 ME	4-5-50	9:10 a.m.	Mud from Poplar Creek N.E. of K-303-8	12.50 micrograms per gram		-	209
11 ME	4-10-50	2:20 p.m.	Mud from Poplar Creek opposite K-27 drain	1.00 micrograms per gram		-	59

All mud results per gram dry weight.

Alpha counts per minute per gram at 50% geometry.

Beta counts per minute per gram at 100% geometry.

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53

SUPERVISOR T. Kwasnoski DATE 5-1-50

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 28

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry — Laboratory Central Files K25RC
J. P. Murray — 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
13 M	4-3-50	10:30 a.m	Clinch River one mile down stream of last K25 effluent	0	-	-	-	7.8
10 M	4-3-50	3:10 p.m	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
26 M	4/3-4/28	Weekly Composite	Drainage from Labs A, B, C, and D	40	-	Sample Exhausted	40 ±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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54

SUPERVISOR T. Kuwasaki DATE 5-1-50

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 286

DISTRIBUTION:

H. F. Henry✓ Laboratory Central Files K25RC
J. P. Murray 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 D	3-30-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	29 ± 21
24 D	4-1-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	18 ± 21
24 D	4-3-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	4-5-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	4-7-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	6 ± 21
24 D	4-9-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	4-11-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ± 21
24 D	4-13-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	4-15-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	4-17-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	2 ± 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. Kuroonoshi DATE 4-21-50

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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
30 W	4-10-50	8:00 a.m.	K-1004-J, Normally Cold drum before				
			dumping	-	-	6±1.1	10,036
Volume of liquid in tank when sampled = 3500 gallons							
Total millicuries in tank = 0.599							
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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56

SUPERVISOR T. Kwasnoski DATE 4-[illegible]-50

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REPORT NO. 28

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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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
13 M	3-6-50	9:20 a.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.8
10 M	3-6-50	1:30 p.m.	Clinch River immediately at S-50 sewer outfall	1	-	-	-	-
26 M	2/27-3/28	Weekly Composite	Drainage from Labs. A, B, C and D	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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57

SUPERVISOR T. Kwanoski DATE 3-11-50

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REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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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	3-16-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
24 D	3-18-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	3-20-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	3-22-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	15 ± 21
24 D	3-24-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	16 ± 21
24 D	3-26-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	16 ± 21
24 D	3-28-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	21 ± 21
24 D	2/26-3/28	Composite	Effluent from Water Purification Plant	0	less than 0.2	0.1 ± 1.1	-

Note: Alpha count per minute per 100 ml. at 50% geometry.
Beta count per minute per 100 ml. at 100% geometry.

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58

SUPERVISOR T. Kwasnoski DATE 3-[illegible]-50

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REPORT NO. 28

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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J. P. Murray 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	pH
16 W	2-28-50	9:20 a.m.	K-25, K-27 Drinking Water from K-1001-A	0	-	0.0±1.1	3±21	7.4
22 W	2-27/3-3	Composite	Poplar Creek immediately below power-house effluent	0	-	-	8±21	7.8
16 W	3-6-50	10:05 a.m	K-25 Cafeteria Cooking Water	0	-	0.1±1.1	6±21	7.3
22 W	3-6/3-10	Composite	Poplar Creek immediately below power-house effluent	0	-	-	9±21	7.4
16 W	3-13-50	8:50 a.m.	K-25, K-27 Drinking Water from K-1024	0	-	0.1±1.1	9±21	7.1
22 W	3/13-3/17	Composite	Poplar Creek immediately below power house effluent	0	-	-	25±21	7.5
16 W	3-20-50	9:30 a.m.	K-25, K-27 Drinking Water from K-1003	0	-	0.0±1.1	12±21	7.8
22 W	3/20-3/24	Composite	Poplar Creek immediately below power-house effluent	0	-	-	35±21	7.8
16 W	3-27-50	9:30 a.m.	K-25, K-27 Drinking Water from K-303-6	0	-	0.1±1.1	19±21	7.3
16 W	2/28-3/27	Weekly Composite	K-25, K-27 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.								

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SUPERVISOR T. Kwasnoski DATE 3-11-50

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REPORT OF WATER SURVEY ANALYSES

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J. P. Murray Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXXX	XXXXXXXXX XXXXXXXXXXXXX XXXXXXXX	COUNTS PER MINUTE PER XXXXXX gram	
						ALPHA	BETA
13 M-E	3-6-50	9:25 a.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.5 micrograms per gram		3.4 ± 0.4	292
1 M-E	3-6-50	1:00 p.m.	Mud from Poplar Creek inlet N.E. of K-303-8	12.5 micrograms per gram		-	290
22 M-E	3-6-50	1:25 p.m.	Mud from Poplar Creek immediately below Powerhouse effluent	1.5 micrograms per gram		-	226
All mud results per gram dry weight.							

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60

SUPERVISOR T. Kwasnoski DATE 3-11-50

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REPORT NO. 280

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray D. M. Lang 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	3-7-50	9:00 a.m.	K-1004-J Normally Cold drum before				
			dumping	-	-	2.3±1.1	1167
Volume of liquid in tank when sampled = 3400 gallons							
Total millicuries in the tank = 0.068							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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6

SUPERVISOR T. Kuroosaki DATE 3-21-50

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REPORT OF WATER SURVEY ANALYSES

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J. P. Murray File
H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION ~~XXXXX~~	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
32 Y-E	2-20-50	12:45 p.m	Acid dilution pit west of K-1024 (249 ≠ 86)	No sludge obtainable			
32 Y-E	3-1-50	10:05 a.m.	Sludge and clay from acid dilution pit west of K-1004-D (274 ≠ 98)	150 micrograms per gram	(Sample was approximately 95% clay.)		
32 Y-E	3-1-50	10:15 a.m.	Sludge from acid dilution pit north of K-1004-C (276 ≠ 70)	10 micrograms per gram	(Very little sludge in a shallow pit.)		
32 Y-E	2-20-50	1:35 p.m	Sludge from acid dilution pit north of K-1004-A (277 ≠ 50)	88 micrograms per gram			
32 Y-E	2-20-50	1:40 p.m	Sludge from acid dilution pit south-east of K-1004-A (279 ≠ 29)	250 micrograms per gram			
32 Y-E	2-20-50	1:50 p.m	Acid dilution pit south of K-1004-B (279 ≠ 11)	No sludge obtainable			
32 Y-E	2-20-50	1:45 p.m	Sludge from acid dilution pit west of K-1004-B (278 ≠ 38)	75 micrograms per gram			
32 Y-E	2-20-50		Acid dilution pit at K-1005 (278 ≠ 76)	No sludge obtainable			
All results per gram dry weight.							

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62

SUPERVISOR T. Kwasnoski DATE 3-17-50

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 2

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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J. P. Murray 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 D	2-26-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	2-28-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	3-2-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	3-4-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	11 ± 21
24 D	3-6-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	3-8-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	3-10-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21
24 D	3-12-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	3-14-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	19 ± 21
Note: Beta counts per minute per 100 ml. at 100% geometry.							

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MAR 20 1950

63

SUPERVISOR T. Kusonoki DATE 3-17-50

WCX-1012 (Mar'

REPORT No. 277

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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J. P. Murray — 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	pH
22 W	2-13/2-17	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	6 ± 21	7.[illegible]
16 W	2-17-50	9:00 a.m.	K-25, K-27 Drinking Water from K-1004-D	0	-	0.3 ± 1.1	2 ± 21	7.[illegible]
16 W	2-20-50	9:00 a.m.	K-25, K-27 Drinking Water from K-1030	0	-	0.0 ± 1.6	16 ± 21	7.[illegible]
16 W	2-1/2-24	Composite	K-25, K-27 Drinking Water	-	Less than 0.2	-	-	-
14 W	2-1/2-24	Composite	Influent to Sewage Disposal Plant	0	-	-	-	-
22 W	2/20-2/24	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0 ± 21	7.[illegible]

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 E. B. Olszewski DATE 2-28-50

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 276

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry — Central Files
J. P. Murray — 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 D	2-14-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	2 ± 21
24 D	2-16-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	2-18-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	2-20-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
24 D	2-22-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	2-24-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	1/29-2/24	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.6 ± 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 C. B. [illegible] DATE 2-28-50

65

WCX-1012 (Mar'

REPORT NO. 275

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry Central Files
J. P. Murray 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	pH
13 M	2-1-50	3:30 p.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.[illegible]
10 M	2-22-50	9:25 a.m.	Clinch River immediately at S-50 Sewer Outfall	5	-	-	-	-
26 M	2/1-2/24	Composite	Drainage from Labs., A. B. C. & D	5	-	1.9 ± 1.6	31 ± 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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66

SUPERVISOR E. B. Olszewski DATE 2-[illegible]-50

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SPECIAL ANALYSIS SECTION

REPORT NO. 2

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXX	XXXXXXXX XXXXXXXXXXXX XXXXX	COUNTS PER MINUTE PER XXXXX Gram	
						ALPHA	BETA
13 ME	2-1-50	3:30 p.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.25 micrograms per gram		3.7 ±0.3	250
1 ME	2-7-50	9:00 a.m.	Mud from Poplar Creek inlet N. E. of K-303-8	7.50 micrograms per gram		-	312
22 ME	2-13-50	9:00 a.m.	Mud from Poplar Creek immediately below powerhouse effluent	2.50 micrograms per gram		-	252
11 ME	No Sample taken. Boat not ready in time.						
All mud results reported per gram dry weight.							
Alpha counts per minute per gram at 50% geometry.							
Beta counts per minute per gram at 100% geometry.							

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SUPERVISOR [signature] DATE 2-27-50

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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	pH
16 W	2-2-50	2:00 p.m.	K-25, K-27 Drinking Water from K-1301	0	-	0 ± 1.1	0 ± 21	6.9
22 W	1/30 - 2-3/50	Composite	Poplar Creek immediately below power-house effluent	0	-	-	1 ± 21	7.5
16 W	2-7-50	10:00 a.m	K-25 cafeteria cooking water	0	-	0 ± 1.1	0 ± 21	7.4
22 W	2/6 2/10/50	Composite	Poplar Creek immediately below power-house effluent	0	-	-	10 ± 21	7.7
Note: Alpha count per minute per 100 ml. at 50% geometry.								
Beta count per minute per 100 ml. at 100% geometry.								

SUPERVISOR E. B. Olszewski DATE 2-15-50

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 272

REPORT OF WATER SURVEY ANALYSES

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H. Carnes

211D. [illegible] = 5 [illegible]

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	1-29-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
24 D	1-31-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	2 ± 21
24 D	2-2-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	2-4-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	2-6-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	6 ± 21
24 D	2-8-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21
24 D	2-10-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	11 ± 21
24 D	2-12-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR E. C. Kizewski DATE 2-15-50

WCX-1012 (Mar

REPORT No. 271

WORKS LABORATORY DEPARTMENT

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REPORT OF WATER SURVEY ANALYSES

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J. P. Murray J. C. Barton
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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	1-31-50	10:30 a.m	K-1004-J, "Normally Cold" drum				
			before dumping	-	-	3.8 ±1.1	571
Volume of liquid in tank when sampled = 3380 gallons							
Total millicuries in tank = 0.033							
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

RECEIVED FEB 8 1950

70

SUPERVISOR E. B. Olszewski DATE 2-[illegible]-50

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H. W. Carnes

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXX	XXXXXXXX XXXXXXXXXXXXXXX XXXXXX	COUNTS PER MINUTE PER XXXXXXX gram	
						ALPHA	BETA
13 ME	1-5-50	3:30 p.m	Clinch River mud one mile downstream of last K-25 effluent	0.6 micrograms per gram		4.3±0.5	450
1 ME	1-9-50	10:30 a.m.	Poplar Creek inlet N.E. of K-303-8 Mud	7.5 micrograms per gram		-	134
22 ME	1-9-50	10:00 a.m.	Poplar Creek immediately below power house effluent, Mud	2.5 micrograms per gram		-	183
11 ME	No Sample	Taken					

Note: All mud results per gram dry weight.

Alpha counts per minute per gm at 50% geometry.

Beta counts per minute per gm. at 100% grometry.

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SUPERVISOR E. B. Olszewski DATE 2-6-50

WCX-1012 (Mar'

REPORT No. 269

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry — Central Files
J. P. Murray — File
H. W. Carter

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
13 M	1-5-50	3:30 p.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
10 M	1-9-50	1:05 p.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
26 M	1/3-1/27	Weekly Composite	Drainage from Labs A, B, C, & D	4	-	3.4 1.1	37 ± 29	-

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

RECEIVED FEB 6 1950

2-2-50

SUPERVISOR _____ DATE _____

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WCX-1012 (Mar'

REPORT No. 2

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry — Central Files
J. P. Murray — 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	pH
16 W	1-5-50	10:00 a.m.	Drinking Water from K-1024	0	-	0.1 ± 1.1	1 ± 21	7.
22 W	1/3-1/6-50	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	2 ± 21	7.
16 W	1-9-50	2:00 p.m.	Cafeteria cooking Water	0	-	0.0 ± 1.1	9 ± 21	7.
22 W	1/9-1/13	Composite	Poplar Creek immediately below Power-house effluent	1	-	-	11 ± 21	7.
16 W	1-16-50	10:17 a.m	Drinking water from K-1001	0	-	0.0 ± 1.1	10 ± 21	7.
22 W	1/16-1/20	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	0 ± 21	7.
16 W	1-23-50	9:35 a.m.	Drinking water from K-1414	0	-	0.2 ± 1.1	5 ± 21	7.
22 W	1/23-1/27	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	16 ± 21	7.
14 W	1/3-1/27	Composite	Influent to Sewage Disposal Plant	1	-	-	-	-
16 W	1/3-1/27	Composite	K-25, K-27 Drinking Water	-	Less than 0.2	-	-	-

Note: Alpha count per minute per 100 ml. at 50% geometry.

Beta count per minute per 100 ml. at 100% geometry.

RECEIVED FEB 6 1950

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SUPERVISOR T. Kwasnoski DATE 2-2-50

WCX-1012 (Mar'

REPORT NO. 267

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry — Central Files
J. P. Murray — 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 D	1-17-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8±21
24 D	1-19-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7±21
24 D	1-21-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	1-23-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	1-25-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	1-27-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	19±21
24 D	12-30-49 1-27-50	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.0±1.1	-

Note: Alpha count per minute per 100 ml. at 50% geometry.
Beta count per minute per 100 ml. at 100% geometry.

RECEIVED FEB 2 1950 RADIATION HAZARDS DEPARTMENT

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SUPERVISOR T. Kwasnoski DATE [illegible]-50

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 2[illegible]

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ Central Files
J. P. Murray 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 D	1-1-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
24 D	1-3-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1±21
24 D	1-5-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8±21
24 D	1-7-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8±21
24 D	1-9-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7±21
24 D	1-11-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	10±21
24 D	1-13-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	2±21
24 D	1-15-50	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0±21
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

RECEIVED JAN 18 1950

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SUPERVISOR T. Kwasnoski DATE 1-18-50

WCX-1012 (Mar'

Report No. 26

Works Laboratory Department

Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ D. M. Lang File
J. P. Murray J. C. Barton
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	1-10-50	8:30 a.m.	K-1004-J Normally Cold drain before				
			dumping	-	-	5.8 ±1.1	593.2
Volume of liquid in the tank when the sample was taken - 3740 gal.							
Total Millicuries in the tank - 0.038							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

RECEIVED JAN 16 1950 RADIATION HAZARDS DEPARTMENT

Supervisor T. Kusonoki Date 1-13-50

WCX-1012 (Mar

REPORT NO. 26

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry ✓ Central Files
J. P. Murray File
H. W. Cannes

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	11/28-12/2	Composite	Poplar Creek immediately below power-house effluent	0	-	-	9 ±21	7.
16 W	12-7-49	12:50 p.m	K-25, K-27 Cafeteria Cooking Water	0	-	0.0±1.1	0 ±21	7.
22 W	12/5-12/9	Composite	Poplar Creek immediately below power-house effluent	0	-	-	8 ±21	7.
16 W	12-13-49	9:35 a.m.	K-25, K-27 Drinking Water from K-301-3	0	-	0.3 ±1.1	8 ±21	7.
22 W	12/12-12/16	Composite	Poplar Creek immediately below power-house effluent	1	-	-	12 ±21	7.
16 W	12-19-49	-	K-25, K-27 Drinking Water from K-1024	0	-	0.1 ±1.1	12 ±21	7.
22 W	12-19-12-23	8:35 a.m.	Poplar Creek immediately below power-house effluent	0	-	-	15 ±21	7.
14 W	12/7-12/28	Composite	Influent to Sewage Disposal Plant	0	-	-	-	-
16 W	12-28-49	9:30 a.m.	K-25, K-27 Drinking Water from K-303-6	0	-	0.0±1.1	4 ±21	7.
16 W	12/7-12/28	Composite	K-25, K-27 Drinking Water	-	less than 0.2	-	-	-
22 W	12/27-12/30	Composite	Poplar Creek immediately below power-house effluent	0	-	-	0 ±21	7.
Note: Alpha counts per minute per 100 ml. at 50% geometry.								
Beta counts per minute per 100 ml. at 100% geometry.								

SUPERVISOR T. Kwasowski DATE 1-3-50

WCX-1012 (Mar'

REPORT NO. 263

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry — Central Files
J. P. Murray — 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 D	12-14-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	18 ± 21
24 D	12-16-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	12 ± 21
24 D	12-18-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	12-20-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ± 21
24 D	12-22-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ± 21
24 D	12-24-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21
24 D	12-26-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	6 ± 21
24 D	12-28-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
24 D	11/30-12/28	Composite	Effluent from Water Purification Plant	0	less than 0.2	0.0 ± 1.1	-
24 D	12-30-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	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. Kwasowski DATE 1-3-50

WCX-1012 (Mar'4

REPORT NO. 26

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry ✓ Central Files
J. P. Murray 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	pH
10 M	12-5-49	9:00 a.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
13 M	12-5-49	10:10 a.m	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
26 M	12/8-12/28	Composite	Drainage from Labs., A, B, C, & D	4	-	1.7±1.1	51±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. Kwasnoski DATE 1-3-50

WCX-1012 (Mar'4

REPORT No. 2(

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry✓ H. W. Carnes File
J. P. Murray Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXXX	XXXXXX XXXXXXXXXXXXXX XXXXXX	COUNTS PER MINUTE PER XXXXX .gram	
						ALPHA	BETA
22 M-E	12-5-49	9:20 a.m.	Poplar Creek immediately below power-house effluent, Mud	5.00 micrograms per gram		-	214
13 M-E	12-5-49	10:10 a.m	Clinch River one mile downstream of last K-25 effluent, Mud	0.25 micrograms per gram		1.8±0.2	177
1 M-E	12-6-49	3:00 p.m.	Mud Poplar Creek inlet N.E. of K-303-8	10.00 micrograms per gram		-	177
15 M-E	12-13-49	9:00 a.m.	Sludge from Sewage Disposal	39.00 micrograms per gram		-	1111
11 M-E	-	-	No Sample Taken	-		-	-
All mud and sludge results are			per gram dry wt.				

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SUPERVISOR T. Kwasowski DATE 12-28-49

WCX-1012 (Mar'49)

REPORT NO. 2

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

M. F. Henry ✓ H.W. Carnes J. C. Barton File
J. P. Murray D. M. Lang 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	12-7-49	8:45 a.m.	K-1004-J, "Normally Cold" drum before	-	-	5.0 ±1.1	1573
			dumping				
Volume of liquid in tank when sampled = 3380 gallons							
Total millicuries in tank =			0.091				
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 12-22-49

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WCX-1012 (Mar'

REPORT NO. -19

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File

J. P. Murray 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
24 D	*10-21-49		Effluent from Water Purification Plant	-	-	-	20 ± 21
24 D	11-30-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	12-2-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21 ✓
24 D	12-4-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21 ✓
24 D	12-6-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21 ✓
24 D	12-8-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21 ✓
24 D	12-10-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21 ✓
24 D	12-12-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	11 ± 21 ✓
24 D	12-13-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21 ✓

* Disc recounted one month after original count.

Note: Alpha counts per minute per 100 ml. at 50% geometry.

Beta counts per minute per 100 ml. at 100% geometry.

R.C.

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cm

SUPERVISOR T. Kwasnoski DATE 1[illegible]-15-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 258

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray 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	PH
13 M	11-1-49	1:00 p.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.5
10 M	11-28-49	9:00 a.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
26 M	11/7-11/28	Composite	Drainage from Labs., A, B, C and D	3	-	1±1.6	53±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. Kwanoski DATE 12-1-49

WCX-1012 (Ma)

REPORT NO. 2.

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray 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	pH
16 W ✓	11-4-49	9:00 a.m.	K-25 Cafeteria Cooking Water	0	-	0.0±1.1	28±21	7.
16 W ✓	11-8-49	9:00 a.m.	K-25, K-27 Drinking Water from K-1005	0	-	0.1±1.1	11±21	7.
16 W ✓	11-18-49	3:00 p.m.	K-25, K-27 Drinking Water from K-1024	0	-	0 ±1.1	5±21	7.
16 W ✓	11-21-49	10:30 a.m	K-25, K-27 Drinking Water from K-1213	0	-	0 ±1.1	9±21	7.
14 W ✓	11/7-11/28	Composite	Influent to Sewage Disposal Plant	0	-	-	-	-
16 W ✓	11-28-49	10:00 a.m.	K-25, K-27 Drinking Water from K-1034	0	-	0 ±1.1	3±21	7.
16 W ✓	11/4-11/28	Composite	K-25, K-27 Drinking Water	-	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.								

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SUPERVISOR T. Kwasnoski DATE 12-1-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 25

DISTRIBUTION:

H. F. Henry H. W. Carnes File
J. P. Murray 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
24 D	11-22-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	12 ±21
24 D	11-24-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ±21
24 D	11-26-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ±21
24 D	11-28-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	6 ±21
24 D	11/2-11/28	Composite	Effluent from Water Purification Plant	0	less than 0.2	0 ±1.1	-

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

SUPERVISOR T. Kwanoshi DATE 12-1-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray, 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	pH
22 D	10/31-11/4	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	29 ± 21	7.
22 D	11/7-11/11	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	13 ± 21	7.
22 D	11/14-11/18	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	4 ± 21	7.
22 D	11/21-11/25	Composite	Poplar Creek immediately below powerhouse effluent	0	-	-	5 ± 21	7.

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

SUPERVISOR T. Kwasnoski DATE 11-30-49

WCX-1012 (Mar

REPORT No. 2

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:
H. F. Henry ✓ H. W. Carnes J. C. Barton File
J. P. Murray D. M. Lang 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	11-17-49	8:35 a.m.	K-1004-J "Normally Cold" drain before dumping.	-	-	15	1416
Volume of liquid in tank when sampled: 2620 gallons							
Total millicuries in tank =			0.063				
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

SUPERVISOR T. Kwiatowski DATE 11-29-49

WCX-1012 (Mar'

REPORT NO. ;

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION ~~XXXXX~~	~~XXXXXXX XXXXXXXXXXXX XXXXX~~	COUNTS PER MINUTE PER ~~XXXXXX~~ gram	
						ALPHA	BETA
25 M-E-Y	11-7-49	10:25 a.m	Mud from Clinch River above Elza Gate	0.16 micrograms per gm.		-	5
13 M-E	11-1-49	1:00 p.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.29 micrograms per gm.		4.1 ±0.3	9
22 M-E	11-7-49	9:32 a.m.	Mud from Poplar Creek immediately below Powerhouse effluent	2.5 micrograms per gm.		-	176
1 M-E	11-7-49	9:00 a.m.	Mud from Poplar Creek inlet N.E. of K-303-8	7.5 micrograms per gm.		-	112
11 M-E	No sample taken						
Note: All mud results per gram dry wt.							

SUPERVISOR T. Kwasnoski DATE 11-29-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 25

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray 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
24 D	11-1-49	10:20 a.m	Effluent from Water Purification Plant	-	-	-	76 ± 21
24 D	11-2-49	8:25 a.m.	Effluent from Water Purification Plant	-	-	-	54 ± 21
24 D	11-4-49	8:40 a.m.	Effluent from Water Purification Plant	-	-	-	34 ± 21
24 D	11-6-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	16 ± 21
24 D	11-8-49	8:35 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	11-10-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	5 ± 21
24 D	11-12-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	11-14-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
24 D +	11-16-49	9:05 a.m.	Effluent from Water Purification Plant	-	-	-	22 ± 21
24 D	11-18-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
24 D	11-20-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 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. Kusovaki DATE 11-28-49

WCX-1012 (Mar

REPORT NO. 2.

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray 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	pH
16 W	10-5-49	9:35 a.m	Cafeteria Cooking Water	0	-	0.0 ± 1.1	1 ± 21	7.
16 W	10-10-49	9:30 a.m.	Drinking Water from K-1001	0	-	0.0 ± 1.1	11 ± 21	7.
16 W	10-20-49	9:00 a.m.	Drinking Water from K-1004-D	0	-	0.2 ± 1.1	46 ± 21	7.
16 W	10-28-49	3:30 a.m	Drinking Water from K-1414	0	-	0.2 ± 1.1	13 ± 29	7.
14 W	Monthly Composite of Weekly samples		Influent to Sewage Disposal Plant	0	-	-	-	-
16 W	Monthly Composite of Weekly Samples		Drinking water spot check	-	less than 0.2	-	-	-

Note: Alpha count per minute per 100 ml. at 50% geometry.

Beta count per minute per 100 ml. at 100% geometry.

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SUPERVISOR T. Kwasnoski DATE 11-7-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 2

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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	10-21-49	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	49 ± 21
24 D	10-23-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	60 ± 21
24 D	10-25-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	29 ± 21
24 D	10-27-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	12 ± 21
24 D	10-29-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	18 ± 21
24 D	10-31-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	19 ± 21
24 D	Monthly Composite		Effluent from Water Purification Plant	0	less than 0.2	0.2 ± 1.1	-

Note: Alpha count per minute per 100 ml. at 50% geometry.
Beta count per minute per 100 ml. at 100% geometry.

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SUPERVISOR T. Kusunoki DATE 11-7-49

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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	pH
22 D	10- 7-49	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	12 ± 21	7.
22 D	10-14-49	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	11 ± 21	7.
22 D	10-21-49	Composite	Poplar Creek immediately below Power house effluent	0	-	-	47 ± 21	8.
22 D	10-28-49	Composite	Poplar Creek immediately below Power-house effluent	0	-	-	21 ± 21	8.
Note: Alpha count per minute per 100 ml. at 50% geometry.								
Beta count per minute per 100 ml. at 100% geometry.								

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SUPERVISOR T. Kwasnoski DATE 11-7-49

WCX-1012 (Mar

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 2

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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
13 M	10- 3-49	12:45 p.m	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
10 M	10- 4-49	1:00 p.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
26 M	Monthly Composite of Weekly Samples		Drainage from Labs. A, B, C, & D	2	-	0.3±1.5	66±21	-

Note: Alpha count per minute per 100 ml. at 50% geometry.

Beta count per minute per 100 ml. at 100% geometry.

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93

SUPERVISOR T. Kwaskoski DATE 11-7-49

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WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 2.

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
30 W	10-27-49	9:30 a.m	K-1004-J, "Normally Cold" drain before				
			dumping	-	-	13.2 ± 1.1	1229
Volume of liquid in tank when sampled = 2360 gallons							
Total millicuries in tank =			0.049				
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

SUPERVISOR T. Kwanoshi DATE [illegible]-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 2

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION ~~XXXXX~~	~~XXXXXX XXXXXXXXXXXX XXXXX~~	COUNTS PER MINUTE PER ~~XXXXX~~ gram	
						ALPHA	BETA
13 M-E	10-3-49	12:45 p.m	Mud, Clinch River one mile downstream of last K-25 effluent	0.18 micrograms per gram		1.9 ± 0.2	55
22 M-E	10-4-49	2:00 p.m.	Mud, Poplar Creek immediately below Powerhouse effluent	3.00 micrograms per gram		-	123
24 M-E	10-5-49	9:20 a.m.	Sludge from settling basin at K-1515	1.25 micrograms per gram		14.0 ± 1.1	562
1 M-E	10-5-49	10:00 a.m.	Mud from Poplar Creek inlet N.E. of K-303-8	7.50 micrograms per gram		-	120
6 M-E	10-5-49	10:15 a.m	Mud from Poplar Creek opposite Blair Gate	0.40 micrograms per gram		-	0
11 M-E	10-11-49	10:05 a.m	Mud from Poplar Creek opposite K-27 drain (K-131)	0.75 micrograms per gram		-	0
24 M-E	10-13-49	9:15 a.m.	Sludge from sand filters at K-1515	1.38 micrograms per gram		3.8 ± 0.3	835
All results per gram dry weight.							

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SUPERVISOR T. Kwasnoski DATE 11-2-49

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SPECIAL ANALYSIS SECTION

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	10- 1-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	10- 3-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
24 D	10- 5-49	9:00 a.m.	Effluent from Water PurificationPlant	-	-	-	9 ± 21
24 D	10- 7-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	5 ± 21
24 D	10- 9-49	9:00a.m.	Effluent from Water Purification Plant	-	-	-	8 ± 21
24 D	10-11-49	10:00 a.m	Effluent from Water Purification Plant	-	-	-	10 ± 21
24 D	10-13-49	10:00 a.m	Effluent from Water Purification Plant	-	-	-	10 ± 21
24 D	10-15-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
24 D	10-17-49	9:00 a.m	Effluent from Water Purification Plant	-	-	-	4 ± 21
24 D	10-19-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ± 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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96

SUPERVISOR E. B. Olszewski DATE 10-25-49

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SPECIAL ANALYSIS SECTION

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
30 W	10-4-49	9:35 a.m.	K-1004-J, Normally Cold drain before				
			dumping	-	-	15 ± 1.1	4464
	Volume of liquid in the tank when sampled = 2580 gal.						
	Total millicuries in the tank = 0.1963						
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. Kusaroski DATE 10-7-49

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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	9-23-49	8:10 a.m.	Effluent from Water Purification Plant	-	-	-	21 ± 21
32 D	9-23-49	8:20 a.m.	Influent to Water Purification Plant	-	-	-	35 ± 21
~~24~~D	9-25-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	41 ± 21
32 D	9-25-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	40 ± 21
~~24~~ D	9-27-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	15 ± 21
32 D	9-27-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	13 ± 21
32 ~~23~~ D	9-29-49	8:30 a.m.	Influent to Water Purification Plant	-	-	-	12 ± 21
~~24~~ D	9-29-49	8:50 a.m.	Effluent from Water Purification Plant	-	-	-	19 ± 21
32 D	9/1-9/29	Composite	Influent to Water Purification Plant	0	less than 0.2	0.2 ± 1.1	-
~~24~~ D	9/1-9/29	Composite	Effluent from Water Purification Plant	0	less than 0.2	0.3 ± 1.1	-
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwasnoski DATE 10-5-49

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REPORT No. 24 rhy

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REPORT OF WATER SURVEY ANALYSES

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H. F. Henry ✓ H. W. Carnes 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	pH
16 W	9-8-49	8:25 a.m.	K-25, K-27 Drinking Water from K-1002	0	-	0.3 ± 1.1	11 ± 21	7.6
16 W	9-12-49	9:55 a.m.	K-25, K-27 Drinking Water from K-1004-D	0	-	0.3 ± 1.1	4 ± 21	7.3
16 W	9-19-49	1:10 p.m.	K-25, K-27 Drinking Water from K-1005	0	-	0.0 ± 1.1	17 ± 21	7.2
16 W	9-26-49	9:50 a.m.	K-25, K-27 Drinking Water from K-1131	0	-	0.1 ± 1.1	30 ± 21	7.6
16 W	9/8 - 9/26	Composite	K-25, K-27 Drinking Water	-	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.								

SUPERVISOR T. Kuwanobe DATE 10-5-49

WCX-1012 (Mar'

REPORT No. 241

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray 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	pH
22 D	8/29-9/2	Composite	Poplar Creek below powerhouse effluent	0	-	-	5 ± 21	8.0
22 D	9/5-9/9	Composite	Poplar Creek below powerhouse effluent	0	-	-	16 ± 21	7.9
22 D	9/12-9/16	Composite	Poplar Creek below powerhouse effluent	0	-	-	9 ± 21	*
22 D	9/19-9/23	Composite	Poplar Creek below powerhouse effluent	0	-	-	34 ± 21	7.8
22 D	9/26-9/30	Composite	Poplar Creek below powerhouse effluent	0	-	-	0 ± 21	7.9
* pH sample destroyed.								
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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100

SUPERVISOR T. Kusanoski DATE 10-5-49

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SPECIAL ANALYSIS SECTION

REPORT NO. 24

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray Central Files

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXXX	XXXXXXXX XXXXXXXXXXXX XXXXXX	COUNTS PER MINUTE PER XXXXXX Gram	
						ALPHA	BETA
13 M-E	9-1-49	1:30 p.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.13 micrograms per gram		3.6	93
22 M-E	9-2-49	1:30 p.m.	Mud from Poplar Creek immediately below Powerhouse effluent	2.50 micrograms per gram		-	135
1 M-E	9-2-49	2:00 p.m.	Mud from Poplar Creek inlet N.E. of K-303-8	10.00 micrograms per gram		-	0
24 M-E	9-7-49	8:50 a.m.	Sludge from sand filters at K-1515 (S.E. Corner)	0.50 micrograms per gram		5.3 ± 0.4	441
24 M-E	9-8-49	10:15 a.m.	Sludge from N.E. Corner of settling basins at K-1515	3.12 micrograms per gram		14.1 ± 1.1	760

Note: Results of mud and sludge samples calculated on basis of one gram dry weight.

SUPERVISOR

WCX-1012 (Mar

REPORT No. 2,1

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

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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
13 M	9-6-49	10:30 a.m	Clinch River one mile downstream of last K-25 effluent.	0	-	-	-	7.6
10 M	9-6-49	2:30 p.m.	Clinch River immediately at S-50 Sewer Outfall	1	-	-	-	-
14 M	9/5-9/26	Composite	Influent to Sewage Disposal Plant	1	-	-	-	-
26 M	9/5-9/27	Composite	Drainage from Labs A, B, C, D	1	-	2.2 ± 1.1	24 ± 29	-
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

WCX-1012 (Ma

REPORT NO. Hy

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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J. P. Murray Central 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
✓32 D	9-9-49	9:10 a.m.	Influent to Water Purification Plant	-	-	-	19 ± 21
✓32 D	9-11-49	9:05 a.m.	Influent to Water Purification Plant	-	-	-	3 ± 21
✓24 D	9-11-49	9:15 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21
✓24 D	9-13-49	8:40 a.m.	Effluent from Water Purification Plant	-	-	-	7 ± 21
✓32 D	9-13-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	12 ± 21
✓24 D	9-15-49	8:45 a.m.	Effluent from Water Purification Plant	-	-	-	14 ± 21
✓32 D	9-15-49	8:55 a.m.	Influent to Water Purification Plant	-	-	-	11 ± 21
✓24 D	9-17-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 21
✓32 D	9-17-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	12 ± 21
✓24 D	9-19-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	10 ± 21
32 D	9-19-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	4 ± 21
✓24 D	9-21-49	8:35 a.m.	Effluent from Water Purification Plant	-	-	-	27 ± 21
✓32 D	9-21-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	22 ± 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 E. B. [illegible]

10-4-49

WCX-1012 (Mar'

REPORT NO. 2[illegible]

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J. P. Murray F. W. Hurd Central File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION XXXXXX	XXXXXXXX XXXXXXXXXXXXXX XXXXXXX	XXXXXXXXXXXXXXXX XXXXXXXXXXX XXXXXXX	XXXXX
✓32 Y-E	9-15-49	1:35 p.m.	Sludge from acid dilution pit west of K-1004-D, 274 + 98	875 micrograms per gm. dry weight			
✓32 Y-E	9-15-49	1:55 p.m.	Sludge from acid dilution pit north of K-1004-C, 276 + 70	19 micrograms per gm. dry weight			
✓32 Y-E	9-15-49	2:05 p.m.	Sludge from acid dilution pit north of K-1004-A, 277 + 50	84 micrograms per gm. dry weight			
32 Y-E	9-15-49	2:15 p.m.	SLUDGE from acid dilution pit south-east of K-1004-A, 278 + 29	375 micrograms per gm. dry weight			
32 Y-E	9-15-49	2:20 p.m.	Sludge from acid dilution pit south of K-1004-B, 279 + 11	750 micrograms per gm. dry weight			
32 Y-E	9-15-49	2:25 p.m.	Acid dilution pit west of K-1004-B, 278 + 38	No sludge in this pit.			

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104

SUPERVISOR T. Kwasnoski DATE 9-23-49

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J. P. Murray D. M. Lang Central 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
30 W	9-12-49	11:15 a.m	K-1004-J, "Normally Cold" drain				
			before dumping	-	-	3.4±1.1	812
Volume of liquid in tank when sampled - 4140 gallons							
Total millicuries in tank -			0.057				
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. Kuwayoshi DATE 9-21-49

WCX-1012 (Mar

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 23

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J. P. Murray G. H. Giboney 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
24 D	8/1-8/31	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.2±1.1	-	-
32 D	8/1-8/31	Composite	Influent to Water Purification Plant	0	Less than 0.2	0.0±1.1	-	-
24 D	9-1-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	6 ±21	-
32 D	9-1-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	10± 21	-
24 D	9-3-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	8 ±21	-
32 D	9-3-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	1 ±21	-
24 D	9-5-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	4 ±21	-
32 D	9-5-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	7± 21	-
24 D	9-7-49	8:35 a.m.	Effluent from Water Purification Plant	-	-	-	14± 21	-
32 D	9-7-49	8:50 a.m.	Influent to Water Purification Plant	-	-	-	8 ±21	-
24 D	9-9-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	12 ±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. Kwanoski DATE 9-19-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 2

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes J. C. Barton File
J. P. Murray D. M. Lang Central 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
✓30 W	9-6-49	8:20 a.m.	K-1004-J, "Normally Cold" drain				
			before dumping	-	-	14 ± 1.1	2660
Volume of liquid in tank when sampled = 4140 gallons							
Total no. millicuries in tank = 0.188							
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 9-19-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 2

RECEIVED SEP 20 1949 RADIATION HAZARDS DEPARTMENT

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray Central 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
16 W	8-26-49	9:15 a.m.	Drinking Water from K-1410	0	-	0.1 ± 1.1	25 ± 21	7.
12 W	8-29-49	9:50 a.m.	Clinch River upstream to K-25	-	-	0.1 ± 1.1	-	7.
13 W	8-29-49	10:15 a.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	8.
10 W	8-30-49	3:15 p.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
16 W	8-30-49	3:30 p.m.	Drinking Water from K-131	0	-	0.0 ± 1.1	17 ± 21	7.
1 W	8-30-49	3:35 p.m.	Poplar Creek inlet N.E. of K-303-8	1	-	-	-	-
16 W	8/1-8/31	Composite	K-25, K-27 Drinking Water	-	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.								

SUPERVISOR T. Kusanoski DATE 9-19-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 23

RECEIVED SEP 8 RADIATION HAZARDS DEPARTMENT

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray Central File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION, ~~XXXXX~~	~~XXXXXXX~~ ~~XXXXXXXXXX~~ ~~XXXXXXXX~~	COUNTS PER MINUTE PER ~~XXXXXX~~ gram	
						ALPHA	BETA
✓ 13 ME	8-17-49	9:00 a.m.	Mud from Clinch River one mile downstream of last K-25 effluent	0.146 micrograms / gm.		20.0 ± 1.6	0
1 ME	8-19-49	9:20 a.m.	Mud from Poplar Creek inlet N.E. of K-303-8	7.50 micrograms / gm.		-	102
24 ME	8-18-49	9:00 a.m.	Sludge from sand filters at K-1515	0.50 micrograms / gm.		14.5 ± 1.2	742
22 ME	8-19-49	9:00 a.m.	Poplar Creek immediately below powerhouse effluent	0.688 micrograms / gm.		-	130
✓ * 24 ME	8-23-49	10:00 a.m	Sludge from settling basins at K-1515, N.E. Corner	2.50 micrograms / gm.		17.0 ± 1.4	1186
Note: All mud and sludge results calculated on basis of one gram dry wt.							
Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							
* Percent water in sludge = 90.6							
* Density of wet sludge = 1.1							

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SUPERVISOR T. Kusnoski DATE 9-8-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 23

REPORT OF WATER SURVEY ANALYSES

RECEIVED SEP 8 1949 RADIATION HAZARDS DEPARTMENT

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray Central 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
✓ * 8 M	8-3-49	8:25 a.m.	Hot scrap yard drainage into Clinch River N.W. of Gallaher Gate	0	-	-	-
✓ 26 M	8/1-8/30	Composite	Drainage from Labs, A, B, C, D	5	-	2.1 ± 1.1	40 ± 21
✓ 14 M	8/1-8/30	Composite	Influent to Sewage Disposal Plant	2	-	-	-

* Sample taken one hour after a rain.

Note: Alpha count per minute per 100 ml. at 50% geometry.

Beta count per minute per 100 ml. at 100% geometry.

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SUPERVISOR T. Kwasnoski DATE 9-8-49

WCX-1012 (Mar'

REPORT NO. 23

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes File
J. P. Murray Central 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 D	8-20-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	10 ± 21
24 D	8-21-49	2:00 p.m.	Effluent from Water Purification Plant	-	-	-	8 ± 21
24 D	8-22-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	17 ± 21
32 D	8-20-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	16 ± 21
32 D	8-22-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	11 ± 21
24 D	8-23-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	1 ± 21
24 D	8-24-49	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	22 ± 21
32 D	8-24-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	10 ± 21
24 D	8-26-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	30 ± 21
32 D	8-26-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	43 ± 21
24 D	8-28-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	17 ± 21
32 D	8-28-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	12 ± 21
32 D	8-30-49	8:40 a.m.	Influent to Water Purification Plant	-	-	-	0 ± 21
24 D	8-30-49	8:55 a.m.	Effluent from Water Purification Plant	-	-	-	0 ± 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 9-6-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ H. W. Carnes J. C. Barton File
J. P. Murray D. M. Lang Central 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
30 W	8-22-49	8:30 a.m.	K-1004-J, "Normally Cold", drain				
			before dumping.	-	-	6.1 ± 1.1	419
			Total volume of liquid in tank when sampled = 3100 gallons				
			Total millicuries in tank = 0.022				
			Liquid level on tank gauge = 43"				
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwasnoski DATE 8-6-49

WCX-1012 (Mar

Report No. 2

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

RECEIVED SEP 8 1949 RADIATION HAZARDS DEPARTMENT

DISTRIBUTION:

H. F. Henry H. W. Carnes File
J. P. Murray Central 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	8/8-8/12	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	6 ± 21	7.
13 W	8-15-49	9:50 a.m.	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
12 W	8-15-49	10:15 a.m.	Clinch River upstream to K-25	-	-	0.23 ± 1.1	-	7.
10 W	8-15-49	10:40 a.m.	Clinch River immediately at S-50 Sewer outfall	0	-	-	-	-
1 W	8-15-49	12:30 p.m	Poplar Creek inlet N.E. of K-303-8	2	-	-	-	-
16 W	8-15-49	12:35 p.m	K-25, K-27 Drinking Water from K-1035	0	-	0.0 ± 1.1	2 ± 21	7.
22 W	8/15-8/19	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	12 ± 21	7.
13 W	8-22-49	10:00 a.m	Clinch River one mile downstream of last K-25 effluent	0	-	-	-	7.
10 W	8-22-49	1:18 p.m.	Clinch River immediately at S-50 Sewer outfall	2	-	-	-	-
12 W	8-23-49	10:20 a.m.	Clinch River upstream to K-25	-	-	0.2 ± 1.1	-	8.
29 W	8-23-49	10:30 a.m	Flow ditch at west end of holding pond	7	-	-	-	-
22 W	8/22-8/26	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	24 ± 21	7.
Note: Alpha count per minute per 100 ml. at 50% geometry.								
Beta count per minute per 100 ml. at 100% geometry.								

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SUPERVISOR T. Kwasnoski DATE 9-6-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ J. P. Murray F. W. Hurd Central File
W. B. Humes A. P. Huber H. W. Carnes 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 D	8-10-49	8:55 a.m.	Effluent from Water Purification Plant	-	-	-	14 ± 21
32 D	8-10-49	9:10 a.m.	Influent to Water Purification Plant	-	-	-	15 ± 21
24 D	8-12-49	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	17 ± 21
32 D	8-12-49	9:40 a.m.	Influent to Water Purification Plant	-	-	-	10 ± 21
32 D	8-14-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	9 ± 21
24 D	8-14-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
24 D	8-16-49	8:50 a.m.	Effluent from Water Purification Plant	-	-	-	3 ± 21
32 D	8-16-49	9:10 a.m.	Influent to Water Purification Plant	-	-	-	8 ± 21
24 D	8-18-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	13 ± 21
32 D	8-18-49	9:10 a.m.	Influent to Water Purification Plant	-	-	-	8 ± 21
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwasnoski DATE 8-24-49

WCX-1012 (Mar'

REPORT No. 226

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ A. P. Dunlap A. P. Huber H. W. Carnes File
W. B. Humes J. P. Murray F. W. Hurd Central 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.		pH
						ALPHA	BETA	
12 W	8-1-49	1:30 p.m.	Clinch River upstream to K-25	-	-	0.39 ± 1.1	-	7.
10 W	8-1-49	1:40 p.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
1 W	8-1-49	2:00 p.m.	Poplar Creek inlet N.E. of K-303-8	8	-	-	-	-
16 W	8-1-49	2:15 p.m.	K-25, K-27 Drinking Water from K-25 Cafeteria	0	-	0.13 ± 1.1	26 ± 21	7.
22 W	8/1-8/5	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	11 ± 21	7.
13 W	8-8-49	9:50 a.m.	Clinch River effluent from K-25	0	-	-	-	8.
12 W	8-8-49	12:30 p.m.	Clinch River upstream to K-25	-	-	0.19 ± 1.1	-	7.
10 W	8-8-49	12:45 p.m.	Clinch River immediately at S-50 Sewer Outfall	0	-	-	-	-
16 W	8-8-49	1:00 p.m.	K-25, K-27 Drinking Water at K-1401 Welding Shop	0	-	0.0 ± 1.1	6 ± 21	7.
29 W	8-8-49	1:15 p.m.	Flow ditch at west end of Holding Pond	13	-	-	-	-

Note: Alpha count per minute per 100 ml. at 50% geometry.

Beta count per minute per 100 ml. at 100% geometry.

Newton

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SUPERVISOR T. Kusowski DATE 8-17

WCX-1012 (Mar'

REPORT NO. 2.

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry, A. P. Dunlap, A. P. Huber, H. W. Carnes, J. C. Barton, File
W. B. Humes, J. P. Murray, F. W. Hurd, D. M. Lang, Central 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
30 W	8-1-49	12:40 p.m.	K-1004-J, Normally Cold, drain				
			before dumping	-	-	6.4±1.1	1628
Volume of liquid in tank when sampled = 3160 gallons							
Total millicuries in tank = 0.088							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

SUPERVISOR T. Kwiatkowski DATE 8-16-49

WCX-1012 (Mar'49)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 24

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ A. P. Dunlap A. P. Huber H. W. Carnes File
W. B. Humes J. P. Murray F. W. Hurd Central 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 D	8-2-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	35 ± 21
32 D	8-2-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	31 ± 21
24 D	8-4-49	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	38 ± 21
32 D	8-4-49	8:40 a.m.	Influent to Water Purification Plant	-	-	-	24 ± 21
24 D	8-6-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	12 ± 21
32 D	8-6-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	7 ± 21
24 D	8-8-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	9 ± 21
32 D	8-8-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	9 ± 21
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

SUPERVISOR T. Kuranoshi DATE 8-16-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 22

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ A. P. Dunlap A. P. Huber H. W. Carnes File
W. B. Humes J. P. Murray F. W. Hurd Central 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
✓12 W	7-20-49	10:30 a.m.	Clinch River upstream to K-25	-	-	0.3 ± 1.1	267	7.1
✓22 W	7/18-7/22	Composite	Poplar Creek immediately below Powerhouse effluent	1	-	-	56 ± 21	7.1
✓13 W	7-25-49	10:00 a.m.	Clinch River effluent from K-25	0	-	-	-	7.4
✓29 W	7-25-49	10:45 a.m.	Flow ditch at west end of Holding Pond	10	-	-	-	-
✓12 W	7-25-49	1:10 p.m.	Clinch River upstream to K-25	-	-	0.5 ± 1.1	72 ± 41	7.7
✓10 W	7-25-49	1:30 p.m.	Clinch River immediately below S-50 Sewer Outfall	0	-	-	-	-
✓16 W	7-25-49	1:35 p.m.	K-25 K-27 Drinking Water from K-1001-A	0	-	0.6 ± 1.1	69 ± 39	7.1
✓22 W	7/25-7/29	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	56 ± 22	7.7
✓13 W	8-1-49	9:00 a.m.	Clinch River effluent from K-25	0	-	-	-	8.4
Note: Alpha count per minute per 100 ml. at 50% geometry.								
Beta count per minute per 100 ml. at 100% geometry.								

SUPERVISOR T. Kuranoshi DATE 8-16-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 22

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ A. P. Dunlap A. P. Huber H. W. Carnes File
W. B. Humes J. P. Murray F. W. Hurd Central 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
✓32 D	7/25-7/29	Composite	Influent to Water Purification Plant	0	-	0.9 ± 1.1	-
✓32 D	7-29-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	92 ± 37
~~24~~ D	7-31-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	30 ± 21
~~24~~ D	7/1-7/31	Composite	Effluent from Water Purification Plant	-	Less than 0.2	-	-
✓32 D	7-31-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	15 ± 21
✓32 D	7/1-7/31	Composite	Influent to Water Purification Plant	-	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.

SUPERVISOR T. Kwonoo Li DATE 8-15-49

WCX-1012 (Mar'

REPORT No. 2.

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ A. P. Dunlap A. P. Huber H. W. Carnes File
W. B. Humes J. P. Murray F. W. Hurd Central 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 D	7-21-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	94 ± 37
✓24 D	7/17-7/23	Composite	Effluent from Water Purification Plant	0	-	0.0 ± 1.1	-
✓32 D	7-21-49	9:00 a.m.	Influent to Water Purification Plant	- -	-	-	91 ± 36
✓32 D	7/17-7/23	Composite	Influent to Water Purification Plant	0	-	0.0 ± 1.1	-
✓24 D	7-23-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	51 ± 21
✓24 D	7-25-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	66 ± 26
✓32 D	7-23-49	9:00 a.m.	Influent to Water Purification Plant	-	- -	-	76 ± 31
✓32 D	7-25-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	87 ± 35
✓24 D	7-27-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	73 ± 29
✓32 D	7-27-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	77 ± 31
24 D	7/24-7/29	Composite	Effluent from Water Purification Plant	0	-	0.1 ± 1.1	-
✓24 D	7-29-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	74 ± 29
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. Kusaroshi DATE 8-15-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 2

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

H. F. Henry ✓ A. P. Dunlap ✗ A. P. Huber H. W. Carnes ✗ File
W. B. Humes ✗ J. P. Murray F. W. Hurd Central File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION	FLUORIDE CONCENTRATION	COUNTS PER MINUTE PER 100 ML.	
						ALPHA	BETA
** 15 M-E	6-29-49	9:35 a.m.	Sludge from Sewage Disposal Plant	50 micrograms per gm.		-	1692
** 13 M-E	7-11-49	10:30 a.m.	Mud - Clinch River effluent from K-25	0.25 micrograms per gm.		4.6 ± 0.4	58
22 M-E	7-12-49	1:35 p.m.	Mud - Poplar Creek immediately below Powerhouse effluent	0.71 micrograms per gm.		-	18
* 8 M	7-13-49	9:15 a.m.	Drainage from Jones Scrap Yard	0 ppb.	-	-	-
** 32 M-X	7-18-49	1:00 p.m.	Alum salt from Water Purification Plant	0.51 micrograms per gm.		-	-
** 24 M-E	7-20-49	3:20 p.m.	Carbonaceous Material from sand filters at K-1515	1.04 micrograms per gm.		3.3 ± 0.3	1071
** 24 M-E	7-20-49	3:20 p.m.	Sand from sand filters at K-1515, 3" under top layer	0.38 micrograms per gm.		7.7 ± 0.6	207
14 M	7/5-7/27	Composite	Influent to Sewage Disposal Plant	1 ppb.	-	-	-
15 M	7/5-7/27	Composite	Effluent from Sewage Disposal Plant	1 ppb.	-	-	-
16 W	7/5-7/27	Composite	K-25, K-27 Drinking Water	-	less than 0.2 ppm	-	-
& 27 M	7/5-7/27	Composite	Drainage from Labs A, B, C and D	3 ppb	-	2.86 ± 1.1	83 ± 33
			c/m/gm				
* Sample taken approximately one hour after a heavy rain.							
** All results are on basis of one gm. dry weight.							

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

SUPERVISOR T. Kwasnoski DATE 8-15-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 215

REPORT OF WATER SURVEY ANALYSES

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W. B. Humes J. P. Murray H. W. Carnes Central 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	7/11-7/15	Composite	Poplar Creek immediately below Powerhouse effluent	1	-	-	79 ± 32	8.0
13 W	7-18-49	10:33 a.m.	Clinch River effluent from K-25	0	-	-	-	7.4
10 W	7-18-49	1:30 p.m.	Clinch River immediately below S-50 Sewer outfall	0	-	-	-	-
16 W	7-18-49	3:10 p.m.	Drinking water from K-1029	0	-	0.2 ± 1.1	89 ± 36	7.4
1 W	7-18-49	3:15 p.m.	Poplar Creek inlet N.E. of K-303-8	1	-	-	-	-

Note: Alpha count per minute per 100 ml. at 50% geometry.
Beta count per minute per 100 ml. at 100% geometry.

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SUPERVISOR T. Kwasnoski DATE 7-27-49

WCX-1012 (Mar'

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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
✓ 32 D	7-17-49	Overflow stopped up. No sample collected.					
✓* 24 D	7-18-49	12:15 a.m.	Effluent from Water Purification Plant	-	-	-	78 ± 31
24 D	7-18-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	74 ± 29
✓t 32 D	7-18-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	118
✓ 24 D	7-19-49	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	170
✓ 32 D	7-19-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	160
* Sample collected from 9:00 a.m., 7-17-49, to 12:15 a.m., 7-18-49. Removed at request of Plant Foreman on telephone							
call from X-10.							
x Sample collected from 12:15 a.m. to 9:00 a.m., 7-18-49.							
t Overflow line stopped up. Spot sample taken.							
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

SUPERVISOR T. Kwasowski DATE 7-27-49

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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
✓22 W	6/27-7/1	Composite	Poplar Creek immediately below Power House effluent	0	-	-	Sample Destroyed	8.1
13 W	7-5-49	10:45 a.m	Clinch River effluent from K-25	0	-	-	-	8.3
✓12 W	7-5-49	12:30 p.m	Clinch River upstream to K-25	-	-	0.5 ± 1.1	49 ± 20	8.2
10 W	7-5-49	12:45 p.m	Clinch River immediately below S-50 Sewer outfall	0	-	-	-	-
✓16 W	7-5-49	3:00 p.m.	K-25, K-27 Drinking Water from K-1004-D	0	-	0.7 ± 1.1	75 ± 30	7.4
✓1 W	7-6-49	9:50 a.m.	Poplar Creek inlet N.E. of K-303-8	0	-	-	-	-
✓22 W	7/5-7/8	Composite	Poplar Creek immediately below Power House effluent	0	-	-	80 ± 32	8.0
✓12 W	7-11-49	10:00 a.m.	Clinch River upstream to K-25	-	-	0.0 ± 1.1	69 ± 27	7.8
✓13 W	7-11-49	10:30 a.m.	Clinch River effluent from K-25	1	-	-	-	8.2
✓10 W	7-11-49	1:00 p.m.	Clinch River immediately below S-50 Sewer outfall	1	-	-	-	-
29 W	7-11-49	1:30 p.m.	Flow ditch at west end of Holding Pond	6	-	-	-	-
✓16 W	7-11-49	1:40 p.m.	K-25, K-27 Drinking Water Cafeteria cooking Water	0	-	0.4 ± 1.1	97 ± 39	7.6
Note: Alpha count per minute per 100 ml. at 50% geometry.								
Beta count per minute per 100 ml. at 100% geometry.								
					7-78			

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SUPERVISOR T. Kwasnoski DATE 7-27-49

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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	7-18-49	9:45 a.m.	K-1004-J, Normally Cold, drain				
			before dumping.	-	-	6.82 ± 1.1	5485
Volume of liquid in tank when sampled = 2280 gallons							
Total millicuries in tank = 0.213							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwiatowski DATE 7-27-49

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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
✓ 32 D	7-9-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	99 ± 40
✓ 32 D	7/3-7/9	Composite	Influent to Water Purification Plant	0	-	0.0 ± 1.1	-
✓ 32 D	7-11-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	82 ± 33
✓ 24 D	7-13-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	97 ± 39
✓ 32 D	7-13-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	88 ± 35
✓* 32 D	7-14-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	123 ± 49
✓ 24 D	7-14-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	105 ± 42
✓ 24 D	7-15-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	80 ± 32
✓ 24 D	7/9-7/15	Composite	Effluent from Water Purification Plant	0	-	1.0 ± 1.1	-
✓ *32 D	7-15-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	73 ± 29
32 D	7/9-7/15	Composite	Influent to Water Purification Plant	1	-	0.8 ± 1.1	-
✓ 24 D	7-17-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	83 ± 33
* Overflow tube stopped up. Spot Sample taken.							
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kwasnoski DATE 7-27-49

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REPORT OF WATER SURVEY ANALYSES

7-27-49

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W. B. Humes J. P. Murray H. W. Carnes Central 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 D	7-1-49	10:00 a.m.	Effluent from Water Purification Plant	-	-	-	88 ± 35
24 D	6/25-7/1	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.1 ± 1.1	-
2 D	7-1-49	10:00 a.m.	Influent to Water Purification Plant	-	-	-	87 ± 35
24 D	7-3-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	75 ± 30
24 D	7-5-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	88 ± 35
32 D	7-3-49	9:05 a.m.	Influent to Water Purification Plant	-	-	-	101 ± 40
32 D	7-5-49	9:05 a.m.	Influent to Water Purification Plant	-	-	-	81 ± 32
24 D	7-7-49	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	79 ± 32
32 D	7-7-49	8:30 a.m.	Influent to Water Purification Plant	-	-	-	67 ± 27
24 D	7-9-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	131 ± 52
D	7/3-7/9	Composite	Effluent from Water Purification Plant	1	-	0.1 ± 1.1	-
24 D	7-11-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	97 ± 39
Note: Alpha count per minute per 100 ml. at 50% geometry.							
Beta count per minute per 100 ml. at 100% geometry.							

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SUPERVISOR T. Kusano-shi DATE 7-26-49

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REPORT NO. 21

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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
30 W	7-5-49	9:45 a.m	K-1004-J, "Normally Cold" drain				
			before dumping.	-	-	2.2±1.1	2750
Volume of liquid in tank when sampled = 3080 gallons							
Total millicuries in tank = 0.1444							
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 7-15-49

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REPORT OF WATER SURVEY ANALYSES

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W. B. Humes J. P. Murray H. W. Carnes Central 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
10 W	6-20-49	10:50 a.m	Clinch River immediately below S-50 Sewer Outfall	0	-	-	49 ± 29	-
14 W	6-20-49	11:00 a.m.	Influent to Sewage Disposal Plant	0	-	-	-	-
16 W	6-20-49	11:15 a.m.	K-25 Cafeteria cooking water	0	-	2.5 ± 1.1	59 ± 24	7.1
22 W	6/20-6/24	Composite	Poplar Creek immediately below Powerhouse effluent	1	-	-	43 ± 29	7.[illegible]
13 W	6-27-49	10:35 a.m.	Clinch River effluent from K-25	1	-	0.5 ± 1.1	53 ± 21	8.2
10 W	6-27-49	1:20 p.m.	Clinch River immediately below S-50 Sewer Outfall	0	-	-	54 ± 30	-
12 W	6-27-49	1:45 p.m.	Clinch River upstream to K-25	0	-	0.6 ± 1.1	58 ± 23	8.1
14 W	6-27-49	2:05 p.m.	Influent to Sewage Disposal Plant	1	-	-	-	-
10 W	6/6-6/30	composite	Clinch River immediately below S-50 Sewer Outfall	-	Less than 0.2	0.6 ± 1.1	-	-
13 W	6/6-6/30	composite	Clinch River effluent from K-25	-	Less than 0.2	-	-	-
16 W	6/6-6/30	composite	K-25, K-27 Drinking Water	-	Less than 0.2	-	-	-
12 W	6/6-6/30	composite	Clinch River upstream to K-25	-	Less than 0.2	-	-	-
16 W	6-27-49	2:15 p.m.	K-25, K-27 Drinking Water from K-1131	0	-	0.8 ± 1.1	67 ± 26	7.5
*6 W	6-28-49	9:00 a.m.	K-27 Drainage into Poplar Creek	1	-	-	-	-
29 W	6-27-49	9:30 a.m.	Flow ditch at west end of Holding Pond	3	-	-	-	-

* Sample taken after a rain.

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. Kwanoski DATE 7-8-49

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REPORT OF WATER SURVEY ANALYSES

REPORT NO. 21

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W. B. Humes J. P. Murray H. W. Carnes Central 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
✓11 M	6/13-6/27	composite	Poplar Creek influent to K-25	0	Less than 0.2	0.0 ± 1.1	3 ± 29	7.7
✓* 8 M	6-16-49	9:30 a.m.	Drainage from Jones' Scrap Yard	0	-	-	-	-
* 9M	6-16-49	9:30 a.m.	Clinch River west of Jones' Scrap Yard	0	-	-	-	-
✓23 M	6-20-49	1:15 p.m.	Ground water at Sludge Pit	0	-	-	-	-
✓15 M	6/6-6/30	composite	Effluent from Sewage Disposal	0	-	-	-	-
✓26 & 27 M	6/6-6/30	composite	Drainage from Labs A, B, C & D	5	-	14.5 ± 1.1	46 ± 29	-
✓21 M			S-50 Sewer Outfall	Sampling position covered, no sample taken.				

* Samples taken after a rain.

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. Kusonoki DATE 7-8-49

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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
22 W	6/6-6/10	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	45±29	8.
12 W	6-13-49	9:35 a.m.	Clinch River upstream to K-25	0	-	0.0±1.1	41±21	7.
13 W	6-13-49	9:00 a.m.	Clinch River effluent from K-25	0	-	0.1±1.1	32±21	8.
10 W	6-13-49	1:15 p.m.	Clinch River immediately below S-50 Sewer Outfall	0	-	-	42±21	-
14 W	6-13-49	1:40 p.m.	Influent to Sewage Disposal Plant	1	-	-	-	-
16 W	6-13-49	2:00 p.m.	K-25, K-27 Drinking Water from K-402-6	0	-	0.2±1.1	41±21	7.
29 W	6-13-49	2:10 p.m.	Flow ditch at west end of Holding Pond	9	-	-	-	-
* 6 W	6-16-49	10:50 a.m.	K-27 Drainage into Poplar Creek	2	-	-	-	-
22 W	6/13-6/17	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	49±21	7.6
13 W	6-20-49	9:30 a.m.	Clinch River effluent from K-25	0	-	0.5±1.1	44±21	8.1
1 W	6-20-49	10:05 a.m.	Poplar Creek inlet N.E. of K-303-8	2	-	-	-	-
12 W	6-20-49	10:30 a.m.	Clinch River upstream to K-25	0	-	0.8±1.1	40±21	8.1
* Sample taken after a rain.								
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 7-8-49

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REPORT NO. 2

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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	6-20-49	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	63 ± 25
✓32 D	6-19-49	9:30 a.m.	Influent to Water Purification Plant	-	-	-	57 ± 23
✓24 D	6-21-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	69 ± 28
✓32 D	6-21-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	67 ± 26
✓24 D	6-23-49	8:30 a.m.	Effluent from Water Purification Plant	-	-	-	37 ± 21
✓32 D	6-23-49	8:40 a.m.	Influent to Water Purification Plant	-	-	-	36 ± 21
✓24 D	6/19-6/25	Composite	Effluent from Water Purification Plant	1	less than 0.2	0.9 ± 1.1	-
✓24 D	6-25-49	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	72 ± 42
✓24 D	6-27-49	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	66 ± 26
✓32 D	6-25-49	9:30 a.m.	Influent to Water Purification Plant	-	-	-	78 ± 31
✓32 D	6-27-49	9:30 a.m.	Influent to Water Purification Plant	-	-	-	56 ± 22
✓24 D	6-29-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	67 ± 27
✓32 D	6-29-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	67 ± 27
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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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	6/5-6/11	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.2±1.1	-
32 D	6-11-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	25±21
24 D	6-11-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	34±21
24 D	6-13-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	51±21
32 D	6-13-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	42±21
24 D	6-15-49	8:20 a.m.	Effluent from Water Purification Plant	-	-	-	53±21
32 D	6-15-49	8:00 a.m.	Influent to Water Purification Plant	-	-	-	55±22
24 D	6-17-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	40±21
24 D	6/13-6/17	Composite	Effluent from Water Purification Plant	0	0.3	0.3±1.1	-
32 D	6-17-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	31±29
24 D	6-18-49	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	41±21
24 D	6-19-49	9:30 a.m.	Effluent from Water Purification Plant	-	-	-	47±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. Kwasnoski DATE 7-8-49

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REPORT OF WATER SURVEY ANALYSES

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S. Visner, A. P. Dunlap, F. W. Hurd, A. P. Huber, J. C. Barton, File
W. B. Humes, J. P. Murray, H. W. Carnes, D. M. Lang, Central 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
30 W	6-20-49	12:58 p.m.	K-1004-J, "Normally Cold" drain				
			before dumping.	-	-	2.8±1.6	3274
			Volume of liquid in tank when sampled	= 2280 gallons			
			Total millicuries in tank	= 0.1273			
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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134

SUPERVISOR T. Kwasowski DATE 7-5-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 20

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

S. Visner, A. P. Dunlap, F. W. Hurd, A. P. Huber, File
W. B. Humes, J. P. Murray, H. W. Carnes, Central File

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION		COUNTS PER MINUTE PER gm.	
						ALPHA	BETA
* 24 ME	5-31-49		Carbonaceous Material from the sand				
			filters at K-1515	2.5 micrograms per gm.		12.4 ± 1.0	3846.1
* 13 ME	6- 9-49	10:37 a.m.	Mud, Clinch River effluent from K-25	0.354 micrograms per gm.		0.0	0.0
* 10 ME	6- 9-49	12:35 p.m	Mud from Clinch River immediately				
			below S-50 Sewer Outfall	0.5 micrograms per gm.		6.9 ± 0.5	2.9
* 22 ME	6-13-49	1:10 p.m.	Mud from Poplar Creek immediately				
			below Powerhouse effluent	0.5 micrograms per gm.		5.4 ± 0.4	0.0
* Results per gram dry weight.							

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135

SUPERVISOR T. Kwongoke DATE 6-24-49

WCX-1012 (Mar'

REPORT NO. _____

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

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W. B. Humes J. P. Murray H. W. Carnes Central 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
23 M	5-31-49	9:55 a.m.	Ground water at Sludge Pit	0	-	-	-

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136

SUPERVISOR T. Kwasnoski DATE 6-17-49

WCX-1012 (Mar'

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SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 4

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W. B. Humes J. P. Murray H. W. Carnes Central 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
13 W ✓	5-31-49	1:15 p.m.	Clinch River effluent from K-25	1	-	0.22±1.1	121	8.2
29 W ✓	5-31-49	1:40 p.m.	Flow ditch at west end of Holding Pond	6	-	-	-	-
16 W ✓	5-31-49	1:50 p.m.	K-25 K-27 Drinking Water, K-1405	0	-	0.11±1.1	99±40	7.5
22 W ✓	5/31-6/5	Composite	Poplar Creek immediately below Powerhouse effluent	1	-	-	48±27	8.2
14 W ✓	5-31-49	3:00 p.m.	Influent to Sewage Disposal Plant	2	-	-	-	-
12 W ✓	[illegible]-49	9:55 a.m.	Clinch River upstream to K-25	0	-	0.0±1.1	62±25	7.8
10 W ✓	6-1-49	4:00 p.m.	Clinch River immediately below S-50 Sewer Outfall	1	-	-	102	
13 W ✓	6-6-49	9:40 a.m.	Clinch River effluent from K-25	1	-	0.4±1.6	84±34	8.1
16 W ✓	6-6-49	10:05 a.m.	K-25 K-27 Drinking Water, K-1028	0	-	0.6±1.6	50±21	7.2
1 W ✓	6-6-49	3:00 p.m.	Poplar Creek inlet N.E. of K-303-8	1	-	-	-	-
14 W ✓	6-6-49	10:20 a.m.	Influent to Sewage Disposal Plant	1	-	-	-	-
10 W ✓	6-6-49	12:52 p.m	Clinch River immediately below S-50 Sewer Outfall	0	-	-	75±43	-
12 W ✓	6-6-49	1:05 p.m.	Clinch River upstream to K-25	0	-	0.0±1.6	63±25	7.9
Note: Alpha counts per minute per 100 ml. at 50% geometry.								
Beta counts per minute per 100 ml. at 100% geometry.								

137

SUPERVISOR T. Kwasnoski DATE 6-16-49

WCX-1012 (Mar'

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

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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	6-3-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	57±23
32 D	6-3-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	86±34
24 D	5/30-6/5	Composite	Effluent from Water Purification Plant	1	less than 0.2	0.1±1.1	-
24 D	6-5-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	116
32 D	6-5-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	61±24
24 D	6-7-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	55±22
32 D	6-7-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	49±21
24 D	6-9-49	8:25 a.m.	Effluent from Water Purification Plant	-	-	-	24±21
32 D	6-9-49	8:30 a.m.	Influent to Water Purification Plant	-	-	-	67±27
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. Kuranoshi DATE 6-16-49

WCX-1012 (Mar'

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SPECIAL ANALYSIS SECTION

REPORT NO. 20

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

S. Visner ✓ A. P. Dunlap F. W. Hurd A. P. Huber J. C. Barton File
W. B. Humes J. P. Murray H. W. Carnes D. M. Lang Central 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
30 W	6-8-49	10:15 a.m	K-1004-J, "Normally Cold", drain				
			before dumping	-	-	9.1 ± 1.1	908
			Volume of liquid in tank when sampled = 2360 gallons				
			Total millicuries in tank = 0.0365				
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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139

SUPERVISOR T. Kuwasaki DATE 6-15-49

WCX-1012 (Mar'

REPORT NO. 20

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Distribution:

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W. B. Humes J. P. Murray H. W. Carnes Central 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 D	5/16-5/22	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.6 ± 1.1	-
24 D	5-21-49	9:00 a.m.	" " " " "	-	-	-	154 ± 62
24 D	5-22-49	9:00 a.m.	" " " " "	-	-	-	195 ± 78
24 D	5-23-49	9:00 a.m.	" " " " "	-	-	-	59 ± 24
24 D	5-24-49	9:00 a.m.	" " " " "	-	-	-	16 ± 21
24 D	5-26-49	9:35 a.m.	" " " " "	-	-	-	40 ± 21
24 D	5/23-5/29	Composite	" " " " "	0	Less than 0.2	1.6 ± 1.1	-
24 D	5-28-49	9:00 a.m.	" " " " "	-	-	-	35 ± 21
24 D	5-29-49	9:00 a.m.	" " " " "	-	-	-	62 ± 21
24 D	5-30-49	9:00 a.m.	" " " " "	-	-	-	152
24 D	6- 1-49	9:40 a.m.	" " " " "	-	-	-	88 ± 34
32 D	6- 1-49	9:50 a.m.	Influent to Water Purification Plant	-	-	-	24 ± 21
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

RECEIVED 6 16 1949

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SUPERVISOR T. Kusunoki DATE 15-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

DISTRIBUTION:

S. Visner ✓ A. P. Dunlap F. W. Hurd A. P. Huber File
W. B. Humes J. P. Murray H. W. Carnes Central 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
25 Y	5-26-49	2:00 p.m.	Clinch River above Elza Gate	0	Less than 0.2	0.3±1.1	1±21
17 Y 25	5-26-49	2:45 p.m.	Recirculating water, K-25	1	-	-	-
17 Y 27	5-26-49	3:15 p.m.	Recirculating water, K-27	0	-	-	-
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 6-15-49

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WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 199

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	5-31-49	8:15 a.m	K-1004-J, "Normally Cold", drain				
			before dumping	-	-	3.6 ± 1.1	9250
			Volume of liquid in tank when sampled	= 4540 gal.			
			Total millicuries in tank = 0.716				
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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142

SUPERVISOR T. Kuranobi DATE 6-9-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 19

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
13 W	5-23-49	10:10 a.m	Clinch River downstream of last K-25 effluent	0	-	0.2 ± 1.1	146 ± 58	7.6
10 W	5-23-49	2:15 p.m	Clinch River immediately below S-50 Sewer Outfall	0	-	-	36 ± 29	
16 W	5-23-49	2:30 p.m	Drinking Water, K-1048	0	-	0.0 ± 1.1	102 ± 41	7.2
14 W	5-23-49	2:35 p.m	Sewage Disposal Plant, influent	1	-	-	-	-
1 W	5-23-49	3:20 p.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-	-
13 W	5/1-5/30/49	Weekly Composite	Clinch River downstream of last K-25 effluent	-	Less than 0.2	-	-	-
12 W	5/1-5/30	Weekly Composite	Clinch River upstream to K-25	-	Less than 0.2	-	-	-
10 W	5/1-5/30	Weekly Composite	Clinch River immediately below S-50 Sewer Outfall	-	Less than 0.2	0.3 ± 1.6	-	-
16 W	5/1 - 5/30	Weekly Composite	K-25, K-27 Drinking Water	-	Less than 0.2	-	-	-
* 6 W	5-24-49	4:00 p.m	K-27 Drinage into Poplar Creek	1	-	-	-	-
* Sample taken immediately after a rain.								
Note: Alpha counts per minute per 100 ml. at 50% geometry.								
Beta counts per minute per 100 ml. at 100% geometry.								

RECEIVED JUN 6 1949

142

SUPERVISOR T. Kwasnoski DATE 6-9-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

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
22 W	5/16-5/20	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	233±93	7.
13 W	5-16-49	10:25 a.m	Clinch River downstream of east K-25 effluent	2	-	0.5±1.1	278±111	8.
12 W	5-17-49	9:00 a.m	Clinch River upstream to K-25	1	-	0.2±1.1	279±112	7.
29 W	5-17-49	12:30 p.m	Ditch at West end of Holding Pond	2	-	-	-	-
10 W	5-17-49	12:35 p.m	Clinch River immediately below S-50 Sewer Outfall	1	-	-	287±115	-
14 W	5-17-49	1:00 p.m	Sewage Disposal Plant, influent	1	-	-	-	-
16 W	5-17-49	1:05 p.m	Cafeteria cooking water	0	-	0.0±1.1	280±112	7.
22 W	5/23-5/27	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	19±21	8.
12 W	5-23-49	9:25 a.m	Clinch River upstream to K-25	0	-	0.0±1.1	11±21	7.
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. Kuwasoshi DATE 6-9-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 19

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
11 M	5/3-5/17	Composite	Poplar Creek influent to K-25	0	Less than 0.2	0.0±1.6	0±29	7.6
15 M	5-3-49	3:00 p.m	Sewage Disposal Plant, effluent	1	-	-	-	-
[illegible] & 27 M	5/1-5/30	Composite Wkly Spl.	Drainage from Labs A, B, C & D	3	-	2.9±1.6	94±38	-
* 24 M-E	5-11-49	3:30 p.m	K-1515 Mud from N.W. corner of Settling Beds	6.25 µg /gm	-	13.0±1.4	5468	-
* 13 M-E	5-12-49	10:30 a.m	Mud from Clinch River effluent from K-25	0.4 µg / gm	-	3.9±0.4	83.7	-
* 22 M-E	5-12-49	1:20 p.m	Mud Poplar Creek immediately below Powerhouse effluent	1.13 µg /gm	-	7.9±0.8	80.6	-
* 10 M-E	5-13-49	1:00 p.m	Mud from Clinch River immediately below S-50 Sewer Outfall	0.57 µg/gm	-	7.4±0.8	55.8	-
X 8 M	5-24-49	3:00 p.m	Drainage from Jones'Hot Scrap Yard	0 p.p.b.	-	-	-	-
X 9 M	5-24-49	3:15 p.m	Clinch River west of Jones8 Scrap Yard	0 p.p.b.	-	-	-	-

Mud Samples. Results per gm. dry weight.

X Samples taken approximately two hours after a rain.

Note: Alpha counts per minute per 100 ml. at 50% geometry.

Beta counts per minute per 100 ml. at 100% geometry.

RECEIVED 6 17 1949

SUPERVISOR E. B. Olszewski DATE 6-6-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 15

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 D	5-4-49	8:45 a.m.	Effluent from Water Purification Plant	-	-	-	38 ± 21
24 D	5-6-49	8:30 a.m.	" " " " "	-	-	-	58 ± 23
24 D	5/2-5/8	Composite	" " " " "	0	less than 0.2	0.2 ± 1.1	-
24 D	5-8-49	9:00 a.m.	" " " " "	-	-	-	85 ± 34
24 D	5-10-49	9:45 a.m.	" " " " "	-	-	-	74 ± 30
24 D	5-12-49	9:00 a.m.	" " " " "	-	-	-	148 ± 59
24 D	5/8-5/14	Composite	" " " " "	0	less than 0.2	0.0 ± 1.1	-
24 D	5-14-49	9:00 a.m.	" " " " "	-	-	-	293 ± 117
24 D	5-16-49	9:00 a.m.	" " " " "	-	-	-	334 ± 134
24 D	5-18-49	9:00 a.m.	" " " " "	-	-	-	286 ± 114
24 D	5-20-49	8:40 a.m.	" " " " "	-	-	-	204 ± 82
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 [signature] DATE 6-1-49

WCX-1012 (Mar

WORKS LABO[illegible] DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. [illegible]4

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
13 W	5- 9-49	9:35 a.m.	Clinch River downstream of last K-25 Effluent	0	-	0.4±1.1	53±21	7.
12 W	5- 9-49	10:15 a.m	Clinch River upstream to K-25	0	-	0.2±1.1	224±90	7.
10 W	5- 9-49	10:20 a.m.	Clinch River immediately below S-50 Sewer Outfall	0	-	-	95±38	-
14 W	5- 9-49	10:40 a.m	Influent to Sewage Disposal Plant	1	-	-	-	-
22 W	5/9-5/13	Composite	Poplar Creek immediately below Power House effluent	1	-	-	127±51	7.
1 W	5- 9-49	12:55 p.m	Poplar Creek inlet N.E. of K-303-8	6	-	-	-	-
16 W	5- 9-49	1:10 p.m	K-25, K-27, Drinking Water at K-413	0	-	0.3±1.1	91±36	7.
6 W	5-10-49	9:00 a.m.	K-27 Drainage into Poplar Creek,	1	-	-	-	-
			after a heavy rain					
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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147

SUPERVISOR T. Kwapowski DATE 5-23-49

WCX-1012 (Mar'48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 193

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	5-17-49	10:45 a.m.	K-1004-J "Normally Cold" drain				
			before dumping	-	-	5.2 ± 1.6	2303
			Volume of liquid in tank when sampled = 2760 gal.				
			Total millicuries in tank = 0.108				

RECEIVED MAY 23 1949

SUPERVISOR T. Kusanovich DATE 5-20-49

WCX-1012 (Mar'48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 192

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
13 W	5-2-49	10:30 a.m	Clinch River downstream of last K-25 effluent	0	-	0.2±1.1	59±24	8.2
12 W	5-2-49	12:45 p.m	Clinch River upstream to K-25	0	-	0.5±1.1	78±31	8.4
10 W	5-2-49	1:05 p.m	Clinch River immediately below S-50 sewer outfall	0	-	-	59±24	-
22 W	5/2-5/6	Composite	Poplar Creek immediately below Powerhouse effluent	0	-	-	50±21	8.0
29 W	5-2-49	2:35 p.m.	Ditch at W. end of Holding Pond	80	-	-	-	-
14 W	5-2-49	2:45 p.m.	Sewage Disposal Plant influent	1	-	-	-	-
16 W	5-2-49	2:55 p.m	Drinking water from K-1004-D	0	-	0.3±1.1	46±21	7.6
Note: Alpha Counts per minute per 100 ml. at 50% geometry.								
Beta Counts per minute per 100 ml. at 100% geometry.								

RECEIVED 17 1949

149

SUPERVISOR T. Kwasowski

DATE 5-16-49

WCX-1012 (Mc 3)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 21

RECEIVED MAY 16 1949

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	4-18-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	34 ± 21
"	4-20-49	8:40 a.m	" " " " "	-	-	-	42 ± 21
"	4-22-49	8:45 a.m.	" " " " "	-	-	-	20 ± 21
"	4/18-4/24	Composite	" " " " "	0	Less than 0.2	0.0 ± 1.1	-
"	4-24-49	9:00 a.m.	" " " " "	-	-	-	19 ± 21
24 D	4-26-49	8:25 a.m	" " " " "	-	-	-	38 ± 21
"	4-28-49	8:45 a.m	" " " " "	-	-	-	25 ± 21
"	4-28-49	9:00 p.m	" " " " "	-	-	-	145 ± 58
"	4-29-49	8:20 a.m	" " " " "	-	-	-	135 ± 54
32 D	4-29-49	8:30 a.m	Influent to Water Purification Plant	-	-	-	197 ± 79

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

150

SUPERVISOR T. Kusonoki DATE 5-16-49

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 190

RECEIVED MAY 16 1949

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
* 32 D	4-29-49	9:00 p.m	Influent to Water Purification Plant	-	-	-	60
* 24 D	4-29-49	9:00 p.m	Effluent from Water Purification Plant	-	-	-	100
* 32 D	4-30-49	9:00 a.m	Influent to Water Purification Plant	-	-	-	92
* 24 D	4-30-49	9:00 a.m	Effluent from Water Purification Plant	-	-	-	18
* 32 D	4-30-49	9:00 p.m	Influent to Water Purification Plant	-	-	-	91
* 24 D	4-30-49	9:00 p.m.	Effluent from Water Purification Plant	-	-	-	60
* 32 D	5-1-49	9:00 a.m	Influent to Water Purification Plant	-	-	-	57
* 24 D	5-1-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	53
* 32 D	5-1-49	9:00 p.m	Influent to Water Purification Plant	-	-	-	62
* 24 D	5-1-49	9:00 p.m	Effluent from Water Purification Plant	-	-	-	48
* 24 D	5-2-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	47
24 D	4-26-4-30	Composite	Effluent from Water Purification Plant	0	Less than 0.2	0.0 ± 1.1	-
* 32 D	5-2-49	9:00 a.m.	Influent to Water Purification Plant	-	-	-	70
* No L.E. because of the rush nature of the work.							

151

SUPERVISOR T. Kuroyoshi DATE 5-16-49

WCX-1012 (Ma)

REPORT NO. 9

WORKS LABORATORY DEPARTMENT

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	BETA
30 W	5-4-49	9:30 a.m.	K-1004-J, "Normally Cold" drain				
			before dumping	-	-	4.3±1.6	1553
			Volume of liquid in tank when sampled = 2940 gal.				
			Total millicures in tank when sampled = 0.078				
Note: Alpha counts per minute per 100 ml. at 50% geometry.							
Beta counts per minute per 100 ml. at 100% geometry.							

RECEIVED MAY 13 1949

152

5-13-49

SUPERVISOR T. Kwasnoski DATE

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. _____

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
* 6 W	4-22-49	10:20 a.m	K-27 Drainage into Poplar Creek	1	-	-	-	-
13 W	4-25-49		Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	26±29	7.
12 W	4-25-49	2:35 p.m.	Clinch River upstream from K-25	0	Less than 0.2	0.2±1.1	40±29	7.
10 W	4-25-49	2:45 p.m.	Clinch River immediately below S-50 Sewer Outfall	0	Less than 0.2	0.0±1.6	-	-
22 W	4-25-49	3:00 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.1±1.1	16±21	7.
14 W	4-25-49	3:30 p.m.	Influent to Sewage Disposal Plant	1	-	-	-	-
1 W	4-25-49	3:45 p.m.	Poplar Creek inlet N.E. of K-303-8	5	-	-	-	-
16 W	4-25-49	3:50 p.m.	K-25, K-27 Drinking Water, K-303-5	0	Less than 0.2	0.0±1.1	31±21	7.
20 W	4-25-49	4:00 p.m.	Cafeteria cooking water	0	-	0.2±1.1	18±21	7.
* 6 W	4-27-49	1:30 p.m.	K-27 Drainage into Poplar Creek	2	-	-	-	-

* Rain immediately before samples were taken.

Note: Alpha counts per minute per 100 ml. at 50% geometry.
Beta counts per minute per 100 ml. at 100% geometry.

RECEIVED MAY 11 1949

53

SUPERVISOR T. Kwanoski DATE 5-10-49

WCX-1012 (Mar'49)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 187

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
Special	5-3-49	8:42 a.m.	K-1024 Acid Dilution Pit	0	-	-	-
"	5-3-49	9:01 a.m.	" " " "	4,000	-	-	-
"	5-3-49	10:00 a.m	" " " "	2,000	-	-	-
"	5-3-49	11:10 a.m.	" " " "	400	-	-	-
"	5-3-49	12:10 p.m	" " " "	175	-	-	-

RECEIVED MAY 11 1949

154

SUPERVISOR T. Kusonoki DATE 10-49

WCX-1012 (Ma 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 1[illegible]

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
* 21 M	4-11-49	10:30 a.m	S-50 Sewer Outfall	1	-	-	-
* 8 M	4-11-49	1:45 p.m	Drainage from Jones Scrap Yard	0	-	0.2 ±1.1	-
* 9 M	4-11-49	1:55 p.m	Clinch River west of Jones Scrap Yard	1	-	-	-
o 13 ME	4-14-49	12:50 p.m	Clinch River effluent from K-25, Mud	0.18 µg/gm	42.2	2.8	-
o 24 ME	4-18-49	3:50 p.m	Mud from settling tank, K-1515	5.6 µg/gm	-	16.4 ±1.5	10,775
o 10 ME	4-19-49	1:40 p.m	Clinch River immediately below S-50 Sewer Outfall , Mud	0.38 µg/gm	85.7	3.0 ±0.3	-
23 M	4-20-49	1:00 p.m	Ground water at Sludge Pit	0	-	-	-
15 M	4-20-49	1:30 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
26 & 27 M	4-20-49	2:00 p.m	Drainage from Labs. A, B, C, & D	10	-	6.2 ±1.6	36 ± 21

* Rain immediately before samples were taken

o All results are based on one gram dry weight

Note: Alpha counts per minute per 100 ml. at 50% geometry.

Beta counts per minute per 100 ml. at 100% geometry.

RECEIVED MAY 16 1949

155

SUPERVISOR T. Kuranoshi DATE 5-9-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 18

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. (Note)	
						ALPHA	BETA
30 W	4-22-49	9:00 a.m.	K-1004-J, "Normally Cold" drain				
			before dumping.	-	-	7.8±1.1	1585
		Volume of	liquid in tank when sampled = 3470 gallons				
		Total mil	licuries in tank when sampled = 0.094				
Note: Alpha counts per minute per 100 ml. at 50% geometry							
Beta counts per minute per 100 ml. at 100% geometry							

RECEIVED MAY 6 1949

156

SUPERVISOR T. Kuwaoshi DATE 5-6-49

WCX-1012 (Ma' `)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

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
13 W	4-18-49	10:21 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	31±21	7.
12 W	4-18-49	12:30 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.1±1.1	77±31	7.
10 W	4-18-49	12:35 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	4-18-49	12:50 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	34±21	7.
20 W	4-18-49	1:00 p.m	Cafeteria cooking water	0	-	0.2±1.1	33±21	7.
14 W	4-18-49	1:25 p.m	Influent to Sewage Disposal Plant	1	-	-	-	-
11 W	4-18-49	2:12 p.m	Poplar Creek influent to K-25, East Fork	0	-	0.4±1.1	2±29	-
1 W	4-18-49	2:30 p.m	Poplar Creek inlet N.E. of K-303-8	0	-	1.4±1.1	-	-
16 W	4-18-49	2:30 p.m	Drinking Water, K-1036, Electrical Stores	0	Less than 0.2	0.0±1.1	36±29	7.
Note: Alpha counts per minute per 100 ml. at 50% counting geometry.								
Beta counts per minute per 100 ml. at 100% counting geometry.								

RECEIVED APR 29 1949

157

SUPERVISOR T. Kwasovski DATE 4-29-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 1a

a-26-49

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	4- 2-49	9:00 a.m.	Effluent from Water Purification Plant	-	-	-	66 ± 26
"	4- 4-49	9:00 a.m.	" " " " "	-	-	-	44 ± 21
"	4- 6-49	8:40 a.m.	" " " " "	-	-	-	48 ± 21
"	4- 8-49	8:15 a.m.	" " " " "	-	-	-	32 ± 21
"	4/2-8/49	Composite	" " " " "	0	Less than 0.2	0.0 ± 1.1	-
"	4-10-49	9:00 a.m.	" " " " "	-	-	-	38 ± 21
"	4-12-49	8:27 a.m.	" " " " "	-	-	-	33 ± 21
"	4-14-49	8:40 a.m.	" " " " "	-	-	-	33 ± 21
"	4-16-49	9:00 a.m.	" " " " "	-	-	-	68 ± 27
"	4/10-16/49	Composite	" " " " "	0	Less than 0.2	0.0 ± 1.1	-

RECEIVED
APR 26 1949

158

SUPERVISOR T. Kuranoshi DATE 4-25-49

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 18

REPORT OF WATER SURVEY ANALYSES

4-21

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
13 W	4-4-49	9:35 a.m.	Clinch River effluent from K-25	1	Less than 0.2	0.0 ± 1.1	53 ± 21	7.8
12 W	4-4-49	12:50 p.m	Clinch River upstream from K-25	1	Less than 0.2	0.0 ± 1.1	96 ± 38	7.9
10 W	4-4-49	10:00 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.1 ± 1.1	-	-
22 W	4-4-49	1:15 p.m.	Poplar Creek immediately before junction with Clinch River	1	-	0.6 ± 1.1	49 ± 21	7.7
11 W	4-4-49	1:30 p.m	Poplar Creek influent to K-25 at Blair Gate	0	-	0.6 ± 1.1	0 ± 21	7.1
1 W	4-4-49	1:45 p.m	Poplar Creek inlet N.E. of K-303-8	2	-	0.9 ± 1.1	-	-
14 W	4-4-49	2:00 p.m	Influent to Sewage Disposal Plant	1	-	-	-	-
6 W	4-5-49	9:30 a.m.	K-27 drainage into Poplar Creek	2	-	-	-	-
16 W	4-5-49	9:30 a.m.	Drinking water, K-631	0	Less than 0.2	0.1 ± 1.1	45 ± 21	7.6
20 W	4-5-49	9:40 a.m.	Cafeteria cooking water	0	-	0.0 ± 1.1	50 ± 21	7.5

RECEIVED APR 22 1949

159

SUPERVISOR T. Kwasnoski DATE

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 182

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	p
13 W	4-11-49	9:35 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	38±31	7.
10 W	4-11-49	10:20 a.m	Clinch River immediately below S-50 sewer outfall	1	Less than 0.2	0.2±1.1	-	-
12 W	4-11-49	1:30 p.m.	Clinch River upstream from K-25	1	Less than 0.2	0.2±1.1	74±30	7.
22 W	4-11-49	2:00 p.m.	Poplar Creek immediately before junction with Clinch River	1	-	0.1±1.1	20±21	7.
14 W	4-11-49	2:20 p.m.	Influent to Sewage Disposal Plant	2	-	-	-	-
*6 W	4-11-49	4:05 p.m.	K-27 drainage into Poplar Creek	3	-	-	-	-
16 W	4-12-49	9:00 a.m.	Drinking water, K-1501	0	Less than 0.2	0.0±1.1	34±21	7.
20 W ✓	4-12-49	9:10 a.m.	Cafeteria cooking water	0	-	0.0±1.1	37±21	7.
29 W ✓	4-12-49	9:20 a.m.	Flow ditch at west end of holding pond	1	-	10.9±1.1	-	-

* Rain preceeding and during sampling period.

RECEIVED APR 25 1949

160

SUPERVISOR T. Kurosaki DATE 4-25-49

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

write letter

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- 4-49	10:05 a.m	K-1004-J, "Normally Cold" drain				
			before dumping	-	-	0.5±1.1	1012
Note: The liquid level gauge measured 18½ inches.							

RECEIVED APR 14 1949

161

SUPERVISOR T. Kwasnoski DATE 4-15-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1'.

REPORT OF WATER SURVEY ANALYSES

4-7.

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
32 D	3-27-49	10:00 a.m	Influent to Water Purification Plant	-	-	-	162±65
24 D	3-27-49	10:00 a.m	Effluent from Water Purification Plant	0	-	0.0±1.1	77±31
32 D	3-27-49	10:00 p.m	Influent to Water Purification Plant	-	-	-	86±34
24 D	3-28-49	10:00 a.m	Effluent from Water Purification Plant	-	-	-	45±21
24 D	3-29-49	9:00 a.m	Effluent from Water Purification Plant	0	Less than 0.2	0.2±1.1	46±21
24 D	3-31-49	8:40 a.m	Effluent from Water Purification Plant	0	-	0.0±1.1	56±22

RECEIVED APR. 7 1949

SUPERVISOR T. Kwasnoski DATE 4-7-49

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 17

REPORT OF WATER SURVEY ANALYSES

4-7

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 ME	3-16-49	10:45 a.m	Mud from settling tank, K-1515	0.62 µg / g	-	15.6 ± 2.7 c/m/g	8391 c/m/g
* 13 ME	3-16-49	12:59 p.m	Clinch River effluent from K-25, Mud	0.15 µg / g	-	3.0 ± 0.5 c/m/g	-
* 10 ME	3-16-49	1:40 p.m	Clinch River immediately below S-50 sewer outfall, Mud	0.06 µg / g	60.0	2.6 ± 0.5 c/m/g	-
θ 8 M	3-18-49	9:00 a.m	Drainage from Jones Scrap Yard	1	-	0.6 ± 1.1	-
θ 9 M	3-18-49	9:10 a.m	Clinch River west of Jones Scrap Yard	0	-	-	-
23 M	3-22-49	2:25 p.m	Ground water at Sludge Pit	0	-	-	-
15 M	3-28-49	1:50 p.m	Effluent from Sewage Disposal Plant	3	-	-	-
26 & 27 M	3-29-49	3:35 p.m	Drainage from Labs A, B, C, & D	4	-	0.6 ± 1.1	97 ± 39
21 M	3-30-49	9:30 a.m	S-50 sewer outfall	8	-	-	-

* All results are based on one gram dry weight.

θ Samples were taken 4 hours after a rain.

RECEIVED APR 7 1949

163

SUPERVISOR T. Kwasnoski DATE 4-7-49

WCX-1012 (Ma)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 171

REPORT OF WATER SURVEY ANALYSES

Cm 4.7

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
13 W	3-28-49	10:30 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.7 ± 1.1	62 ± 25	8.
14 W	3-28-49	1:45 p.m	Influent to Sewage Disposal Plant	4	-	-	-	-
16 W	3-28-49	2:05 p.m	Drinking water, K-402-6	0	Less than 0.2	0.0 ± 1.1	37 ± 21	7.
12 W	3-28-49	3:30 p.m	Clinch River upstream from K-25	1	Less than 0.2	0.4 ± 1.1	261 ± 65	8.
10 W	3-28-49	3:40 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0 ± 1.1	-	-
11 W	3-29-49	9:25 a.m	Poplar Creek influent to K-25	0	-	0.2 ± 1.1	0 ± 21	7.
29 W	3-29-49	9:30 a.m	Flow ditch at west end of holding pond	2	-	2.4 ± 1.1	-	-
22 W	3-29-49	10:00 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.2 ± 1.1	90 ± 36	7.
20 W	3-29-49	10:00 a.m	Cafeteria cooking water	0	-	0.3 ± 1.1	122 ± 49	7.
* 6 W	3-31-49	9:25 a.m	K-27 drainage into Poplar Creek	1	-	-	-	-

* Sample taken 6 hours after a rain.

RECEIVED APR 7 1949

164

SUPERVISOR T. Kwasnoski DATE 4-7-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 1

4-6

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	3-21-49	10:00 a.m	Effluent from Water Purification Plant	0	Less than 0.2	0.3 ±1.1	78 ± 31
24 D	3-23-49	8:25 a.m	Effluent from Water Purification Plant	0	-	0.2 ±1.1	67 ± 27
32 D	3-25-49	10:00 a.m	Influent to Water Purification Plant	-	-	-	109 ± 44
24 D	3-25-49	10:00 a.m	Effluent from Water Purification Plant	0	-	0.0 ± 1.1	47 ± 21
32 D	3-25-49	10:00 p.m.	Influent to Water Purification Plant	-	-	-	103 ± 41
24 D	3-25-49	10:00 p.m	Effluent from Water Purification Plant	-	-	-	101 ± 40
32 D	3-26-49	10:00 a.m	Influent to Water Purification Plant	-	-	-	179 ± 72
24 D	3-26-49	10:00 a.m.	Effluent from Water Purification Plant	-	-	-	97 ± 39
32 D	3-26-49	10:00 p.m	Influent to Water Purification Plant	-	-	-	174 ± 70
24 D	3-26-49	10:00 p.m	Effluent from Water Purification Plant	-	-	-	91 ± 36

151

SUPERVISOR T. Kusunoki DATE 4-5-49

WCX-1012 (Ma)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 175

REPORT OF WATER SURVEY ANALYSES

4-6

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
Special	3-29-49	1:00 p.m	K-1024 Acid Dilution Pit	4	-	-	-
"	3-29-49	1:15 p.m.	" " " "	1,500	-	-	-
"	3-29-49	2:18 p.m	" " " "	1,500	-	-	-
"	3-29-49	2:30 p.m	" " " "	400	-	-	-
"	3-29-49	3:30 p.m	" " " "	2,000	-	-	-
"	3-30-49	8:45 a.m.	" " " "	100	-	-	-
"	3-30-49	9:55 a.m.	" " " "	150	-	-	-
"	3-30-49	11:05 a.m.	" " " "	800	-	-	-

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166

SUPERVISOR T. Kuwanoshi DATE 4-5-49

NCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 174

4-6

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
13 W	3-21-49	10:00 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	141±56	7.[illegible]
11 W	3-21-49	12:30 p.m	Poplar Creek influent to K-25	0	-	0.1±1.1	0±21	6.9
12 W	3-21-49	1:10 p.m	Clinch River upstream from K-25	1	Less than 0.2	0.3±1.1	114±44	7.1
10 W	3-21-49	1:25 p.m	Clinch River immediately below S-50 sewer outfall	1	Less than 0.2	0.0±1.1	-	-
22 W	3-21-49	1:35 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.5±1.1	61±24	6.9
1 W	3-21-49	2:10 p.m	Poplar Creek inlet N.E. of K-303-8	2	-	1.9±1.1	-	-
6 W	3-22-49	1:55 p.m	K-27 drainage into Poplar Creek	1	-	-	-	-
16 W	3-22-49	2:50 p.m	Drinking water, K-303-8	0	Less than 0.2	0.0±1.1	81±32	6.5
20 W	3-22-49	3:30 p.m	Cafeteria cooking water	0	-	0.2±1.1	76±30	6.5
14 W	3-23-49	2:10 p.m	Influent to Sewage Disposal Plant	1	-	-	-	-

RECEIVED APR 6 1949

167

SUPERVISOR T. Kwaczowski DATE 4-5-49

WCX-1012 (Me 3)

Report No. 173

Works Laboratory Department

Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

cm 4-6.

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	3-28-49	9:10 a.m	K-1004-J, "Normally Cold" drain				
			before dumping	-	-	3.2 ±1.1	19,601

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Supervisor T. Kwasnoski Date 4-5-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 173

PLOT PLAN REFERENCE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLING LOCATION	URANIUM CONCENTRATION ~~P.P.B.~~	FLUORIDE CONCENTRATION P.P.M.	COUNTS PER MINUTE PER ~~XXXXXX~~ gram	
						ALPHA	BETA
31 M-E	3-16-49	3:40 p.m.	Sludge from Powerhouse Sewage				
			Disposal Plant	25 µg/gram	-	261 ± 44	630
Note: Results are reported on one gram dry weight basis.							
			Corrected copy, Report No. 172.				
			Destroy previous report issued.				

RECEIVED APR 1 1949

SUPERVISOR E. B. Olszewski DATE 3-31-49

169

WCX-1012 (Ma)

REPORT NO. 169

WORKS LABORATORY DEPARTMENT

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	BETA	pH
13 W	3-14-49	9:55 a.m.	Clinch River effluent from K-25	1	Less than 0.2	0.2±1.1	44±21	7.
11 W	3-14-49	10:20 a.m.	Poplar Creek influent K-25	0	-	0.1±1.1	3±21	6.
12 W	3-14-49	12:50 p.m	Clinch River upstream from K-25	2	Less than 0.2	0.0±1.1	64±26	7.
19 W	3-14-49	1:00 p.m	Clinch River immediately below S-50 sewer outfall	2	Less than 0.2	0.0±1.1	-	-
22 W	3-14-49	1:20 p.m	Poplar Creek immediately before junction with Clinch River	2	-	0.1±1.1	33±21	7.
29 W	3-14-49	3:35 p.m	Flow ditch at west end of holding pond	12	-	10.0±1.1	-	-
16 W	3-14-49	3:45 p.m	Drinking water, K-1021 building	0	Less than 0.2	0.0±1.1	37±21	7.
20 W	3-14-49	3:50 p.m	Cafeteria cooking water	0	-	0.0±1.1	33±21	6.
* 6 W	3-18-49	8:45 a.m	K-27 drainage into Poplar Creek	0	-	-	-	-
14 W	3-18-49	1:10 p.m	Influent to Sewage Disposal Plant	6	-	-	-	-

* Sample taken 4 hours after a heavy rain .

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170

SUPERVISOR T. Kwasnoski DATE 3-29-49

WCX-1012 (Mar'49)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

REPORT OF WATER SURVEY ANALYSES

Effluent - one spot sample on

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	3-17-49	9:00 a.m.	Effluent from Water Purification Plant	0	-	0.0±1.1	27±21
24 D	3-18-49	10:00 a.m	Effluent from Water Purification Plant	-	-	-	24±21
32 D	3-18-49	10:00 a.m	Influent to Water Purification Plant	-	-	-	44±21
24 D	3-18-49	10:00 p.m	Effluent from Water Purification Plant	-	-	-	50±21
32 D	3-18-49	10:00 p.m	Influent to Water Purification Plant	-	-	-	311±78
24 D	3-19-49	10:00 a.m	Effluent from Water Purification Plant	7	-	0.6±1.1	105±42
32 D	3-19-49	10:00 a.m	Influent to Water Purification Plant	-	-	-	135±41
24 D	3-19-49	10:00 p.m	Effluent from Water Purification Plant	-	-	-	147±44
32 D	3-19-49	10:00 p.m	Influent to Water Purification Plant	-	-	-	129±39
24 D	3-20-49	10:00 a.m	Effluent from Water Purification Plant	-	-	-	77±31
32 D	3-20-49	10:00 a.m	Influent to Water Purification Plant	-	-	-	179±54
24 D	3-20-49	10:00 p.m	Effluent from Water Purification Plant	-	-	-	98±39
32 D	3-20-49	10:00 p.m	Influent to Water Purification Plant	-	-	-	137±41

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SUPERVISOR T. Kobayashi DATE 3-29-49

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NCX-1012 (Mar

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 171

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	3-21-49	12:45 p.m.	K-1004-J, "Normally Cold" drain before dumping	-	-	1.2±1.6	8933
Note: This sample was taken without previously agitating the storage tank.							

RECEIVED MAR 30 1949

172

SUPERVISOR T. Kuronoshi DATE 3-30-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 168

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
Special	3-16-49	1:15 p.m.	K-1024 acid dilution pit	0	-	-	-
Special	3-16-49	1:40 p.m.	K-1024 acix dilution pit	6,000	-	-	-
Special	3-16-49	2;20 p.m.	K-1024 acid dilution pit	1,500	-	-	-
Special	3-16-49	2:44 p.m.	K-1024 acid dilution pit	2,000	-	-	-
Special	3-16-49	3:47 p.m.	K-1024 acid dilution pit	145	-	-	-
Special	3-17-49	8:35 a.m.	K-1024 acid dilution pit	50	-	-	-
Special	3-17-49	9:32 a.m.	K-1024 acid dilution pit	200	-	-	-
Special	3-17-49	10:32 a.m	K-1024 acid dilution pit	50	-	-	-
Special	3-17-49	11:35 a.m	K-1024 acid dilution pit	25	-	-	-
Special	3-17-49	12:47 p.m	K-1024 acid dilution pit	25	-	-	-
Special	3-17-49	2:22 p.m.	K-1024 acid dilution pit	25	-	-	-

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173

SUPERVISOR T. Kuranoshi DATE 3-22-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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 D	3- 1-49	8:30 a.m.	Effluent from Water Purification Plant	0	Less than 0.2	0.0 ± 1.1	24 ± 21
24 D	3- 3-49	9:05 a.m.	" " " " "	0	-	0.0 ± 1.1	26 ± 21
24 D	3- 5-49	9:00 a.m.	" " " " "	0	-	0.0 ± 1.1	16 ± 21
24 D	3- 7-49	9:00 a.m.	" " " " "	0	Less than 0.2	0.0 ± 1.1	13 ± 21
24 D	3- 9-49	8:45 a.m.	" " " " "	0	-	0.1 ± 1.1	28 ± 21
24 D	3-11-49	9:20 a.m.	" " " " "	0	-	0.1 ± 1.1	26 ± 21
24 D	3-13-49	9:15 a.m.	" " " " "	0	-	0.0 ± 1.1	29 ± 21
24 D	3-15-49	9:00 a.m.	" " " " "	0	-	0.1 ± 1.1	39 ± 21

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SUPERVISOR T. Kwasnoski DATE 3-[illegible]49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 16

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	p
13 W	3-7-49	9:30 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	47±21	7.
11 W	3-7-49	9:55 a.m.	Poplar Creek influent to K-25	0	-	0.0±1.1	0±21	7.
1 W	3-7-49	10:07 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	1.8±1.1	-	-
12 W	3-7-49	10:25 a.m	Clinch River upstream from K-25	0	Less than 0.2	0.1±1.1	49±21	8.
10 W	3-7-49	12:00 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.2±1.1	-	-
22 W	3-7-49	1:20 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	18±21	7.
14 W	3-7-49	2:10 p.m	Influent to Sewage Disposal Plant	0	-	-	-	-
20 W	3-8-49	2:15 p.m	Cafeteria cooking water	0	-	0.0±1.1	38±31	7.
16 W	3-8-49	9:30 a.m	Drinking water, K-1401 Pump Shop	0	Less than 0.2	0.1±1.1	21±21	7.
* 6 W	3-10-49	12:50 p.m	K-27 drainage into Poplar Creek	3	-	-	-	-

* This sample taken approximately two hours a rain fall.

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T. Kwasnoski

DATE 3-21-49

WCX-1012 (Mar'

REPORT NO. 16.

WORKS LABORATORY DEPARTMENT

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	BETA
30 W	3-14-49	8:40 a.m.	K-1004-J, "Normally Cold" drain before				
			dumping.	-	-	0.0 ± 1.1	719

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SUPERVISOR T. Kwasnoski DATE 3-2[illegible]-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 164

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
13 W	3-1-49	9:32 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	18±21	7.5
11 W	3-1-49	10:00 a.m	Poplar Creek influent to K-25	0	-	0.1±1.1	1±21	7.1
29 W	3-1-49	10:10 a.m	Flow ditch at west end of holding pond	2	-	5.6±1.1	-	-
16 W	3-1-49	10:07 a.m	Drinking water, K-1405	0	Less than 0.2	0.0±1.1	30±21	7.1
12 W	3-1-49	12:35 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.0±1.1	42±21	7.7
10 W	3-1-49	12:50 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	3-1-49	1:10 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	27±21	7.3
6 W	3-1-49	1:25 p.m.	K-27 drainage into Poplar Creek	1	-	-	-	-
14 W	3-1-49	1:35 p.m.	Influent to Sewage Disposal Plant	1	-	-	-	-
20 W	3-2-49	8:35 a.m.	Cafeteria cooking water	0	-	0.0±1.1	37±21	7.5

SUPERVISOR T. Kwaaoski DATE 3-15-49

WCX-1012 (Mar'

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 163

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	3-7-49	9:05 a.m.	K-1004-J "Normally Cold" drain before				
			dumping.	-	-	1.0±1.1	2530

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SUPERVISOR T. Kuroasaki DATE 3-15-49

WCX-1012 (Ma 8)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

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	2-28-49	9:20 a.m.	K-1004-J "Normally Cold" drain				
			before dumping.	-	-	0.3±1.1	3057

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SUPERVISOR T. Kuranoshi DATE 3-7-49

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 1

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	p
13 W	2-21-49	9:47 a.m.	Clinch River effluent from K-25	0	0.3	0.1±1.1	64±26	7
11 W	2-21-49	10:10 a.m	Poplar Creek influent to K-25	0	-	0.1±1.1	0±21	7
6 W	2-21-49	10:22 a.m.	K-27 drainage into Poplar Creek	0	-	-	-	
14 W	2-21-49	10:25 a.m	Influent to Sewage Disposal Plant	7	-	-	-	-
12 W	2-21-49	10:35 a.m	Clinch River upstream from K-25	0	Less than 0.2	0.1±1.1	83±33	7
10 W	2-21-49	1:05 p.m.	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	2-21-49	1:30 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.2±1.1	26±21	7.
16 W	2-21-49	2:00 p.m.	Drinking water, K-309-3	0	0.2	0.1±1.1	61±24	7.
20 W	2-21-49	2:15 p.m.	Cafeteria cooking water	0	-	0.1±1.1	50±21	7.
1 W	2-23-49	10:00 a.m.	Poplar Creek N.E. of K-303-8	2	-	1.8±1.1	-	-

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SUPERVISOR T. Kwapowski DATE 3-7-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO.

REPORT OF WATER SURVEY ANALYSES

verbal data from Straub at X-10

inches rainfall.

13. 0
14. 0
15. .60
16. .50
17. 0
18. 0
19. .50

Rainfall

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	2-16-49	8:45 a.m.	Effluent from Water Purification Plant	-	- 14.72	0.1 ± 1.1	57 ± 23
"	2-17-49	8:40 a.m.	" " " " "	0	- 10.40	0.0 ± 1.1	149 ± 60
"	2-18-49	8:30 a.m.	" " " " "	-	- 6.14	0.0 ± 1.1	139 ± 56
"	2-19-49	9:00 a.m.	" " " " "	0	- 6.96	0.2 ± 1.1	109 ± 44
"	2-20-49	9:00 a.m.	" " " " "	-	- 9.15	-	166 ± 66
"	2-21-49	8:30 a.m.	" " " " "	2	Less than 0.2	0.2 ± 1.1	92 ± 37
"	2-22-49	9:00 a.m.	" " " " "	-	- 4.79	0.3 ± 1.1	57 ± 23
"	2-23-49	8:40 a.m.	" " " " "	0	-	0.1 ± 1.1	34 ± 21
"	2-25-49	8:20 a.m.	" " " " "	0	-	0.1 ± 1.1	37 ± 21
"	2-27-49	8:30 a.m.	" " " " "	0	-	0.1 ± 1.1	25 ± 21

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SUPERVISOR T. Kwasnoski DATE 3-4-49

WCX-1012 (Ma 8)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. -.7

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
8 M	2-7-49	2:35 p.m.	Drainage from Jones Scrap Yard	0	-	0.1±1.1	-
9 M	2-7-49	2:45 p.m.	Clinch River west of Jones Scrap Yard	0	-	-	-
* 13 M-E	2-9-49	1:00 p.m.	Clinch River effluent from K-25, Mud	0.6 µg/g.	41.2	6.8±1.1	-
* 10 M-E	2-9-49	1:54 p.m.	Clinch River immediately below S-50 sewer outfall, Mud	0.5 µg/g.	54.8	3.6	-
* 15 M-E	2-9-49	2:30 p.m.	Sludge from Sewage Disposal Plant	28.2 µg/g.	-	228.3±38.8	-
* 24 M-E	2-9-49	3:00 p.m.	Mud from bottom of settling tank at K-1515	4.7 µg/g.	-	11.4±1.9	4198
* 31 M-E	2-10-49	1:05 p.m.	Sludge from Powerhouse Sewage Disposal Plant	300 µg/g.	-	191.5±32.5	716
2 M	2-18-49	3:36 p.m.	Drainage from pond at west end of Garage Area	-	-	-	14±21
21 M	2-21-49	1:10 p.m.	S-50 Sewer outfall	7	-	-	-
23 M	2-23-49	9:30 a.m.	Ground water at sludge pit	0	-	-	-
15 M	2-23-49	9:00 a.m.	Effluent from Sewage Disposal Plant	0	-	-	-
26 & 27 M	2-23-49	9:45 a.m.	Drainage from Labs. A, B, C, & D	1	-	1.8±1.1	40±21
* These results are based on one gram dry weight of sample.							

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SUPERVISOR T. Kurasoshi DATE 3-1-49

WCX-1012 (Mar ?)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. [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	BETA
Special	2-2-49	12:50 p.m	Sludge from the bottom of the				
			dilution pit at K-1024	35.5 µg/g	-	230 ± 39	325
Special	2-2-49	12:50 p.m	Fluid from near the top of the liquid				
			level of the dilution pit at K-1024	4 ppb	-	1.3 ± 1.6	-
All the results for the sample of sludge are based on one gram dry weight of the sample.							

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SUPERVISOR T. Kwasnoski DATE 2-28-49

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WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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	p
13 W	2-14-49	9:50 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.2 ± 1.1	100 ± 40	8
11 W	2-14-49	10:05 a.m	Poplar Creek influent to K-25	0	-	0.1 ± 1.1	6 ± 21	7.
1 W	2-14-49	10:16 a.m.	Poplar Creek inlet N.E. of K-303-8	2	-	1.2 ± 1.1	-	-
6 W	2-14-49	10:30 a.m.	K-27 drainage into Poplar Creek	0	-	-	-	-
14 W	2-14-49	10:35 a.m.	Influent to Sewage Disposal Plant	3	-	-	-	-
16 W	2-14-49	10:35 a.m.	Drinking water, K-131	0	Less than 0.2	0.2 ± 1.1	87 ± 35	7.
12 W	2-14-49	1:15 p.m.	Clinch River upstream from K-25	0	Less than 0.2	0.1 ± 1.1	80 ± 32	7.
10 W	2-14-49	1:30 p.m.	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	*	-	-
22 W	2-14-49	1:42 p.m.	Poplar Creek immediately before junction with Clinch River	1	-	0.3 ± 1.1	50 ± 21	7.
20 W	2-14-49	2:30 p.m.	Cafeteria cooking water	0	-	0.1 ± 1.1	59 ± 21	7.

* This portion of the sample was destroyed in the laboratory.

RECEIVED CEN

182

SUPERVISOR T. Kwasnoski DATE 2-28-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 5

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	2-21-49	9:00 a.m.	K-1004-J "Normally Cold" drain				
			before dumping.	-	-	0.1± 1.1	2335
#155	2-14-49	9:15 AM	"	-	=	0.9 ± 1.1	8803

RECEIVED 28 CEN

183

SUPERVISOR T. Kusanoski DATE 2-25-49

WCX-1012 (Ma')

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 35

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	2-14-49	9:15 a.m.	K-1004-J "Normally Cold" drain before				
			dumping.	-	-	0.9 ± 1.1	8803

RECEIVED FEB 21 1949 CEN

SUPERVISOR T. Kuranoshi DATE 2-23-49

WCX-1012 (Mar [illegible])

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 154

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 D	2- 1-49	9:05 a.m.	Effluent from Water Purification Plant	0	Less than 0.2	0.0±1.1	47±21
"	2- 3-49	8:30 a.m.	" " " " "	2	-	0.0±1.1	42±21
"	2- 5-49	9:00 a.m.	" " " " "	0	-	0.1±1.1	31±21
"	2- 7-49	9:00 a.m.	" " " " "	0	0.4	0.0±1.1	21±21
"	2- 9-49	9:00 a.m.	" " " " "	0	-	0.7±1.1	24±21
"	2-11-49	8:45 a.m.	" " " " "	0	-	0.0±1.1	20±21
"	2-13-49	8:40 a.m.	" " " " "	0	-	0.0±1.1	33±21
"	2-15-49	8:40 a.m.	" " " " "	0	Less than 0.2	0.1±1.1	70±28

RECEIVED FEB 23 CEN

185

SUPERVISOR T. Kuwanoki DATE 2-23-49

.12 (Mar '48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

2-22-49

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	p
13 W	2-7-49	9:35 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 1.1	11 ± 21	7
11 W	2-7-49	9:50 a.m	Poplar Creek influent to K-25	0	-	0.3 ± 1.1	0 ± 21	7
29 W	2-7-49	10:10 a.m	Flow ditch at west end of holding pond.	4	-	6.9 ± 1.1	-	-
16 W	2-7-49	10:15 a.m	Drinking water, K-1037	0	Less than 0.2	0.0 ± 1.1	15 ± 21	7
14 W	2-7-49	10:25 a.m	Influent to Sewage Disposal Plant	4	-	-	-	-
20 W	2-7-49	10:35 a.m	Cafeteria cooking water	0	-	0.2 ± 1.1	22 ± 21	7
12 W	2-7-49	12:50 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.1 ± 1.1	48 ± 21	7.
10 W	2-7-49	1:00 p.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.2 ± 1.1	-	-
22 W	2-7-49	1:25 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3 ± 1.1	16 ± 21	7.
6 W	2-7-49	1:40 p.m	K-27 drainage into Poplar Creek	0	-	-	-	-

186

SUPERVISOR T. Kwasnoski DATE 2-28-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 15

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	p
12 W	2-1-49	9:15 a.m	Clinch River upstream from K-25	0	Less than 0.2	0.1±1.1	101±40	7
10 W	2-1-49	9:30 a.m	Clinch River immediately below S-50 Sewer Outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	2-1-49	9:45 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3±1.1	22±21	7
14 W	2-1-49	10:35 a.m	Influent to Sewage Disposal Plant	2	-	-	-	-
6 W	2-1-49	10:45 a.m	K-27 drainage into Poplar Creek	1	-	-	-	-
13 W	2-1-49	12:50 p.m.	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	4±21	7
11 W	2-1-49	1:10 p.m	Poplar Creek influent to K-25	0	-	0.2±1.1	0±21	7
1 W	2-1-49	1:20 p.m	Poplar Creek inlet N.E. of K-303-8	2	-	0.9±1.1	-	-
16 W	2-1-49	1:35 p.m	Drinking water, K-402-5	0	Less than 0.2	0.0±1.1	47±21	7
20 W	2-1-49	1:45 p.m	Cafeteria cooking water	0	-	0.0±1.1	52±21	7

REC

CEN

187

SUPERVISOR T. Kwasnoski DATE 2-14-49

WCX-1012 (Mar 7)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

RECEIVED FEB 9 1949 CEN

REPORT NO. 1

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	1-16-49	9:00 a.m	Effluent from Water Purification Plant	0	-	0.0 ± 1.1	8 ± 21
"	1-18-49	8:40 a.m	" " " " "	0	Less than 0.2	0.1 ± 1.1	2 ± 21
"	1-20-49	9:10 a.m	" " " " "	0	-	0.0 ± 1.1	70 ± 28
"	1-22-49	9:00 a.m	" " " " "	0	-	0.1 ± 1.1	56 ± 22
"	1-23-49	9:00 a.m	" " " " "	-	-	0.2 ± 1.1	151 ± 60
"	1-24-49	8:25 a.m.	" " " " "	*50	Less than 0.2	3.1 ± 1.1	64 ± 26
"	1-26-49	9:36 a.m	" " " " "	0	-	0.0 ± 1.1	49 ± 21
"	1-28-49	9:00 a.m	" " " " "	0	-	0.0 ± 1.1	26 ± 21
"	1-30-49	9:00 a.m	" " " " "	4	-	0.8 ± 1.1	41 ± 21

* This is the average of four determinations. This value is believed to be the result of the sampling container having been used for contaminated wastes.

188

SUPERVISOR T. Kuwasaki DATE 2-8-49

WCX-1012 (M[illegible])

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

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 W	1-24-49	9:32 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 1.1	10 ± 21	7.
11 W	1-24-49	9:55 a.m	Poplar Creek influent to K-25	0	-	0.0 ± 1.1	0 ± 21	7.
29 W	1-24-49	10:00 a.m	Drainage ditch at west of holding pond	10	-	12.2 ± 1.1	-	-
16 W	1-24-49	10:10 a.m	Drinking water, K-1036	0	Less than 0.2	0.0 ± 1.1	47 ± 21	7.
14 W	1-24-49	10:20 a.m	Influent to Sewage Disposal Plant	1	-	-	-	-
12 W	1-24-49	12:40 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.1 ± 1.1	99 ± 40	8.
10 W	1-24-49	1:00 p.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.0 ± 1.1	-	-
22 W	1-24-49	1:10 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3 ± 1.1	20 ± 21	7.
6 W	1-24-49	1:35 p.m	K-27 drainage into Poplar Creek	2	-	-	-	-
20 W	1-24-49	2:10 p.m	Cafeteria cooking water	0	-	0.0 ± 1.1	54 ± 22	7.

RECEIVED FEB 4

189

SUPERVISOR T. Kwasnoski DATE 2-2-49

WCX-1012 (M[illegible] '8)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

This report is in error
13 ME
10 ME
24 ME

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 M-E	1-11-49	2:45 p.m	Clinch River effluent from K-25, Mud	0.2	41.2	1.8 ± 0.3	-
* 10 M-E	1-11-49	3:15 p.m	Clinch River immediately below S-50 Sewer outfall, Mud	0.4	38.0	1.8 ± 0.3	-
* 24 M-E	1-12-49	9:35 a.m	Mud from bottom of settling tank, K-1515	2.5	-	5.3 ± 0.9	1666
8 M	1-18-49	9:50 a.m	Drainage from Jones Scrap Yard	0	-	0.1 ± 1.1	-
9 M	1-18-49	9:55 a.m	Clinch River west of Jones Scrap Yard	0	-	-	-
21 M	1-18-49	10:05 a.m	S-50 Sewer outfall	9	-	-	-
23 M	1-18-49	2:00 p.m	Ground water at Sludge Pit	0	-	-	-
15 M	1-18-49	2:20 p.m	Effluent from Sewage Disposal Plant	3	-	-	-
26 & 27 M	1-24-49	2:00 p.m	Drainage from Labs A, B, C, and D	10	-	4.0 ± 1.1	47 ± 29
* Results are expressed in terms of per gram dry weight basis.							

RECEIVED

190

SUPERVISOR T. Kwasnoski DATE 2-2-49

(Mar '48)

REPORT No. 1

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Highlights Jan. Flow. 147 cm.

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- 2-49	9:00 a.m.	Effluent from Water Purification Plant	0	-	0.1 ± 1.1	16 ± 21
"	1- 4-49	8:45 a.m.	" " " " "	0	Less than 0.2	0.0 ± 1.1	22 ± 21
"	1- 6-49	8:15 a.m.	" " " " "	0	-	0.1 ± 1.1	53 ± 30
"	1- 7-49	8:20 a.m.	" " " " "	-	-	-	102 ± 58
"	1- 8-49	9:00 a.m.	" " " " "	0	-	0.0 ± 1.1	39 ± 21
"	1- 9-49	9:10 a.m.	" " " " "	-	-	-	25 ± 21
"	1-10-49	9:00 a.m.	" " " " "	0	Less than 0.2	0.2 ± 1.1	32 ± 21
"	1-12-49	9:15 a.m.	" " " " "	0	-	0.7 ± 1.1	12 ± 21
"	1-14-49	8:35 a.m.	" " " " "	0	-	0.0 ± 1.1	4 ± 21

SUPERVISOR T. Kuranoshi DATE 1-20-49

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 8

1-28-49

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	p
13 W	1-17-49	10:35 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	11±21	7
10 W	1-17-49	12:50 p.m.	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	1-17-49	1:05 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.5±1.1	0±21	7
14 W	1-17-49	1:20 p.m	Influent to Sewage Disposal Plant	0	-	-	-	-
11 W	1-17-49	2:10 p.m.	Poplar Creek influent to K-25	0	-	0.2±1.1	0±21	8.
1 W	1-17-49	2:20 p.m	Poplar Creek inlet N.E. of K-303-8	4	-	3.6±1.1	-	-
6 W	1-17-49	2:30 p.m	K-27 drainage into Poplar Creek	2	-	-	-	-
20 W	1-17-49	2:45 p.m	Cafeteria cooking water	0	-	0.4±1.1	0±21	7.
16 W	1-17-49	2:50 p.m.	Drinking water K-1004-D	0	Less than 0.2	0.0±1.1	0±21	7.
12 W	1-18-49	9:40 a.m.	Clinch River upstream from K-25	0	Less than 0.2	0.0±1.1	35±21	7.

RECEIVED JAN 28 1949 CLG/wkp

192

SUPERVISOR T. Kwasnoski DATE 1-27-49

X-1012 (M[illegible]B)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

1-21-49

REPORT NO. _____

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	p
13 W	1-10-49	9:35 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 1.1	10 ± 21	
11 W	1-10-49	10:07 a.m.	Poplar Creek influent to K-25	0	-	0.3 ± 1.1	4 ± 21	8
16 W	1-10-49	10:20 a.m.	Drinking water, Guard Post #41	0	Less than 0.2	0.4 ± 1.1	-	7
12 W	1-10-49	1:20 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.0 ± 1.1	12 ± 21	8
10 W	1-10-49	1:35 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.7 ± 1.1	-	-
22 W	1-10-49	1:50 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0 ± 1.1	16 ± 21	7
20 W	1-10-49	2:15 p.m	Cafeteria cooking water	0	-	0.2 ± 1.1	14 ± 21	7
29 W	1-10-49	3:25 p.m	Flow ditch at west end of holding pond	2	-	2.7 ± 1.1	-	-
6 W	1-10-49	3:35 p.m	K-27 drainage into Poplar Creek	0	-	-	-	-
14 W	1-10-49	3:40 p.m	Influent to Sewage Disposal Plant	0	-	-	-	-

193

SUPERVISOR T. Kusonoki DATE 1-20-49

(Mc 8)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

RECEIVED JAN 20 1949 PROCESS SUPT. OFFICE

REPORT NO. 5

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
13W	1- 3-49	9:45 a.m.	Clinch River effluent from K-25	0	less than 0.2	0.0±1.1	1±21	8.0
12 W	1- 3-49	12:30 p.m	Clinch River upstream from K-25	0	less than 0.2	0.2±1.1	-	7.9
10 W	1- 3-49	12:45 p.m	Clinch River immediately below S-50 Sewer Outfall	0	less than 0.2	0.3±1.1	-	-
22 W	1- 3-49	12:55 p.m	Poplar Creek immediately before junction with Clinch River	0	-	1.0±1.1	15±21	7.
14 W	1- 3-49	1:10 p.m.	Influent to Sewage Disposal Plant	0	-	-	-	-
16 W	1- 3-49	1:15 p.m	Drinking water, K-1131 building	0	less than 0.2	0.0±1.1	-	7.
20 W	1- 3-49	1:30 p.m	Cafeteria cooking water	0	-	0.0±1.1	16±21	7.
11 W	1- 3-49	2:10 p.m	Poplar Creek influent to K-25	0	-	0.3±1.1	4±21	7.
1 W	1- 3-49	2:25 p.m	Poplar Creek inlet N. E. of K-303-8	4	-	3.2±1.1	-	-
6 W	1- 3-49	3:00 p.m	K-27 drainage into Poplar Creek	3	-	-	-	-
12 W	1- 6-49	9:40 a.m	Clinch River upstream from K-25	-	- -	-	47±21	-
12 W	1- 7-49	8:30 a.m	Clinch River upstream from K-25	-	-	-	70±40	-

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SUPERVISOR T. Kwasnoski DATE 1-19-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

REPORT OF WATER SURVEY ANALYSES

RECEIVED JAN 11 1949 PROCESS SUPT. OFFICE

PLOT PLAN REFERENCE	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
13 W	12-27-48	9:20 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	12± 21	7.9
11 W	12-27-48	9:40 a.m	Poplar Creek influent to K-25	0	-	0.2±1.1	8±21	7.5
12 W	12-28-48	1:00 p.m	Clinch River up stream from K-25	0	Less than 0.2	0.2±1.1	35 ±21	8.0
10 W	12-27-48	1:15 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	12-27-48	1:30 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.5±1.1	9 ±21	7.5
14 W	12-27-48	1:45 p.m	Influent to Sewage Disposal Plant	0	-	-	-	-
1 W	12-27-48	3:28 p.m	Poplar Creek inlet N.E. of K-303-8	2	-	2.9±1.1	-	-
6 W	12-27-48	3:40 p.m	K-27 drainage into Poplar Creek	1	-	-	-	-
16 W	12-28-48	9:05 a.m	Drinking water, K-303-4	0	Less than 0.2	0.4 ±1.1	20 ±21	7.8
20 W	12-28-48	9:10 a.m	Cafeteria cooking water	0	-	0.2 ±1.1	9±21	7.7

195

SUPERVISOR E. B. Olszewski DATE 1-10-49

WCX-1012 (Mar [illegible])

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 14

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
9 M	12- 8-48	1:00 p.m	Clinch River west of Jones Scrap Yard	0	-	-	-
21 M	12- 8-48	1:20 p.m.	S-50 Sewer outfall	5	-	-	-
28 M	12- 8-48	1:40 p.m	Bear Creek at Oak Ridge Turnpike	0	-	0.4±1.1	-
23 M	12-21-48	1:30 p.m	Ground water at sludge pit	0	-	-	-
15 M	12-21-48	2:00 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
26 & 27 M	12-21-48	2:10 plm	Drainage from Labs. A, B, C & D		-	4.9±1.1	-
8 M	12- 8-48	12:55 p.m	Drainage from Jones Scrap Yard into Clinch River	0	-	0.4±1.1	-

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SUPERVISOR T. Kwasnoski DATE 1-5-[illegible]

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 14

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
25 Y	12- 8-48	3:45 p.m	Clinch River above Elza Gate	0	Less than 0.2	0.0 ± 1.1	-
17 Y-25	12-21-48	1:50 p.m.	Recirculating water in K-25	0	-	0.2 ± 1.1	-
17 Y-27	12-21-48	1:55 p.m	Recirculating water in K-27	0	-	0.5 ± 1.1	-

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SUPERVISOR T. Kuronoshi DATE 1-5-49

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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
12 W	12-20-48	9:25 a.m	ClinchRiver upstream from K-25	0	Less than 0.2	0.1±1.1	168±67	7.8
10 W	12-20-48	9:41 a.m	Clinch River immediately below S-50 sewer outfall	0	less than 0.2	0.2±1.1	-	-
22 W	12-20-48	9:45 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	53±21	7.3
13 W	12-20-48	10:30 a.m	Clinch River effluent from K-25	0	0.3	0.0±1.1	60±24	7.8
11 W	12-20-48	12:25 p.m.	Poplar Creek influent to K-25	0	-	0.2±1.1	0±21	7.0
29 W	12-20-48	12:30 p.m	Flow ditch at west end of holding pond	10	-	18.2±1.1	-	-
20 W	12-20-48	12:40 p.m	Cafeteria cooking water	0	-	0.1±1.1	59±24	7.3
14 W	12-20-48	1:00 p.m	Influent to Sewage Disposal Plant	0	-	-	-	-
6 W	12-20-48	1:05 p.m	K-27 drainage into Poplar Creek	0	-	-	-	-
16 W	12-20-48	2:00 p.m	Drinking water, K-802 Bldg.	0	Less than 0.2	0.1±1.1	40±21	7.2

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SUPERVISOR T. Kwasowski DATE 1-5-49

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

RECEIVED JAN 6 1949 PROCESS SUPT. OFFICE

REPORT No. 11

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 D	12-17-48	9:15 a.m	Effluent from Water Purification Plant	0	-	0.0±1.1	35±21
"	12-19-48	9:00 a.m	" " " " "	0	-	0.1±1.1	38±21
"	12-21-48	9:00 a.m	" " " " "	0	-	0.3±1.1	32±21
"	12-23-48	8:30 a.m	" " " " "	0	Less than 0.2	0.5±1.1	25±21
"	12-25-48	9:00 a.m	" " " " "	0	-	0.1±1.1	23±21
"	12-27-48	10:00 a.m	" " " " "	0	Less than 0.2	0.0±1.1	35±21
"	12-29-48	9:00 a.m	" " " " "	0	-	0.1±1.1	15±21
"	12-31-48	9:00 a.m	" " " " "	0	-	0.2±1.1	

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SUPERVISOR T. Kwasnoski DATE 1-5-49

WCX-1012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

RECEIVED DEC 31 1948 PROCESS SUPT. OFFICE

REPORT No. 12

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 ~~xxxxxx~~dry gr/wt	
						ALPHA	BETA
13 M-E	12-15-48	1:00 p.m	Clinch River effluent from K-25	290	59.4	3.3±0.4	-
10 M-E	12-15-48	1:35 p.m	Clinch River immediately below S-50 sewer outfall	440	95	2.5±0.3	-
24 M-E	12-15-48	2:00 p.m	Bottom of settling tank, K-1515	875	-	13.9±2.7	13,674

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SUPERVISOR E. B. Olszewski DATE 12-30-48

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT No. 138

REPORT OF WATER SURVEY ANALYSES

RECEIVED DEC 29 1948 PROCESS SUPT. OFFICE

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
10 W	12-13-48	8:45 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	12-13-48	9:57 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.6±1.1	5±8	7.7
14 W	12-13-48	10:00 a.m	Influent to Sewage Disposal Plant	0	-	-	-	-
13 W	12-13-48	10:22 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-	-
11 W	12-13-48	12:30 p.m	Poplar Creek influent to K-25	0	-	0.2±1.1	0±8	7.7
1 W	12-13-48	12:55 p.m	Poplar Creek inlet N.E. of K-303-8	0	-	0.9±1.1	-	-
12 W	12-13-48	12:50 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.3±1.1	18±8	7.9
6 W	12-13-48	1:30 p.m	Drainage from K-27 into Poplar Creek	10	-	-	-	-
16 W	12-13-48	1:30 p.m	Drinking water, K-1401	0	Less than 0.2	0.2±1.1	14±8	7.6
20 W	12-13-48	1:35 p.m	Cafeteria cooking water	0	-	0.1±1.1	18±8	7.7

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SUPERVISOR T. Kuwasaki DATE 12-29-48

WCX-1012 (Ma[illegible])

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO.

RECEIVED DEC 24 1948 PROCESS SUPT. OFFICE

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 D	12- 1-48	8:55 a.m	Effluent from Water Purification Plant	0	-	0.2±1.1	27±8
"	12- 3-48	9:20 a.m	" " " " "	0	-	0.0±1.1	26±8
"	12- 5-48	8:00 a.m	" " " " "	0	Less than 0.2	0.0±1.1	37±8
"	12- 7-48	9:30 a.m	" " " " "	0	-	0.3±1.1	37±8
"	12- 9-48	8:50 a.m	" " " " "	0	-	0.0±1.1	33±8
"	12-11-48	8:00 a.m	" " " " "	0	-	0.0±1.1	9±8
"	12-13-48	8:30 a.m	" " " " "	0	Less than 0.2	0.0±1.1	20±8
"	12-15-48	8:40 a.m	" " " " "	0	-	0.5±1.1	9±8

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SUPERVISOR T. Kwasnoski DATE 12-[illegible]8

WCX-1012 (Mar 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

RECEIVED DEC 22 1948 PROCESS SUPT. OFFICE

REPORT No. 1

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
12 W	12- 1-48	1:30 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.0±1.1	23±11	7.7
12 W-1	12- 1-48	2:00 p.m	Clinch River approximately 1½ miles above K-25	0	-	-	-	-
12-W-2	12- 1-48	2:30 p.m	Clinch River ½ mile below X-10 effluent	0	-	-	-	-
13 W	12- 6-48	9:50 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	-	-
11 W	12- 6-48	1:20 p.m	Poplar Creek influent to K-25	0	-	0.1±1.1	15±8	7.4
12 W	12- 7-48	3:40 p.m	Clinch River upstream from K-25	0	Less than 0.2	0.1±1.1	169±8	7.6
10 W	12- 6-48	3:00 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-	-
22 W	12- 6-48	3:10 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.2±1.1	0±11	8.0
14 W	12- 6-48	3:20 p.m	Influent to Sewage Disposal Plant	3	-	-	-	-
6 W	12- 6-48	3:30 p.m	K-27 drainage into Poplar Creek	0	-	-	-	-
29 W	12- 6-48	3:40 p.m	Flow ditch at west end of holding pond	16	-	8.8±1.1	-	-
20 W	12- 6-48	3:50 p.m.	Cafeteria cooking water	0	-	0.0±1.1	34±11	7.9
16 W	12- 6-48	4:00 p.m	Drinking water, K-1003	0	Less than 0.2	0.0±1.1	-	-

202

SUPERVISOR T. Kwasowski DATE 12-21-48

WCX-1012 (Ma[illegible])

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

U.S. PROCESS SUPT. OFFICE

REPORT No. 1.

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
11 W	11-22-48	1:35 p.m	Poplar Creek influent to K-25	0	-	0.0±1.1	1±8
1 W	11-22-48	12:40 p.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
6 W	11-22-48	12:55 p.m	K-27 Drainage into Poplar Creek	5	-	-	-
14 W	11-22-48	1:00 p.m	Influent to Sewage Disposal Plant	1	-	-	-
10 W	11-22-48	1:20 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.4±1.1	-
22 W	11-22-48	1:35 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.2±1.1	-
16 W	11-22-48	2:45 p.m	Drinking water from K-413	0	Less than 0.2	0.3±1.1	-
20 W	11-22-48	2:55 p.m	Cafeteria cooking water	0	Less than 0.2	0.1±1.1	-
13 W	11-29-48	9:15 a.m	Clinch River effluent from K-25	0	0.2	0.3±1.1	-
11 W	11-29-48	9:30 a.m	Poplar Creek influent to K-25	0	-	0.2±1.1	0±8
* 1 W	11-29-48	9:35 a.m	Poplar Creek inlet N. E. of K-303-8	0	-	-	-
*29 W	11-29-48	9:40 a.m	Flow ditch at west end of holding pond	8	-	-	-

* Heavy rain approximately 10 hours before sample was taken.

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SUPERVISOR T. Kwasowski DATE 12-[illegible]48

WCX-1012 (Ma' 2)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

DEC 10 1948
PROCESS SUPT.
OFFICE

REPORT No. _____

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
* 6 W	11-29-48	9:45 a.m	K-27 Drainage into Poplar Creek	1	-	-	-
14 W	11-29-48	9:50 a.m	Influent to Sewage Disposal Plant	0	-	-	-
10 W	11-29-48	10:35 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.5±1.1	-
22 W	11-29-48	10:40 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	-
16 W	11-29-48	1:00 p.m	Drinking Water from K-1030	0	Less than 0.2	0.1±1.1	-
20 W	11-29-48	1:15 p.m	Cafeteria cooking water	0	Less than 0.2	0.2±1.1	-

* Heavy rain approximately 10 hours before sampling time.

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SUPERVISOR T. Kwasnoski DATE 12-10-48

WCX-1012 (Ma')

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

REPORT OF WATER SURVEY ANALYSES

PROCESS SUPT. OFFICE

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 M-E	11-10-48	9:27 a.m	Clinch River effluent from K-25, Mud	160	42.6	6.1±1.0	-
24 M-E	11-10-48	2:00 p.m	Settling Tank K-1515, Mud	10,000	-	39.8±6.8	3058

Note: Uranium concentration reported on dry weight basis

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SUPERVISOR T. Kwasnoski DATE 12-[illegible]-48

WCX-1012 (Mar 2)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

RECEIVED DEC 10 1943 PROCESS SUPT. OFFICE

REPORT No. 13.

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 D	11-17-48	8:50 a.m	Effluent from Water Purification Plant	0	less than 0.2	0.1 ± 1.1	30 ± 8
"	11-19-48	10:17 a.m	" " " " "	0	-	0.3 ± 1.1	27 ± 8
"	11-21-48	9:00 a.m	" " " " "	0	less than 0.2	0.3 ± 1.1	426 ± 8
"	11-23-48	8:30 a.m	" " " " "	0	-	0.0 ± 1.1	103 ± 8
"	11-25-48	9:05 a.m	" " " " "	0	-	0.0 ± 1.1	66 ± 8
"	11-27-48	8:45 a.m	" " " " "	0	-	0.0 ± 1.1	37 ± 8
"	11-29-48	10:25 a.m	" " " " "	0	less than 0.2	0.1 ± 1.1	93 ± 8

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SUPERVISOR T. Kwasnoski DATE 12-8-48

WCX-1012 (Ma')

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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
13 W	11-16-48	9:00 a.m	Clinch River effluent from K-25	0	less than 0.2	0.1±1.1	-
10 W	11-17-48	9:20 a.m	Clinch River immediately below S-50 sewer outfall	0	less than 0.2	0.1±1.1	-
22 W	11-17-48	9:40 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	-
11 W	11-17-48	10:00 a.m	Poplar Creek influent to K-25	0	-	0.1±1.1	11±11
14 W	11-17-48	10;10 a.m	Influent to Sewage Disposal Plant	1	-	-	-
16 W	11-18-48	9:00 a.m	K-25 and K-27 Drinking Water from Building K-402-1	0	less than 0.2	0.1±1.1	-
20 W	11-18-48	9:30 a.m	Cafeteria cooking water	0	less than 0.2	0.0±1.1	-
* 1 W	11-19-48	12:55 p.m	Poplar Creek inlet N. E. of K-303-8	0	-	-	-
* 29 W	11-19-48	1:01 p.m.	Flow ditch at west end of holding pond	5	-	3.8±1.1	-
* 6 W	11-19-48	1:15 p.m	K-27 drainage into Poplar Creek	2	-	-	-
13 W	11-22-48	10:30 a.m	Clinch River effluent from K-25	0	0.2	0.3±1.1	-
t 29 W	11-22-48	12:30 p.m	Flow ditch at west end of holding pond	6	-	8.7±1.1	-

* Sampled immediately after heavy rain for long period. Heavy flow in ditch.
t Heavy rain during night before sample was taken.

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2

SUPERVISOR T. Kwasnoski DATE 12-8

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

DEC 1948
PROCESS SUPT.
OFFICE

REPORT No. 1

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
* 21 M	11- 3-48	9:23 a.m	S-50 Sewer Outfall	8	-	-	-
* 8 M	11- 3-48	9:30 a.m	Drainage from Jones Scrap Yard	0		0.5±1.1	
* 28 M	11- 3-48	9:45 a.m	Bear Creek at Oak Ridge Turnpike	1	-	0.8±1.1	8±11
t 9 M	11-10-48	10:30 a.m	Clinch River west of Jones Scrap Yard	0	-	0.1±1.1	-
17 M 27	11-17-48	10:17 a.m	Recirculating water, K-27	0	-	0.4±1.1	-
17 M 25	11-17-48	10:21 a.m	Recirculating water, K-25	0	-	0.3±1.1	-

* Heavy rain approximately 10 hrs. before sample was taken.
t Heavy rain approximately 30 minutes before sample was taken.

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SUPERVISOR T. Kwasnoski DATE 12-7-48

REPORT No. _____

ATER SURVEY ANALYSES

			Sampling Location	Uranium Concentration P.P.B.	Fluoride Concentration P.P.M.	Counts per Minute per 100 ml.	
						Alpha	Beta
		.m	Clinch River effluent from K-25	1	Less than 0.2	0.6±1.1	-
	-4	:50 a.m	Poplar Creek influent to K-25	0	-	0.1±1.1	12±11
*		9:55 a.m	Poplar Creek inlet N.E. of K-303-8	5	-	-	-
*29	-10-48	10:05 a.m	Flow ditch west end of holding pond	5	-	4.2±1.1	-
14 W	11-10-48	10:15 a.m	Influent to Sewage Disposal Plant	2	-	-	-
* 6 W	11-10-48	10:25 a.m	K-27 drainage into Poplar Creek	2	-	-	-
*10 W	11-10-48	10:42 a.m	Clinch River immediately below S-50 sewer outfall	0	less than 0.2	0.0±1.1	-
*22 W	11-10-48	11:00 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	-
16 W	11-10-48	2:50 p.m	Drinking water, K-1131	0	less than 0.2	0.2±1.1	-
20 W	11-10-48	3:00 p.m	Cafeteria cooking water	0	0.2	0.0±1.1	-

* These samples were taken during and following a heavy rain that ended at approximately 10:00 a.m. on 11-10-48

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SUPERVISOR T. Kwasnoski DATE 11-[illegible]-48

WCX-1012 (Ma)
-23-48

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 1

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	11- 3-48	8:25 a.m	Effluent from Water Purification Plant	0	-	0.5±1.1	19± 8
"	11- 5-48	9:05 a.m	" " " " "	0	Less than 0.2	0.2±1.1	27±8
"	11- 7-48	8:40 a.m	" " " " "	0	Less than 0.2	0.2±1.1	66±8
"	11- 9-48	8:45 a.m	" " " " "	0	-	0.2±1.1	141±8
"	11-11-48	9:16 a.m	" " " " "	0	-	0.2±1.1	122±8
"	11-13-48	12:00 p.m	" " " " "	0	-	0.3±1.1	64±8
"	11-15-48	8:45 a.m	" " " " "	0	-	0.0±1.1	18±8

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SUPERVISOR T. Kurosaki DATE 11-23-48

WCX-1012 (Ma)
11-16-48

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT NO. 1

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
13 W	11-1-48	1:00 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.4±1.1	-
11 W	11-1-48	1:15 p.m	Poplar Creek influent to K-25	0	-	0.7±1.1	4±8
1 W	11-1-48	1:30 p.m	Poplar Creek inlet N.E. of K-303-8	3	-	-	-
6 W	11-1-48	2:43 p.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	11-1-48	2:49 p.m	Influent to Sewage Disposal Plant	0	-	-	-
10 W	11-1-48	3:00 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.2±1.1	-
22 W	11-1-48	3:15 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.5±1.1	-
29 W	11-1-48	3:30 p.m	Flow ditch at west end of holding pond	12	-	7.6±1.1	-
16 W	11-1-48	3:30 p.m	Drinking water, K-1030	0	Less than 0.2	0.5±1.1	-
20 W	11-1-48	3:42 p.m	Cafeteria cooking water	0	Less than 0.2	0.4±1.1	-
*29 W	11-3-48	8:45 a.m	Flow ditch at west end of holding pond	8	-	8.8±1.1	-
* 1 W	11-3-48	8:55 a.m	Poplar Creek inlet N.E. of K-303-8	3	-	-	-
* 6 W	11-3-48	9:15 a.m	K-27 drainage into Poplar Creek	0	-	-	-
* These positions were resampled approximately 10 hours after a rain.							

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SUPERVISOR T. Kwasnoski DATE 11-[illegible]-48

WCX-1012 (Mar '48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 6

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
139 MA	11-2-48	10:20 a.m	Composite Sample (top soil) from lower part of bank between hot scrap yard and area being used for top soil supply.	440	-	-	-

2/3

SUPERVISOR T. Turowski DATE 11-15-48

WCX-4012 (Mar)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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
13 W	10-25-48	9:40 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.2±1.1	-
11 W	10-25-48	10:00 a.m	Poplar Creek influent to K-25	0	-	0.1±1.1	0±11
1 W	10-25-48	10:05 a.m	Poplar Creek inlet N.E. of K-303-8	5	-	-	-
29 W	10-25-48	10:10 a.m	Flow ditch at west end of holding pond	5	-	8.8±1.1	-
16 W	10-25-48	11:15 a.m	Drinking water K-1401	0	Less than 0.2	0.2±1.6	-
10 W	10-25-48	2:20 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.1±1.1	-
22 W	10-25-48	2:30 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3±1.1	-
6 W	10-25-48	3:00 p.m	K-27 drainage into Poplar Creek	1	-	-	-
14 W	10-25-48	3:20 p.m	Influent to Sewage Disposal Plant	2	-	-	-
20 W	10-25-48	3:45 p.m	Cafeteria cooking water	0	Less than 0.2	0.5±1.1	-

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SUPERVISOR C. B. Olszewski DATE 11-[illegible]-48

WCX-1012 (M '48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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 D	10-17-48	12:00 p.m	Effluent from Water Purification Plant	0	-	0.2±1.1	2±8
"	10-19-48	8:32 a.m	" " " " "	0	Less than 0.2	0.1±1.1	3±8
"	10-21-48	8:17 a.m	" " " " "	0	-	0.1±1.1	11±8
"	10-23-48	12:00 p.m	" " " " "	0	-	0.0±1.1	6±8
"	10-25-48	9:00 a.m	" " " " "	0	Less than 0.2	0.0±1.1	23±8
"	10-27-48	9:35 a.m	" " " " "	0	-	0.0±1.1	0±8
"	10-29-48	8:30 a.m	" " " " "	0	-	0.0±1.1	8±8
"	10-31-48	12:00 p.m	" " " " "	0	-	0.2±1.1	8±8

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SUPERVISOR T. Kusaroski DATE 11-8-48

WCX-1012 (Mar ')

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 3

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
28 M	10- 4-48	1:10 p.m	Bear Creek at Oak Ridge Turnpike	0	-	0.6±1.6	1±8
* 13 M-E	10-,14-48	3:00 p.m	Clinch River effluent from K-25, Mud	0	61.4	9.0±1.5	-
* 24 M-E	10-14-48	3:33 p.m	Mud from bottom of settling tank, K-1515	2,500	-	31.0±5.3	1041
(x) 21 M	10-18-48	1:05 p.m	S-50 sewer outfall	50	-	-	-
(x) 8 M	10-18-48	1:10 p.m	Drainage from Jones Scrap Yard	0	-	0.0±1.1	-
(x) 9 M	10-18-48	1:17 p.m	Clinch River west of Jones Scrap Yard	0	-	0.0±1.1	-
17 M-27	10-27-48	10:20 a.m	Recirculating water, K-27	0	-	0.1±1.1	-
17 M-25	10-27-48	10:30 a.m	Recirculating water, K-25	2	-	0.7±1.1	-

* Results based on a gram dry weight.

(x) These samples taken approximately 12 hours after a heavy rain.

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SUPERVISOR T. Kwasnoski DATE 11-[illegible]48

WCX-1012 (Me)

2-48

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 42

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 W	10-18-48	9:40 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-
11 W	10-18-48	8:50 a.m	Poplar Creek influent to K-25	0	-	0.1±1.1	0±11
1 W	10-18-48	10:00 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
29 W	10-18-48	9:03 a.m	Flow ditch at west end of holding pond	4	-	3.3±1.1	-
6 W	10-18-48	10:10 a.m	K-27 drainage into Poplar Creek	0	-	-	-
16 W	10-18-48	10:17 a.m	Drinking water, K-631	0	Less than 0.2	0.0±1.1	-
14 W	10-18-48	10:20 a.m	Influent to Sewage Disposal Plant	2	-	-	-
10 W	10-18-48	10:35 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±1.1	-
22 W	10-18-48	10:50 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	-
20 W	10-18-48	2:30 p.m	Cafeteria cooking water	0	Less than 0.2	0.0±1.1	-

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SUPERVISOR T. Kwoonoski DATE 11-1-48

WCX-1012 (Ma)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 12

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	10- 1-48	8:25 a.m	Effluent from Water Purification Plant	0	-	0.2 ±1.1	17±8
"	10- 3-48	12:00 p.m	" " " " "	0	-	0.0±1.1	4±8
"	10- 5-48	9:05 a.m	" " " " "	0	0.2	0.0±1.1	25 ±8
"	10- 7-48	8:30 a.m	" " " " "	0	-	0.4±1.1	5±8
"	10- 9-48	12:00 p.m	" " " " "	0	-	0.0±1.1	8±8
"	10-11-48	8:55 a.m	" " " " "	0	Less than 0.2	0.0±1.1	26±8
"	10-13-48	9:34 a.m.	" " " " "	0	-	0.2±1.1	3 ±8
"	10-15-48	8:20 a.m	" " " " "	0	-	0.2 ±1.1	15±8

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SUPERVISOR T. Kwiatkowski DATE 10-[illegible]-48

WCX-1012 (Ma 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 1

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 W	10-11-48	9:40 a.m	Clinch River effluent from K-25	0	0.2	0.0±1.1	
11 W	10-11-48	9:55 a.m	Poplar Creek influent to K-25	0	-	0.0±1.1	8±8
1 W	10-11-48	10:05 a.m	Poplar Creek inlet N.E. of K-303-8	2	-	-	-
29 W	10-11-48	10:10 a.m	Flow ditch at west end of holdingpond	5	-	23.1±1.1	-
6 W	10-11-48	10:20 a.m	K-27 drainage into Poplar Creek	2	-	-	-
14 W	10-11-48	10:25 a.m	Influent to Sewage Disposal Plant	6	-	-	-
10 W	10-11-48	10:44 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.1±1.1	-
22 W	10-11-48	10:50 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	-
13 W	10-13-48	8:40 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-
10 W	10-13-48	9:05 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.1±1.1	-
16 W	10-13-48	10:45 a.m	Drinking water, K-1028-18	0	Less than 0.2	0.1±1.1	-
20 W	10-13-48	10:50 a.m	Cafeteria cooking water	0	Less than 0.2	0.0±1.1	-

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SUPERVISOR T. Kuwasaki DATE 10-27-48

CX-1012 (Mar 48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. _____

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 W	10-4-48	9:55 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-
11 W	10-4-48	10:15 a.m	Poplar Creek influent to K-25	0	-	0.3±1.6	24±8
1 W	10-4-48	10:20 a.m	Poplar Creek inlet N.E. of K-303-8	3	-	-	-
29 W	10-4-48	10:25 a.m	Flow ditch at west end of holding pond	5	-	5.1±1.1	-
14 W	10-4-48	10:30 a.m	Influent to Sewage Disposal Plant	1	-	-	-
6 W	10-4-48	10:45 a.m	K-27 drainage into Poplar Creek	2	-	-	-
10 W	10-4-48	12:35 p.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.1±1.1	-
22 W	10-4-48	12:55 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.2±1.1	-
16 W	10-5-48	3:26 p.m	Drinking water, K-1034 building	0	Less than 0.2	0.5 ±1.1	-
20 W	10-5-48	3:30 p.m	Cafeteria cooking water	0	Less than 0.2	0.0 ±1.1	-

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SUPERVISOR E. B. Olszewski DATE 10-1[illegible]-48

WCX-1012 (M 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 118

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 M-E	8-31-48	12:05 p.m	Mud from bottom of settling tank in K-1515	-	-	10±2 *	1137 *
28 M	9- 7-48		Bear Creek at Oak Ridge Turnpike	1	-	0.5±1.1	0±11
13 M-E	9- 8-48	2:00 p.m	Clinch River effluent from K-25, Mud	5000	45.8	4.3±0.7	-
15 M-E	9- 8-48	2:35 p.m	Sludge from Sewage Disposal Plant	50000	-	328±56	-
24 M-E	9-20-48	1:10 p.m	Mud from bottom of settling tank in K-1515	7500	-	11.5±3.8	1508

* Resample at same position taken earlier in August.

All Mud and Sludge Alpha and Beta Counts are based on per gram dry weight.

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SUPERVISOR C. B. Olszewski DATE 10-7-48

WCX-1012 (Mar 48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 1

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
13 W	9-27-48	9:40 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.3± 1.1	-
11 W	9-27-48	10:00 a.m	Poplar Creek influent to K-25	0	-	0.3±1.1	1±8
1 W	9-27-48	10:05 a.m	Poplar Creek inlet N.E. of K-303-8	3	-	-	-
29 W	9-27-48	10:10 a.m	Flow ditch at west end of holding pond	4	-	3.3 ±1.1	-
6 W	9-27-48	10:20 a.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	9-27-48	10:25 a.m	Influent to Sewage Disposal Plant	3	-	-	-
10 W	9-27-48	10:50 a.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.3±1.1	-
22 W	9-27-48	3:05 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	-
16 W	9-27-48	3:15 p.m	Drinking water K-1032 building	0	Less than 0.2	0.3±1.1	-
20 W	9-27-48	3:15 p.m	Cafeteria cooking water	0	Less than 0.2	0.2 ±1.1	-

SUPERVISOR C. B. Olszewski DATE 10-7-48

WCX-1002 (Me 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 116

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	9-17-48	9:00 a.m	Effluent from Water Purification Plant	0	-	0.1 ± 1.1	18 ± 8
24 D	9-19-48	12:00 p.m	" " " "	0	-	0.0 ± 1.1	14 ± 8
24 D	9-21-48	8:30 a.m	" " " "	0	Less than 0.2	0.3 ± 1.1	14 ± 8
24 D	9-23-48	9:15 a.m	" " " "	0	-	0.0 ± 1.1	19 ± 8
24 D	9-25-48	12:00 p.m	" " " "	0	-	0.0 ± 1.1	11 ± 8
24 D	9-27-48	8:50 a.m	" " " "	0	Less than 0.2	0.0 ± 1.1	19 ± 8
24 D	9-29-48	8:40 a.m	" " " "	0	-	0.2 ± 1.1	23 ± 8

SUPERVISOR E. B. Olszewski DATE 10-4-48

WCX-48 012 (Ma[illegible])

0-5-48

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 5

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
13 W	9-20-48	9:20 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.5±1.1	-
11 W	9-20-48	9:35 a.m	Poplar Creek influent to K-25	0	-	0.3±1.1	6±11
1 W	9-20-48	9:45 a.m	Poplar Creek inlet N.E. of K-303-8	2	-	-	-
6 W	9-20-48	9:55 a.m	K-27 drainage into Poplar Creek	1	-	-	-
14 W	9-20-48	10:00 a.m	Influent to Sewage Disposal Plant	1	-	-	-
16 W	9-20-48	10:07 a.m.	Drinking water K-131 Building	0	Less than 0.2	0.1±1.1	-
10 W	9-20-48	10:20 a.m.	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.0±1.1	-
29 W	9-20-48	12:10 p.m.	Flow ditch at west end of holding pond	8	-	6.7±1.1	-
22 W	9-20-48	12:30 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	-
20 W	9-20-48	1:35 p.m	Cafeteria cooking water	0	Less than 0.2	0.0±1.1	-

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SUPERVISOR E. B. Olszewski DATE 10-[illegible]8

WO-0012 (Mar 9)

28-48

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

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
13 W	9-13-48	10:05 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	-
11 W	9-13-48	10:21 a.m	Poplar Creek influent to K-25	0	-	0.3±1.1	6±8
1 W	9-13-48	10:29 a.m	Poplar Creek inlet N.E. of K-303-8	1	-	-	-
6 W	9-13-48	10:35 a.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	9-13-48	10:45 a.m	Influent to Sewage Disposal Plant	0	-	-	-
16 W	9-13-48	10:50 a.m	Drinking water K-131 building	0	Less than 0.2	0.1±1.1	-
10 W	9-14-48	8:22 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.2±1.1	-
22 W	9-14-48	8:30 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	-
29 W	9-14-48	9:06 a.m	Flow ditch at west end of holding pond	0	-	3.9±1.1	-
20 W	9-14-48	9:15 a.m	Cafeteria cooking water	0	less than 0.2	0.0±1.1	-

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SUPERVISOR T. Kwasnoski DATE 9-27-48

WCX-1012 (Ma)

22-78

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 11.

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
10 W	9- 7-48	9:15 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.1±1.1	-
22 W	9- 7-48	9:30 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	-
13 W	9- 7-48	10:05 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-
11 W	9- 7-48	10:25 a.m	Poplar Creek influent to K-25	1	-	0.1±1.1	5±11
1 W	9- 7-48	10:30 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
6 W	9- 7-48	10:40 a.m	K-27 drainage into Poplar Creek	4	-	-	-
14 W	9- 7-48	10:45 a.m	Influent to Sewage Disposal Plant	2	-	-	-
29 W	9- 7-48	12:45 p.m	Flow ditch at west end of holding pond	1	-	4.6±1.1	-
20 W	9- 7-48	1:20 p.m	Cafeteria cooking water	0	Less than 0.2	0.0±1.1	-
16 W	9- 7-48	1:20 p.m	Drinking water K-1004-D	0	Less than 0.2	0.3±1.1	-

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SUPERVISOR T. Kuwanoshi DATE 9-[illegible]-48

WCX-1012 (Ma)
-22-48

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 116

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	9- 1-48	8:40 a.m	Effluent from Water Purification Plant	0	less than 0.2	0.0±1.1	17±8
24 D	9- 3-48	8:25 a.m	" " " " "	0	-	0.0±1.1	8±8
24 D	9-5-48	12:01 p.m	" " " " "	0	-	0.0±1.1	3±8
24 D	9-7-48	9:10 a.m	" " " " "	0	Less than 0.2	0.0±1.1	0 ±8
24 D	9-9-48	8:20 a.m	" " " " "	0	-	0.2±1.1	5±8
24 D	9-11-48		" " " " "	0	-	0.0±1.1	26±8
24 D	9-13-48	9:25 a.m	" " " " "	0	Less than 0.2	0.0±1.1	13±8
24 D	9-15-48	8:20 a.m	" " " " "	0	-	0.0±1.1	46±8

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SUPERVISOR T. Kusunoki DATE 9-21-48

WCX-1012 (Ma 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 111

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
10 W	9-1-48	8:55 a.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.0±1.1	-
22 W	9-1-48	9:10 a.m	Poplar Creek immediately before junction with Clinch River	1	-	0.0±1.1	-
16 W	9-1-48	9:20 a.m	Drinking water, K-1049	0	Less than 0.2	0.0±1.1	-
13 W	9-1-48	9:45 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-
11 W	9-1-48	10:00 a.m	Poplar Creek influent to K-25	0	-	0.2±1.1	1±11
1 W	9-1-48	10:10 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
14 W	9-1-48	12:15 p.m	Influent to Sewage Disposal Plant	0	-	-	-
6 W	9-1-48	12:20 p.m	Drainage from K-27 into Poplar Creek	2	-	-	-
29 W	9-1-48	12:30 p.m	Drainage ditch at west end of holding pond	0	-	1.0±1.1	-
20 W	9-1-48	12:45 p.m	Cafeteria cooking water	0	Less than 0.2	0.0±1.1	

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SUPERVISOR T. Kuroda DATE 9-[illegible]48

WCX-1012 (Ma.)

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

RESTRICTED

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
10-W	8-23-48	9:30 AM	Clinch River immediately below S-50 Sewer outfall.	0	Less than 0.2	0.2 ± 1.1	
22-W	8-23-48	9:35 AM	Poplar Creek immediately before junction with Clinch River.	0		0.2 ± 1.1	
14-W	8-23-48	10:05 AM	Influent to sewage disposal plant	0			
6-W	8-23-48	10:25 AM	K-27 drainage into Poplar Creek	01			
16-W	8-23-48	10:30 AM	Drinking water, K-413 building	0	Less than 0.2	0.0 ± 1.1	
11-W	8-23-48	10:35 AM	POplar Creek influent to K-25	0		0.4 ± 1.1	2 ± 11
1-W	8-23-48	10:40 AM	Poplar Creek inlet N.E. of K-303-8 pond.	0			
29-W	8-23-48	10:35 AM	Flow ditch at west end of holding	0		1.0 ± 1.1	
20-W	8-23-48	10:47 AM	Cafeteria Cooking Water	0	Less than 0.2	0.0 ± 1.1	
13-W	8-23-48	3:40 PM	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 1.1	

Classification changed to UNCLASSIFIED (level and category)

[signature] 24 Feb 95
ADC or ADD signature (first reviewer) Date

[signature] 7/28/95
ADD signature (final reviewer) Date

RESTRICTED

SUPERVISOR E. B. Olszewski DATE 9-8-48

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WCX-1012 (Mar 3)

REPORT No. 109

WORKS LABORATORY DEPARTMENT
SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

RESTRICTED

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	8-16-48	8:37 AM	Influent to Water Purification Plant	0	Less than 0.2	0.0±1.1	29±8
24-D	8-17-48	8:45 AM	" " " " "	0		0.1±1.1	33±8
24-D	8-18-48	8:40 AM	" " " " "	0		0.4±1.1	41±8
24-D	8-19-48	8:29 AM	" " " " "	0		0.3±1.1	38±8
24-D	8-20-48	8:25 AM	" " " " "	0		1.2±1.1	38±8
24-D	8-23-48	8:35 AM	" " " " "	0	Less than 0.2	0.4±1.1	29±8
24-D	8-24-48	9:30 AM	" " " " "	0		0.2±1.1	51±8
24-D	8-25-48	8:25 Am	" " " " "	0		0.0±1.1	17±8
24-D	8-26-48	8:15 AM	" " " " "	0		0.0±1.1	18±8
24-D	8-27-48	8:55 Am	" " " " "	0		0.0±1.1	17±8
24-D	8-30-48	10:10 AM	" " " " "	0		0.1±1.1	13±8
24-D	8-31-48	8:30 AM	" " " " "	0		0.0±1.1	35±8

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) Date 24 Jul 95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

SUPERVISOR E. B. Olszewski DATE 9-[illegible]48

230

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. _____

RESTRICTED

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
21 M	8-16-48	1:45 p.m	S-50 sewer outfall	10	-	-	-
26 & 27 M	8-17-48	9:00 a.m	Drainage from Laboratories A,B,C &D	3	-	0.8±1.1	-
23 M	8-19-48	9:05 a.m	Ground water at K-1239 sludge pit	0	-	-	-
15 M	8-23-48	10:00 a.m	Effluent from Sewage Disposal Plant	0	-	-	-
* 15 M-E	8-23-48	10:10 a.m	Sludge from Sewage Disposal Plant	50,000	-	347±59	-

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) Date 28 Jul 95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

* Sludge samples are reported on basis of a gram dry weight.

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SUPERVISOR E. B. Olszewski DATE 9-2-48

WCX-1012 (Ma' ')

3-48

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 1.

RESTRICTED

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 M-F	8- 2-48	12:45 p.m.	Clinch River effluent from K-25 Mud	1500	57.4	4.0±0.7	-
17 M-25	8- 2-48	1:40 p.m	Process recirculating water, K-25	0	-	0.0±1.1	-
17 M-27	8- 2-48	2:05 p.m	Process recirculating water, K-27	0	-	0.0±1.1	-
25 M	8- 9-48	1:05 p.m	Clinch River above Elza Gate	0	Less than 0.2	0.2±1.1	-
28 M	8- 9-48	2:10 p.m	Bear Creek at Oak Ridge Turnpike	0	-	0.5±1.1	0±2
4 M	8-10-48	9:30 a.m	Process drainage into Poplar Creek west of K-305	0	-	-	-
5 M	8-10-48	9:40 a.m	Process drainage into Poplar Creek west of K-306	0	-	-	-
8 M	8-10-48	10:00 a.m	Drainage from Hot Scrap Yard into Clinch River	0	-	0.1±1.1	-
9 M	8-10-48	10:05 a.m	Clinch River west of Jones Scrap Yard	0	-	-	-
3 M	8-10-48	10:15 a.m	Process drainage into Poplar Creek north of K-303	0.	-	-	-
*10 M-E	8-12-48	2:00 p.m	Clinch River immediately below S-50 sewer outfall, Mud	1000	78.4	31±5	-
*24 M-E	8-16-48	12:35 p.m	Bottom of settling basins #1 and #2 at K-1515, Mud	5000	-	43±7	2098

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) 24 Jul 95 Date

ADD signature (final reviewer) 7/28/95 Date

RESTRICTED

* All mud samples are reported on basis of a gram dry weight.

SUPERVISOR E. B. Olszewski DATE 9-2-48

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WCX-102 (Mr 8)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 0

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 W	8-16-48	12:30 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.5±1.1	-
11 W	8-16-48	12:50 p.m	Poplar Creek influent to K-25	0	-	0.4±1.1	-
1 W	8-16-48	1:00 p.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
14 W	8-16-48	1:10 p.m	Influent to Sewage Disposal Plant	0	-	-	-
10 W	8-16-48	1:40 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.4±1.1	-
22 W	8-16-48	1:55 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.6±1.1	-
6 W	8-17-48	8:29 a.m	K-27 drainage into Poplar Creek	0	-	-	-
29 W	8-17-48	8:35 a.m	Flow ditch at west end of holding pond	0	-	1.8±1.1	-
16 W	8-17-48	9:00 a.m.	Drinking water, K-1005 building	0	Less than 0.2	0.5±1.1	-
20 W	8-17-48	9:10 a.m	Cafeteria cooking water	0	Less than 0.2	0.4±1.1	-

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SUPERVISOR T. Kwasnoski DATE 8-26-48

WCX-1012 (Mp 8)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 5

REPORT OF WATER SURVEY ANALYSES

RESTRICTED

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 W	8-9-48	9:35 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1 ± 1.1	-
11 W	8-9-48	10:00 a.m	Poplar Creek influent to K-25	0	-	0.4 ± 1.1	0 ± 2
1 W	8-9-48	10:10 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
29 W	8-9-48	10:16 a.m	Flow ditch at west end of holding pond	0	-	0.9 ± 1.1	-
16 W	8-9-48	10:20 a.m	Drinking water K-1501	0	Less than 0.2	0.1 ± 1.1	-
20 W	8-9-48	10:25 a.m	Cafeteria cooking water	0	Less than 0.2	0.1 ± 1.1	-
6 W	8-9-48	10:50 a.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	8-9-48	12:25 p.m	Influent to Sewage Disposal Plant	0	-	-	-
22 W	8-9-48	12:47 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.1 ± 1.1	-
10 W	8-9-48	1:00 p.m	Clinch River immediately below S-50 sewer outfall	0	0.2	1.4 ± 1.1	-

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) Date 24 Jul 95

ADD signature (final reviewer) Date 2/28/95

RESTRICTED

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SUPERVISOR C. B. Olszewski DATE 8-2[illegible]8

WCX-1012 (Me 8)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 34

REPORT OF WATER SURVEY ANALYSES

RESTRICTED

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	8-2-48	8:45 a.m	Water influent to Water Purification Plant	0	Less than 0.2	1.4±1.1	2±2
"	8-3-48	8:40 a.m	" " " "	0	-	0.0±1.1	4±2
"	8-4-48	8:55 a.m	" " " "	0	-	0.1±1.1	4±2
"	8-5-48	9:00 a.m	" " " "	0	-	0.0±1.1	5±2
"	8-6-48	8:40 a.m	" " " "	0	-	0.0±1.1	7±2
"	8-9-48	9:05 a.m	" " " "	0	Less than 0.2	0.0±1.1	3±2
"	8-10-48	8:45 a.m	" " " "	0	-	0.0±1.1	4±2
"	8-11-48	9:00 a.m	" " " "	0	-	0.2±1.1	7±2
"	8-12-48	9:04 a.m	" " " "	0	-	0.2±1.1	2±2
"	8-13-48	8:45 a.m	" " " "	0	-	0.0±1.1	6±8

Classification changed to: UNCLASSIFIED
(level and category)

ADC or ADD signature (first reviewer) Date 24 Feb 95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

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SUPERVISOR E. B. Olszewski DATE 8-24-48

WCX-1012 (Ma 9)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 03

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
13 W	8-2-48	12:40 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±1.1	-
11 W	8-2-48	1:25 p.m	Poplar Creek influent to K-25	0	-	0.0±1.1	0±2
1 W	8-2-48	1:35 p.m.	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
6 W	8-2-48	2:00 p.m	K-27 drainage into Poplar Creek	11	- -	-	-
14 W	8-2-48	2:07 p.m	Influent to Sewage Disposal Plant	0	-	-	-
10 W	8-2-48	2:35 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	1.1±1.1	-
16 W	8-2-48	2:45 p.m	Drinking water K-702	0	Less than 0.2	0.0±1.1	-
22 W	8-2-48	2:50 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±1.1	-
20 W	8-4-48	2:25 p.m	Cafeteria cooking water	0	Less than 0.2	0.2±1.1	-
29 W	8-6-48	12:50 p.m	Flow ditch at west end of holding pond	4	-	2.9±2.2	-

SUPERVISOR E. B. Olszewski DATE 8-20-48

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT No. 11

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
20 W	7-21-48	2:55 p.m	Cafeteria cooking water	0	Less than 0.2	0.8 ±1.1	-
13 W	7-26-48	10:13 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.2 ±1.1	-
11 W	7-26-48	10:35 a.m	Poplar Creek influent to K-25	0	-	0.4 ±1.1	0 ±2
1 W	7-26-48	10:47 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
6 W	7-26-48	12:40 p.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	7-26-48	12:45 p.m	Influent to Sewage Disposal Plant	0	-	-	-
16 W	7-26-48	12:50 p.m	Drinking water K-1203-3	0	Less than 0.2	0.2 ±1.1	-
22 W	7-26-48	1:20 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4 ±1.1	-
10 W	7-26-48	1:35 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.3 ±1.1	-
20 W	7-26-48	3:10 p.m	Cafeteria cooking water	0	less than 0.2	0.4 ±1.1	-

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) Date 24 Jul 95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

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SUPERVISOR T. Kwasnoski DATE 8-16-48

WCX-1012 (M-'48)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

RESTRICTED

REPORT OF WATER SURVEY ANALYSES

REPORT No. 101

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
3 M	7-26-48	10:45 a.m	Process drainage into Poplar Creek north of K-303	0	-	-	-
15 M	7-26-48	12:45 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
15 ME	7-26-48	12:46 p.m	Sludge from Sewage Disposal Plant	40,000	-	-	-
8 M	7-26-48	1:11 p.m	Drainage from Hot Scrap Yard into Clinch River	0	-	0.2±1.1	-
10 ME	7-26-48	1:35 p.m	Clinch River immediately below S-50 Sewer outfall	1,000	49.2	0.0	-
~~25~~ 21 M	7-26-48	2:50 p.m	S-50 sewer outfall	0	-	-	-
26 & 27 M	7-26-48	3:05 p.m	Drainage from laboratories A, B, C &D	1	-	0.4±1.1	1±2
WV-30	7-26-48	12:30 p.m	Sludge from West Village Sewage Disposal Plant	45,000	-	277	49±11

Classification changed to: UNCLASSIFIED
(level and category)

ADC or ADD signature (first reviewer) Date 24 Jul 95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

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SUPERVISOR C. B. Olszewski

WCX-1012 (M3 3)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 10

RESTRICTED

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
17 M-25	7- 6-48	1:40 p.m.	Process recirculating water K-25	0	-	0.6±1.1	-
17 M-27	7- 6-48	1:50 p.m.	Process recirculating water K-27	0	-	0.2±1.1	-
4 M	7- 7-48	10:12 a.m	Process drainage into Poplar Creek W of K-305	0	-	-	-
5 M	7- 7-48	10:10 a.m	Process drainage into Poplar Creek W of K-306	0	-	-	-
15 ME-X	7- 9-48	11:15 a.m	Bottom of slope between K-1040 and K-27	6,300	-	-	-
28 M	7-12-48	10:25 a.m	Bear Creek at Oak Ridge Turnpike	0	-	0.9±1.1	2±2
13 ME	7-15-48	3:30 p.m.	Clinch River effluent from K-25	500	49.6	0.1	-
25 M	7-16-48	2:30 p.m.	Clinch River above Elza Gate	0	Less than 0.2	0.1±1.1	-
25 ME-X	7-21-48	10:00 a.m	Clinch River above Elza Gate, Mud	380	82.2	0.1	11±11
EV-31	7-22-48	3:05 p.m.	East village Sewage Disposal Plant, Sludge	2,500	-	0.1	0 ±11
23 M	7-26-48	9:20 a.m	Ground water at K-1239 sludge pit	0	-	-	-
9 M	7-26-48	9:30 a.m.	Clinch River west of Jones Scrap Yard	0	-	-	-

Classification changed to: UNCLASSIFIED (level and category)

24 Mar 95

ADC or ADD signature (first reviewer) Date

7/28/95

ADC or ADD signature (final reviewer) Date

SUPERVISOR C. R. Alexander DATE 8-13-48

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WCX-1012 (Mai)

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

RESTRICTED

REPORT OF WATER SURVEY ANALYSES

REPORT NO. ____

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	7-20-48	9;15 am	Influent to Water Purification Plant	0	less than 0	0.3 ± 1.1	3 ± 3
24-D	7-21-48	2;45 pm	Influent to Water Purification Plant	0	-	0.2 ± 1.1	10 ± 2
24-D	7-22-48	9;00 am	Influent to Water Purification Plant	0	-	0.4 ± 1.1	6 ± 2
24-D	7-23-48	8;55 am	Influent to Water Purification Plant	0	-	0.4 ± 1.1	2 ± 2
24-D	7-26-48	9;35 am	Influent to Water Purification Plant	0	less than 0	0.7 ± 1.1	3 ± 3
24-D	7-27-48	10;02 am	Influent to Water Purification Plant	0	-	0.3 ± 1.1	3 ± 3
24-D	7-28-48	8;01 am	Influent to Water Purification Plant	0	-	0.4 ± 1.1	1 ± 2
24-D	7-29-48	9;10 am	Influent to Water Purification Plant	0	-	0.1 ± 1.1	2 ± 2
24-D	7-30-48	8;50 am	Influent to Water Purification Plant	0	-	0.2 ± 1.1	3 ± 2

Classification changed to: UNCLASSIFIED
(level and category)

ADC or ADD signature (first reviewer) Date 7/28/95

ADD signature (final reviewer) Thomas W. Kelly Date 7/28/95

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SUPERVISOR T. Kwanoshi

DATE 7-9-48

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT No. 98

RESTRICTED

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
10-W	7-12-48	2:00 pm	Clinch River immediately below S-50 Sewer outfall	0	less than 0.2	0.5 ± 1.1	-
1-W	7-12-48	3:20 pm	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
14-W	7-12-48	3:30 pm	Influent to Sewage Disposal Plant	4	-	-	-
16-W	7-12-48	3:40 pm	Drinking Water K-1028	0	less than 0.2	0.3 ± 1.1	-
20-W	7-12-48	3:45 pm	Cafeteria cooking water	0	less than 0.2	0.3 ± 1.1	-
6-W	7-15-48	2:45 pm	K-27 drainage into Poplar Creek	0	-	-	-
13-W	7-19-48	10:15 am	Clinch River effluent from K-25	0	less than 0.2	0.1 ± 1.1	-
1-W	7-19-48	10:45 am	Poplar Creek inlet N.E. K-303-8	0	-	-	-
11-W	7-19-48	12:45 pm	Poplar Creek influent to K-25	0	-	0.2 ± 1.1	2 ± 2
22-W	7-19-48	3:05 pm	Poplar Creek immediately before junction with Clinch River	0	-	0.3 ± 1.1	-
[illegible]-W	7-19-48	3:15 pm	Clinch River immediately below S-50 Sewer outfall	0	less than 0.2	0.3 ± 1.1	-
14-W	7-19-48	3:35 pm	Influent to Sewage Disposal Plant	0	-	-	-
16-W	7-19-48	3:40 pm	Drinking water K-631	0	less than 0.2	0.0 ± 1.1	-
6-W	7-21-48	2:35 pm	K-27 drainage into Poplar Creek	0	-	-	-

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) Date 24 Jul 95

Thomas W. Kelley 7/28/95

SUPERVISOR F. Kwasnoski DATE 7-30-48

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WCX-1012 (Ma 9)

REPORT NO. 17

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

RESTRICTED

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	7-1-48	12:45 pm	Influent to water purification plant	1	-	0.6 ± 0.6	5 ± 3
24-D	7-2-48	2:10 pm	Influent to water purification plant	0	-	0.6 ± 0.6	2 ± 3
24-D	7-6-48	9:45 am	Influent to water purification plant	0	-	0.6 ± 0.6	2 ± 3
24-D	7-7-48	10:30 am	Influent to water purification plant	0	less than 0.2	0.2 ± 0.5	2 ± 3
24-D	7-8-48	3:00 pm	Influent to water purification plant	0	-	0.8 ± 1.1	1 ± 2
24-D	7-9-48	1:47 pm	Influent to water purification plant	0	-	0.6 ± 1.1	1 ± 2
24-D	7-12-48	1:37 pm	Influent to water purification plant	0	-	0.5 ± 1.1	0 ± 2
24-D	7-13-48	9:15 am	Influent to water purification plant	0	less than 0.2	0.2 ± 1.1	1 ± 3
24-D	7-14-48	9:00 am	Influent to water purification plant	0	-	1.0 ± 1.1	2 ± 2
24-D	7-15-48	9:20 am	Influent to water purification plant	0	-	0.7 ± 1.1	51 ± 26
24-D	7-16-48	9:27 am	Influent to water purification plant	0	-	0.4 ± 1.1	5 ± 2
24-[illegible]	7-19-48	1:00 pm	Influent to water purification plant	0	-	0.5 ± 1.1	2 ± 2

Classification changed to: UNCLASSIFIED (level and category)

[signature] 24 Jul 95

ADC or ADD signature (first reviewer) Date

[signature] 7/28/95

ADD signature (final reviewer) Date

242

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SUPERVISOR _____ DATE [illegible]-48

WCX-1012 (Ma

REPORT NO. ?

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

RESTRICTED

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
22 W	7- 5-48	10:00 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.1±0.1	-
10 W	7- 6-48	10:15 a.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.5±1.1	-
11 W	7- 6-48	10:40 a.m	Poplar Creek influent to K-25	0	-	0.5±0.6	0.0
13 W	7- 6-48	1:00 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.2±1.1	-
14 W	7- 6-48	1:55 p.m	Influent to Sewage Disposal Plant	0	-	-	-
1 W	7- 6-48	2:20 p.m	Poplar Creek inlet N.E. of K-303-8	1	-	-	-
16 W	7-6-48	2:45 p.m	Drinking water K-1405	0	Less than 0.2	0.5±1.1	-
20 W	7- 6-48	2:55 p.m.	Cafeteria cooking water	0	Less than 0.2	0.3±1.1	-
6 W	7- 6-48	3:30 p.m	K-27 drainage into Poplar Creek	0	-	-	-
13 W	7-12-48	9:40 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1±1.1	-
11 W	7-12-48	10:10 a.m	Poplar Creek influent to K-25	0	-	0.7±1.1	0±2
22 W	7-12-48	1:53 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4±1.1	-

Classification changed to: UNCLASSIFIED (level and category)

ADC or ADD signature (first reviewer) Date 7/28/95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

SUPERVISOR T. Kwasnoski DATE 7-27-48

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7-19-48

WCX-1012 (Ma 9)

REPORT NO. 15

WORKS LABORATORY DEPARTMENT

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	BETA
13 W	6-28-48	9:45 a.m	Clinch River effluent from K-25	0	0.2	0.1±0.5	-
11 W	6-28-48	10:21 a.m	Poplar Creek influent to K-25	0	-	0.5±0.5	0±3
1 W	6-28-48	10:27 a.m.	Poplar Creek inlet N.E. of K-303-8	2	-	-	-
14 W	6-28-48	10:30 a.m.	Influent to Sewage Disposal Plant	1	-	-	-
15 W	6-28-48	10:31 a.m.	Effluent from Sewage Disposal Plant	0	-	-	-
16 W	6-28-48	10:40 a.m.	Drinking water, K-1405	0	Less than 0.2	0.2±0.5	-
20 W	6-28-48	12:35 p.m.	Cafeteria cooking water	0	Less than 0.2	0.0±0.5	-
22 W	6-28-48	1:00 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.7±0.6	-
21 W	6-28-48	1:10 p.m.	S-50 Sewer outfall	14	-	-	-
10 W	6-28-48	1:15 p.m.	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.1±0.5	-
6 W	6-28-48	1:30 p.m.	K-27 drainage into Poplar Creek	0	-	-	-

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SUPERVISOR T. Kwarowski DATE 7-15-48

7-19-48
WCX-1012 (Ma

REPORT NO. _____

WORKS LABORATORY DEPARTMENT
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	BETA
24 D	6-15-48	10:00 a.m.	Influent to Water Purification Plant	0	-	0.3±0.5	5±3
24 D	6-16-48	1:00 p.m.	" " " " "	0	-	0.1±0.5	1±3
24 D	6-17-48	9:55 a.m.	" " " " "	0	-	0.5±0.6	0±3
24 D	6-18-48	10:35 a.m.	" " " " "	0	Less than 0.2	0.7±0.6	0±3
24 D	6-21-48	8:40 a.m.	" " " " "	0	Less than 0.2	0.1±0.5	1±3
24 D	6-22-48	2:30 p.m.	" " " " "	0	-	0.5±0.5	1±3
24 D	6-23-48	12:45 p.m.	" " " " "	0	-	0.0±0.5	0±3
24 D	6-24-48	12:40 p.m	" " " " "	0	-	0.2±0.5	0±3
24 D	6-25-48	12:45 p.m	" " " " "	0	-	0.0±0.5	1±3
24 D	6-28-48	12:45 p.m	" " " " "	0	Less than 0.2	0.6±0.6	1±3
24 D	6-29-48		No Sample Taken	-	-	-	-
24 D	6-30-48	9:40 a.m	Influent to Water Purification Plant	0	-	0.3±0.5	4±3

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SUPERVISOR T. Kiosnoske DATE 7-15-48

WCX-1012 (Ma 8)

REPORT No. _____

WORKS LABORATORY DEPARTMENT

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 XXXXXX Gram	
						ALPHA	BETA
10 W-E	6- 1-48	12:00 p.m	Clinch River immediately below S-50 sewer outfall, Mud	500	28.8	1±2	-
13 W-E	6- 1-48	1:10 p.m	Clinch River effluent from K-25, Mud	400	28.2	2±3	-
13 W-E	6- 7-48	2:05 p.m	Clinch River effluent from K-25, Mud	500	48.8	2	-
10 W-E	6- 9-48	12:45 p.m	Clinch River immediately below S-50 sewer outfall, Mud	300	64.1	1	-
13 W-E	6-15-48	2:56 p.m	Clinch River effluent from K-25, Mud	1,300	55.1	2	-
15 M-E	6-18-48	10:55 p.m	Sludge from Sewage Disposal Plant	45,000	-	260	-
13 W-E	6-21-48	9:40 a.m	Clinch River effluent from K-25, Mud	500	52.0	2	-
10 W-E	6-21-48	1:10 p.m	Clinch River immediately below S-50 sewer outfall, Mud	1,300	81.4	2	-
13 W-E	6-28-48	9:46 a.m	Clinch River effluent from K-25, Mud	400	95.8	1.0	-
10 W-E	6-28-48	1:15 p.m	Clinch River immediately below S-50 sewer outfall, Mud	400	93.6	0.5	-
10 W-E	6-14-48	2:30 p.m	Clinch River immediately below S-50 sewer outfall, Mud	300	59.8	2	-

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SUPERVISOR E. B. Olszewski DATE [illegible]2-48

WCX-1012 (Ma

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
13 W	6-15-48	2:55 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.2±0.5	-
16 W	6-21-48	9:10 a.m	Drinking water K-1401	0	Less than 0.2	0.0±0.5	-
13 W	6-21-48	9:40 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.3±0.5	-
11 W	6-21-48	10:10 a.m	Poplar Creek influent to K-25	0	-	0.0±0.5	1±3
1 W	6-21-48	10:20 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
14 W	6-21-48	10:30 a.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	6-21-48	10:30 a.m	Effluent from Sewage Disposal Plant	3	-	-	-
6 W	6-21-48	10:45 a.m	K-27 drainage into Poplar Creek	0	-	-	-
20 W	6-21-48	10:50 a.m	Cafeteria cooking water	0	Less than 0.2	0.4±0.5	-
22 W	6-21-48	12:45 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.0±0.5	-
21 W	6-21-48	1:00 p.m	S-50 Sewer outfall	18	-	-	-
10 W	6-21-48	12:59 p.m	Clinch River immediately below S-50 sewer outfall	0	0.2	0.2±0.5	-

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SUPERVISOR E. B. Uszowski DATE 7-12-48

WCX-1012 (Mar 8)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
11 W	6-14-48	10:30 a.m	Poplar Creek influent to K-25	0	-	0.2±0.5	0±3
22 W	6-14-48	2:15 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3±0.5	-
21 W	6-14-48	2:20 p.m	S-50 sewer outfall	3	-	-	-
10 W	6-14-48	2:25 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.2±0.5	-
1 W	6-15-48	1:15 p.m	Poplar Creek inlet N.E. of K-303-8	1	-	-	-
6 W	6-15-48	1:37 p.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	6-15-48	2:00 p.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	6-15-48	2:00 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
16 W	6-15-48	2:01 p.m	Drinking water K-1203-3	0	Less than 0.2	0.0±0.5	-
20 W	6-15-48	2:14 p.m	Cafeteria cooking water	0	Less than 0.2	0.1±0.5	-

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SUPERVISOR D. L. Stoddard DATE [illegible]-1-48

WCX-1012 (Ma[illegible])

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
25 M	6- 1-48	2:25 p.m	Clinch River above Elza Gate	0	Less than 0.2	0.1±0.5	-
28 M	6- 1-48	2:45 p.m	Bear Creek at Oak Ridge Turnpike	0	-	0.6±0.5	0±3
8 M	6- 2-48	10:15 a.m	Drainage from Hot Scrap yard into Clinch River	0	-	0.0±0.5	-
9 M	6- 2-48	10:20 a.m	Clinch River west of Jones scrap yard	0	-	-	-
23 M	6-14-48	1:00 p.m	Ground water at K-1239 Sludge Pit	0	-	-	-
3 M	6-15-48	1:10 p.m	Process drainage into Poplar Creek north of K-303	0	-	-	-
17 M-25	6-15-48	1:22 p.m	Process recirculating water, K-25	0	-	0.2±0.5	-
17 M-27	6-15-48	2:06 p.m	Process recirculating water, K-27	0	-	0.5±0.5	-
4 M	6-17-48	2:50 p.m	Process drainage into Poplar Creek west of K-305	0	-	-	-
5 M	6-17-48	3:00 p.m	Process drainage into Poplar Creek west of K-306	0	-	-	-
26 M & 27 M	6-18-48	10:30 a.m	Drainage from Laboratories A,B,C & D	3	-	0.1±0.6	-

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SUPERVISOR D. L. Stoddard DATE 7-1-48

WCX-1012 (Ma 3)

REPORT NO. 9

WORKS LABORATORY DEPARTMENT

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	BETA
22 W	6- 7-48	9:15 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.4 ±0.5	-
13 W	6- 7-48	2:05 p.m	Clinch River effluent from K-25	1	Less than 0.2	0.0±0.5	-
11 W	6- 7-48	3:10 p.m	Poplar Creek influent to K-25	0	-	0.5± 0.6	0±3
14 W	6- 7-48	3:20 p.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	6- 7-48	3:21 p.m.	Effluent from Sewage Disposal Plant	0	-	-	-
21 W	6- 9-48	12:50 p.m	S-50 Sewer outfall	4	-	-	-
10 W	6- 9-48	12:52 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0±0.5	-
1 W	6- 9-48	1:15 p.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
16 W	6- 9-48	1:25 p.m	Drinking water, K-1030 building	0	Less than 0.2	0.1 ±0.5	-
20 W	6- 9-48	1:35 p.m	Cafeteria cooking water	0	Less than 0.2	0.2 ±0.5	-
6 W	6-11-48	1:00 p.m	K-27 drainage into Poplar Creek	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 6-29-48

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. _____

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	6- 1-48	9:05 a.m	Influent to Water Purification Plant	0	Less than 0.2	0.0 ± 0.5	3 ± 3
24 D	6- 2-48	10:13 a.m	" " " " "	0	-	0.1 ± 0.5	7 ± 3
24 D	6- 3-48	9:30 a.m	" " " " "	0	-	0.4 ± 0.5	4 ± 3
24 D	6- 4-48	9:30 a.m	" " " " "	0	-	0.1 ± 0.5	3 ± 3
24 D	6- 7-48	8:50 a.m	" " " " "	0	-	0.0 ± 0.5	1 ± 3
24 D	6- 8-48	8:30 a.m	" " " " "	0	-	0.0 ± 0.5	2 ± 3
24 D	6- 9-48	12:30 a.m	" " " " "	0	Less than 0.2	0.0 ± 0.5	2 ± 3
24 D	6-10-48	12:30 p.m	" " " " "	0	-	0.2 ± 0.5	3 ± 3
24 D	6-11-48	12:40 p.m	" " " " "	0	-	0.1 ± 0.5	2 ± 3
24 D	6-14-48	9:21 a.m	" " " " "	0	-	0.1 ± 0.5	2 ± 3

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SUPERVISOR D. L. Stoddard DATE 6-25-48

CX-1012 (Mar 3)

REPORT No. 87

WORKS LABORATORY DEPARTMENT

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	BETA
1 W-A	6- 1-48	9:20 a.m	In ditch at east end of holding pond	0	-	-	-
1 W	6- 1-48	9:35 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
22 W	6-1-48	9:45 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3 ± 0.5	-
14 W	6- 1-48	10:02 a.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	6- 1-48	10:05 a.m	Effluent from Sewage Disposal Plant	0	-	-	-
16 W	6- 1-48	10:15 a.m	Drinking water K-1020 building	0	Less than 0.2	0.1 ± 0.5	-
20 W	6- 1-48	10:20 a.m	Cafeteria cooking water	0	Less than 0.2	0.2 ± 0.5	-
10 W	6- 1-48	12:00 p.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.4 ± 0.5	-
11 W	6- 1-48	12:30 p.m	Poplar Creek influent to K-25	0	-	0.2 ± 0.5	3 ± 3
13 W	6- 1-48	1:10 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.3 ± 0.5	-
6 W	6- 2-48	4:05 p.m	K-27 drainage into Poplar Creek	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 6-[illegible]-48

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 8

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 mg~~ gram	
						ALPHA	BETA
13 W-E	5- 6-48	10:00 a.m	Clinch River effluent from K-25, Mud	1000	62	1±1	-
13 W-E	5-11-48	9:35 a.m	" " " " " "	800	57	1±1	-
15 M-E	5-12-48	2:10 p.m	Sludge from Sewage Disposal Plant	100,000	-	-	-
10 W-E	5-13-48	2:30 p.m	Clinch River immediately below S-50 sewer outfall, Mud	1000	61	0±1	-
13 W-E	5-17-48	2:30 p.m	Clinch River effluent from K-25, Mud	1500	40	0±1	-
10 W-E	5-18-48	1:30 p.m	Clinch River immediately below S-50 sewer outfall, Mud	1500	61	1±2	-
13 W-E	5-24-48	2:55 p.m	Clinch River effluent from K-25, Mud	800	74	0±1	-
10 W-E	5-25-48	9:00 a.m	Clinch River immediately below S-50 sewer outfall, Mud	1000	56	2±3	-

Note: Although there seems to be fair correlation between the alpha counts and the uranium determinations these values are reported with reservations. There has not been a sufficient number of this particular type of samples run to establish a limit of error.

All values are based on the dry weight of the individual sample.

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SUPERVISOR D. L. Stoddard DATE 6-14-48

WCX-1012 (Ma[illegible])

REPORT No. _____

WORKS LABORATORY DEPARTMENT

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	BETA
20 W	5-25-48	9:40 a.m	Cafeteria cooking water	0	Less than 0.2	0.1± 0.5	-
6 W-A	5-25-48	10:00 a.m	Drain line from K-631 building	No drainage	-	-	-
6 W-B	5-25-48	10:05 a.m	Drain line from K-131 building	0	-	-	-
6 W	5-25-48	10:10 a.m	K-27 drainage into Poplar Creek	0	-	-	-
14 W	5-25-48	10:15 a.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	5-25-48	10:20 a.m	Effluent from Sewage Disposal Plant	0	-	-	-

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SUPERVISOR D.L. Stoddard DATE [illegible]-9-48

WCX-1012 (Mar

REPORT NO. 8

WORKS LABORATORY DEPARTMENT

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	BETA
1 W-A	5-24-48	9:42 a.m	In ditch at east end of holding pond	0	-	-	-
1 W-B	5-24-48	9:45 a.m	In ditch ten yards from boundary fence	3	-	-	-
1 W	5-24-48	9:50 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
11 W	5-24-48	10:05 a.m	Poplar Creek influent to K-25	0	-	0.1 ±0.5	0.0 ±3.0
16 W	5-24-48	10:15 a.m	Drinking water K-1024 building	0	Less than 0.2	0.0 ±0.5	-
22 W	5-24-48	10:40 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.1 ±0.5	-
21 W	5-24-48	2:00 p.m	S-50 sewer outfall	3	-	-	-
13 W	5-24-48	2:55 p.m	Clinch River/effluent from K-25	0	Less than 0.2	0.5 ±0.6	-
10 W	5-25-48	9:00 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.0 ±0.5	-
14 W-C	5-25-48	9:20 a.m	Manhole west of S.W. corner of K-1405 building	50	-	-	-
14 W-B	5-25-48	9:30 a.m	Manhole N.W. corner of K-1301 building	5	-	-	-
14 W-A	5-25-48	9:32 a.m	Manhole between "R Area" gate and "1300 Area" gate	5	-	-	-

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SUPERVISOR D. L. Stoddard DATE 6-9-48

WCX-1012 (Ma' ')

REPORT No. _____

WORKS LABORATORY DEPARTMENT

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	BETA
11 W	5-17-48	9:25 a.m	Poplar Creek influent to K-25	0	-	0.0±0.5	0.0± 3.0
22 W	5-17-48	1:15 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.1±0.5	-
21 W	5-17-48	1:24 p.m	S-50 Sewer outfall	0	-	-	-
13 W	5-17-48	2:20 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.0±0.5	-
15 W	5-17-48	2:55 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
14 W	5-17-48	2:55 p.m	Influent to Sewage Disposal Plant	0	-	-	-
6 W-A	5-18-48	12:25 p.m	Drainage from K-631 building	No Drainage	-	-	-
6 W-B	5-18-48	12:30 p.m	Drainage from K-131 building	4	-	-	-
6 W	5-18-48	12:35 p.m	K-27 drainage into Poplar Creek	0	-	-	-
21 W	5-18-48	1:20 p.m	S-50 Sewer outfall	2	-	-	-
14 W-C	5-18-48	2:25 p.m	Manhole west of S.W. corner of K-1405 building	30	-	-	-
14 W-B	5-18-48	2:39 p.m	Manhole at N.W. corner of K-1301 bldg.	10	-	-	-
14 W-A	5-18-48	2:40 p.m	Manhole between "R Area" gate and "1300 Area" gate	8	-	-	-
20 W	5-18-48	2:55 p.m	Cafeteria cooking water	0	Less than 0.2	0.4±0.5	-

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SUPERVISOR D. L. Stoddard DATE 5-[illegible]-48

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. _____

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	5-24-48	10:25 a.m	Influent to Water Purification Plant	0	Less than 0.2	0.2 ± 0.5	0.0 ± 3.0
24 D	5-25-48	8:42 a.m	" " " " "	0	-	0.0 ± 0.5	1.0 ± 3.0
24 D	5-26-48	1:20 p.m	" " " " "	0	-	0.1 ± 0.5	1.0 ± 3.0
24 D	5-27-48	10:30 a.m	" " " " "	0	-	0.0 ± 0.5	0.0 ± 3.0
24 D	5-28-48	9:05 a.m	" " " " "	0	-	0.4 ± 0.5	0.0 ± 3.0

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SUPERVISOR D. L. Stoddard DATE 6-9-48

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REPORT NO. [illegible]

WORKS LABORATORY DEPARTMENT

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	BETA
13 W	5-11-48	9:35 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.1±0.5	-
14 W-C	5-11-48	3:35 p.m	Manhole west of S.W. corner of K-1405 bldg.	53	-	-	-
14 W-B	5-11-48	4:00 p.m	Manhole at N.W. corner of K-1301	0	-	-	-
14 W-A	5-11-48	4:05 p.m	Manhole between "R" area gate and "1300 Area" gate	13	-	-	-
6 W-A	5-12-48	1:20 p.m	Drainage from K-631 building	No drainage	-	-	-
6 W-B	5-12-48	1:25 p.m	Drainage from K-131 building	1	- -	-	-
6 W	5-12-48	1:30 p.m	K-27 drainage into Poplar Creek	0	-	-	-
15 W	5-12-48	2:00 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
14 W	5-12-48	2:00 p.m	Influent to Sewage Disposal Plant	0	-	-	-
16 W	5-13-48	2:40 p.m	Drinking water K-25 and K-27	0	Less than 0.2	0.6±0.6	-
1 W-A	5-17-48	9:05 a.m	In ditch at east end of holding pond	0	-	-	-
1 W-B	5-17-48	9:10 a.m	In ditch ten yards from boundary fence	1	-	-	-
1 W	5-17-48	9:15 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE [illegible]-48

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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	BETA
24 D	5-11-48	1:30 p.m	Influent to Water Purification Plant	2	-	0.6±0.6	3.0±3.0
24 D	5-12-48	10:50 a.m	" " " " "	0	-	0.1±0.5	1.1±2.8
24 D	5-13-48	9:35 a.m	" " " " "	0	-	0.2±0.5	8.6±4.3
24 D	5-14-48	10:43 a.m	" " " " "	0	-	0.2±0.5	5.0±3.0
24 D	5-17-48	9:40 a.m	" " " " "	0	Less than 0.2	0.0±0.5	3.0±3.0
24 D	5-18-48	9:00 a.m	" " " " "	0	-	0.3±0.5	9.0±3.0
24 D	5-19-48	10:50 a.m.	" " " " "	0	-	0.8±0.6	5.0±3.0
24 D	5-20-48	8:50 a.m.	" " " " "	0	-	0.3±0.5	3.0±3.0
24 D	5-21-48	12:40 p.m.	" " " " "	0	-	0.1±0.5	2.0±3.0

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SUPERVISOR D. L. Stoddard DATE 6-4-48

WCX-1012 (Ma)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
26 M & 27 M	5- 6-48	1:07 p.m	Drainage from Labs. A, B, C & D	10	-	3.5±0.8	-
25 M	5-10-48	3:30 p.m	Clinch River above Elza Gate	0	Less than 0.2	0.2±0.5	-
3 M	5-13-48	2:30 p.m.	Process drainage into Poplar Creek north of K-303-8	0	-	-	-
5 M	5-20-48	2:20 p.m	Process drainage into Poplar Creek west of K-306	0	-	-	-
4 M	5-20-48	2:10 p.m	Process drainage into Poplar Creek west of K-305	0	-	-	-
23 M	5-24-48	9:30 a.m	Ground water at K-1239 sludge pit	0	-	-	-

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SUPERVISOR D. L. Stokkard DATE 6-[illegible]-48

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. _____

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 D	5- 3-48	8:40 a.m	Influent to Water Purification Plant	0	Less than 0.2	0.3±0.5	2.4
24 D	5- 4-48	12:40 p.m	" " " " "	0	-	0.1±0.5	0.0
24 D	5- 5-48	9:08 a.m	" " " " "	0	-	0.1±0.5	0.0
24 D	5- 6-48	9:20 a.m	" " " " "	0	Less than 0.2	0.0±0.5	9.7±3.5
24 D	5- 7-48	11:00 a.m	" " " " "	0	Less than 0.2	0.5±0.6	-
24 D	5-10-48	9:00 a.m	" " " " "	0	-	0.1±0.5	2.7±2.7

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SUPERVISOR D. L. Stoddard DATE 5-27-48

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REPORT NO. 77

WORKS LABORATORY DEPARTMENT

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	BETA
13 W	5- 6-48	10:00 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.2±0.5	-
6 W-B	5- 7-48	10:30 a.m	Drain line from K-131 building	2	-	-	-
6 W	5- 7-48	10:35 a.m	K-27 drainage into Poplar Creek	0	-	-	-
6 W-A	5- 7-48	4:00 p.m	Drain line from K-631 building	Could not sample as drain line was dry.			
21 W	5- 7-48	4:00 p.m	S-50 sewer outfall	River level above sewer, could not sample.			
10 W-E	5- 7-48	4:00 p.m	Clinch River immediately below S-50 Sewer outfall, Mud	River level above normal, could not sample.			
1 W-B	5-10-48	9:50 a.m	In ditch ten yards from boundary fence	1	-	-	-
1 W	5-10-48	10:53 a.m	Poplar Creek inlet N.E. of K-303-8	1	-	-	-
11 W	5-10-48	10:05 a.m	Poplar Creek influent to K-25	0	-	0.4± 0.5	0.0±2.7
20 W	5-10-48	10:20 a.m	Cafeteria cooking water	0	Less than 0.2	Sample exhausted by operational error.	
22 W	5-10-48	9:15 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.5± 0.5	-
10 W	5-10-48	9:25 a.m	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.3±0.5	-
1 W-A	5-10-48	9:45 a.m	In ditch at east end of holding pond	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 5-[illegible]-48

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 70

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 GRAM	
						ALPHA	BETA
13-W-E	4-20-48	2:10 pm	Clinch River effluent from K-25, Mud	500	65.6	0.5	---
15-M-E	4-22-48	2:00 pm	Sewage Disposal Plant Sludge	60,000	---	---	---
13-W-E	4-30-48	9:45 am	Clinch River effluent from K-25, Mud	750	67.0	0.3	---

NOTE: Although there seems to be fair correlation between the alpha counts and the Uranium determinations these values are reported with reservations. There has not been a sufficient number of this particular type of samples run to establish a limit of error.

All values are based on the dry weight of the individual sample.

SUPERVISOR D. L. Stoddard DATE 5-19-48

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT NO. 15

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
22-W	5-3-48	9:00 am	Poplar Creek immediately before junction with Clinch River	0	---	0.1 ± 0.5	---
10-W	5-3-48	9:10 am	Clinch River immediately below S-50 sewer outfall	0	less than 0.2	0.0 ± 0.5	---
1-W-A	5-3-48	10:15 am	In ditch at east end of holding pond	0	---	---	---
1-W-B	5-3-48	10:30 am	In ditch ten yards from boundary fence	0	---	---	---
1-W	5-3-48	10:40 am	Poplar Creek inlet N.E.of K-303-8	0	---	---	---
11-W	5-3-48	10:45 am	Poplar Creek influent to K-25	0	---	0.5 ± 0.5	0.0
14-W-A	5-3-48	12:45 pm	Manhole between "RArea" gate and "1300 Area" gate	10	---	---	---
14-W-B	5-3-48	1:00 pm	Manhole at edge of avenue "F" and Sixth Street	0	---	---	---
20-W	5-3-48	1:00 pm	Cafeteria cooking water	0	less than 0.2	0.0 ± 0.5	---
14-W-C	5-3-48	1:10 pm	Manhole on slope south of K-402-1	0	---	---	---
14-W	5-3-48	1:10 pm	Influent to Sewage Disposal Plant	0	---	---	---
15-W	5-3-48	1:15 pm	Effluent from Sewage Disposal Plant	0	---	---	---
16-W	5-4-48	12:30 pm	Drinking water K-1029 building	0	less than 0.2	0.1 ± 0.5	---

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SUPERVISOR D. L. Stoddard DATE 5-[illegible]-48

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WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 14

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
14-W-A	4-27-48	12:30 pm	Manhole between "R Area" gate and "1300 Area" gate	35	---	---	---
14-W-B	4-27-48	12:35 pm	Manhole , corner of Area "F" and 6th Street	3	---	---	---
14-W-C	4-27-48	12:45 pm	Manhole on slope south of K-402-1	0	---	---	---
14-W-	4-27-48	12:50 pm	Influent to Sewage Disposal Plant	0	---	---	---
15-W	4-27-48	12:50 pm	Effluent from Sewage Disposal Plant	0	---	---	---
16-W	4-22-48	2:00 pm	Drinking water K-1101	0	less than 0.2	0.2 ± 0.5	---
20-W	4-27-48	2:10 pm	Cafeteria Cooking Water	0	less than 0.2	0.0 ± 0.5	---
6-W-B	4-27-48	3:00 pm	Drainage from K-131	0	---	---	---
6-W	4-27-48	3:00 pm	K-27 drainage into Poplar Creek	0	---	---	---
21-W	4-30-48	3:00 pm	No sample taken , Clinch River above sewer outlet .				
10-W-E	4-30-48	3:00 pm	No sample taken, Clinch River above normal sampling level.				

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SUPERVISOR D. L. Stoddard DATE 5-19-48

WCX-1012 (Ma)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
24 D	4-26-48	10:00 a.m.	Influent to Water Purification Plant	0	Less than 0.2	0.0 ±0.5	2.7
24 D	4-27-48	9:35 a.m	Influent to Water Purification Plant	0	-	0.4 ±0.5	4.1
24 D	4-28-48	9:35 a.m	Influent to Water Purification Plant	0	-	0.2 ±0.5	0.0
24 D	4-29-48	10:25 a.m	Influent to Water Purification Plant	0	-	0.0 ±0.5	0.0
24 D	4-30-48	10:35 a.m	Influent to Water Purification Plant	0	-	0.5 ±0.5	1.8

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SUPERVISOR D. L. Stoddard DATE 14-48

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REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
28 M	5-3-48	8:30 a.m.	Bear Creek at Oak Ridge Turnpike	0	-	0.1±0.5	-
8 M	5-3-48	8:45 a.m.	Drainage from Hot Scrap Yard into Clinch River	0	-	0.2±0.5	-
9 M	5-3-48	8:50 a.m.	Clinch River west of Jones Scrap Yard	0	-	-	-
17 M-27	5-3-48	12:30 p.m.	Recirculating water, K-27	0	-	0.0±0.5	-
17 M-25	5-3-48	12:30 p.m.	Recirculating water, K-25	0	-	0.1±0.5	-

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SUPERVISOR D. L. Stoddard DATE 5-12-48

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REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
13 D	4-15-48	8:50 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.6±0.6	-
24 D	4-15-48	9:20 a.m.	Effluent from Water Purification Plant	0	-	0.0±0.5	1.6
24 D	4-16-48	1:15 p.m.	Influent to Water Purification Plant	0	-	0.0±0.5	0.0
24 D	4-19-48	10:30 a.m.	Influent to Water Purification Plant	0	-	0.0±0.5	0.0
24 D	4-20-48	10:10 a.m.	Influent to Water Purification Plant	0	-	0.0±0.5	0.0
24 D	4-21-48	2:00 p.m.	Influent to Water Purification Plant	0	-	0.3±0.5	3.8
24 D	4-22-48	9:50 a.m.	Influent to Water Purification Plant	0	-	0.0±0.5	0.4
24 D	4-23-48	8:50 a.m.	Influent to Water Purification Plant	0	Less than 0.2	0.1±0.5	0.0

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SUPERVISOR D. L. Stoddard DATE 5-[illegible]-48

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REPORT NO. 7

WORKS LABORATORY DEPARTMENT

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	BETA
20 W	4-20-48	2:30 p.m.	Cafeteria cooking water	0	Less than 0.2	0.0±0.5	-
6 W-B	4-22-48	1:50 p.m.	Drainage from K-131 building	0	-	-	-
6 W	4-22-48	1:50 p.m.	Drainage from K-27 into Poplar Creek	0	-	-	-
10 W-E	4-23-48	2:00 p.m.	Could not collect sample. River water level approximately ten feet above normal.				
6 W-A	4-23-48	4:00 p.m.	Could not collect sample. Drain line dry.				
21 W	4-23-48	4:00 p.m.	Could not collect sample. River water covered drain.				
11 W	4-26-48	9:15 a.m.	Poplar Creek influent to K-25	0	-	0.4±0.5	0.0
1 W-A	4-26-48	9:30 a.m.	In ditch at east end of holding pond	0	-	-	-
1 W-B	4-26-48	9:35 a.m.	In ditch ten yards upstream from fence	0	-	-	-
1 W	4-26-48	9:40 a.m.	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
13 W	4-26-48	3:00 p.m.	Clinch River effluent from K-25	0	Less than 0.2	0.7±0.6	-
10 W	4-27-48	10:15 a.m.	Clinch River immediately below S-50 sewer outfall	0	0.2	0.2±0.5	-
22 W	4-28-48	10:00 a.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.0±0.5	-

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SUPERVISOR D. L. Stoddard DATE 5-5-48

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REPORT NO. 9

WORKS LABORATORY DEPARTMENT
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	BETA
26 & 27 M	4-22-48	2:40 p.m	Drainage from laboratories A,B,C,&D	0	-	0.5±0.6	-
23 M	4-26-48	2:00 p.m	Ground water adjacent to K-1039 Sludge Pit	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE [illegible]0-48

WCX-1012 (Ma

REPORT No. _____

WORKS LABORATORY DEPARTMENT

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	BETA
1 W-A	4-19-48	9:10 a.m	In ditch at east end of holding pond	0	-	-	-
1 W-B	4-19-48	9:15 a.m	In ditch ten yards from boundary fence	0	-	-	-
1 W	4-19-48	9:20 a.m	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
11 W	4-19-48	10:00 a.m	Poplar Creek influent to K-25	0	-	0.1±0.5	0.0
22 W	4-20-48	10:25 a.m	Poplar Creek immediately before junction with Clinch River	0	-	0.5±0.6	-
10 W	4-20-48	10:30 a.m	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.2±0.5	-
14 W-A	4-20-48	10:40 a.m	Manhole between "R" Area gate and 1300 Area gate	140	-	-	-
14 W-B	4-20-48	10:55 a.m	Manhole at corner of Avenue "F" and Sixth Street	7	-	-	-
14 W-C	4-20-48	1:10 p.m	Manhole slope south of K-402-1	0	-	-	-
14 W	4-20-48	1:20 p.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	4-20-48	1:20 p.m	Effluent from Sewage Disposal Plant	0	-	-	-
16 W	4-20-48	1:30 p.m	Drinking water K-1131	0	Less than 0.2	0.1±0.5	-
13 W	4-20-48	2:15 p.m	Clinch River effluent from K-25	0	Less than 0.2	0.3±0.5	-

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SUPERVISOR W. L. Stoddard DATE 4-30-48

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REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
12 W	4-12-48	12:15 p.m.	Clinch River influent to K-25	0	-	0.1±0.5	-
11 W-C	4-12-48	1:30 p.m	Bear Creek at Oak Ridge Turnpike	0	-	-	-
22 W	4-12-48	1:35 p.m	Poplar Creek immediately before junction with Clinch River	0	-	[illegible]±0.5	-
21 W	4-12-48	2:15 p.m	S-50 Sewer Outfall	10	-	-	-
10 W	4-12-48	2:15 p.m	Clinch River immediately below S-50 Sewer outfall	0	-	0.2±0.5	-
16 W	4-12-48	2:30 p.m	Drinking water K-25	0	Less than 0.2	0.2±0.5	-
20 W	4-12-48	2:50 p.m	Cafeteria Cooking water	0	Less than 0.2	0.4±0.6	-
6 W-B	4-12-48	3:45 p.m	Drainage from K-131 building	3	-	-	-
6 W	4-12-48	4:00 p.m	Drainage from behind K-131 into Poplar Creek	0	-	-	-
14 W-B	4-13-48	9:45 a.m	Sewer at corner of 6th St. and Avenue "F"	4	-	-	-
14 W-A	4-13-48	9:50 a.m	Manhole between "R" Area and 1300 Area	160	-	-	-
14 W-C	4-13-48	10:05 a.m	Manhole on slope south of K-402-1	0	-	-	-
14 W	4-13-48	10:10 a.m	Influent to Sewage Disposal Plant	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-23-48

WCX-1012 (Ma

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. _____

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 D	4- 8-48	10:30 a.m.	Clinch River effluent from K-25	0	-	0.2 ± 0.5	-
24 D	4- 8-48	10:40 a.m	Effluent from Water Purification Plant	0	-	0.8 ± 0.6	0.0
13 D	4- 9-48	1:00 p.m	Clinch River effluent from K-25	0	-	0.3 ± 0.5	-
24 D	4- 9-48	9:30 a.m	Effluent from Water Purification Plant	0	-	0.6 ± 0.6	3.1
13 D	4-12-48	9:30 a.m	Clinch River effluent from K-25	0	-	0.3 ± 0.5	-
24 D	4-12-48	10:45 a.m	Effluent from Water Purification Plant	0	-	0.2 ± 0.5	2.6
13 D	4-13-48	8:40 a.m	Clinch River effluent from K-25	0	-	0.5 ± 0.6	-
24 D	4-13-48	9:10 a.m	Effluent from Water Purification Plant	0	-	0.1 ± 0.5	1.6
13 D	4-14-48	12:20 p.m	Clinch River effluent from K-25	0	-	0.0 ± 0.5	4.1
24 D	4-14-48	1:00 p.m	Effluent from Water Purification Plant	0	-	0.1 ± 0.5	1.1

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SUPERVISOR D. L. Stoddard DATE 4-22-48

WCX-1012 (Ma)

REPORT No. _____

WORKS LABORATORY DEPARTMENT

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	BETA
8 M	4- 1-48	10:20 a.m.	Drainage from Hot Scrap Yard into Clinch River	0	Less than 0.2	0.4 ± 0.5	-
9 M	4- 1-48	10:30 a.m.	Clinch River west of Jones Scrap Yard	0	-	-	-
19 M	4-1- 48	10:30 a.m	Powerhouse water intake	0	-	-	-
18 M	4- 1-48	10:40 a.m	Powerhouse water outlet	0	-	-	-
25 M	4- 2-48	3:20 p.m	Clinch River above Elza Gate	0	-	0.1 ± 0.5	-
3 M	4- 5-48	12:15 p.m	Drainage into Poplar Creek N. of 303-8	0	-	-	-
2 M	4- 7-48	3:00 p.m	Drainage from pond S.W. of Garage Area	1	-	-	-
4 M	4-13-48	10:40 a.m	Drainage into Poplar Creek N. of 305-2	0	-	-	-
5 M	4-13-48	10:30 a.m	Drainage into Poplar Creek behind 306-3	4	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-[illegible]48

WCX-1012 (Mar

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 61

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 W-A	4-6-48	10:50 a.m.	East end of holding pond	0	-	-	-
1 W-B	4-6-48	9:50 a.m.	Water from ditch 10 yards from boundary	5	-	-	-
1 W	4-6-48	10:30 a.m.	Poplar Creek inlet N.E. K-303-8	2	-	-	-
6 W	4-6-48	10:45 a.m.	K-131 drainage into Poplar Creek	1	-	-	-
6 W-B	4-6-48	10:30 a.m.	Drain line from K-131	24	-	-	-
14 W-C	4-6-48	12:30 p.m.	Sewer on slope south of K-402-3	0	-	-	-
14 W	4-6-48	12:25 p.m.	Influent to Sewage Disposal Plant	0	-	-	-
14 W-A	4-6-48	12:45 p.m.	Manhole between "R" area and 1300 area gate	17	-	-	-
14 W-B	4-6-48	1:00 p.m.	Sewer at corner of Avenue F and 6th Street	0	-	-	-
20 W	4-7-48	10:05 a.m.	Cafeteria cooking water	0	Less than 0.2	0.6 ± 0.6	-
11 W	4-12-48	10:00 a.m.	Poplar Creek influent to K-25	0	-	0.8 ± 0.6	-
1 W-B	4-12-48	10:15 a.m.	Water from ditch 10 yards from boundary	2	-	-	-
1 W	4-12-48	10:15 a.m.	Poplar Creek inlet N.E. K-303-8	0	-	-	-
17 W	4-12-48	10:30 a.m.	Drinking water K-25	0	-	0.0 ± 0.5	-
1 W-A	4-12-48	10:10 a.m	East end of holding pond	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-22-48

WCX-1012 (Ma 3)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

Closed

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 D	4-1-48	9:00 a.m	Clinch River effluent from K-25	0	-	0.1 ± 0.5	-
24 D	4-1-48	10:10 a.m	Water effluent from Water Purification Plant	0	-	0.4 ± 0.5	2.0
13 D	4-2-48	10:10 a.m	Clinch River effluent from K-25	0	-	0.1 ± 0.5	-
24 D	4-2-48	10:55 a.m	Water effluent from Water Purification Plant	0	-	0.7 ± 0.5	0.8
13 D	4-5-48	9:00 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.4 ± 0.6	-
24 D	4-5-48	9:45 a.m	Water effluent from Water Purification Plant	0	-	0.4 ± 0.6	0.8
13 D	4-6-48	9:05 a.m	Clinch River effluent from K-25	0	-	1.6 ± 0.7	-
24 D	4-6-48	9:30 a.m	Water effluent from Water Purification Plant	0	-	0.2 ± 0.5	0.0
13 D	4-7-48	9:20 a.m	Clinch River effluent from K-25	0	-	0.2 ± 0.5	-
24 D	4-7-48	9:50 a.m	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.0

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SUPERVISOR D. L. Stoddard DATE 4-19-48

WCX-1012 (Mar

REPORT No. 6

WORKS LABORATORY DEPARTMENT

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	BETA
14 W-A	4-2-48	12:15 p.m	Sewer between "R" Area and 1300 Area gate	80	-	-	-
14 W-C	4-2-48	12:30 p.m	Sewer on slope south of K-402-1	0	-	-	-
14 W	4-2-48	12:35 p.m	Influent to Sewage Disposal Plant	0	-	-	-
20 W	4-2-48	3:00 p.m	Cafeteria cooking water	0	Less than 0.2	0.1±0.5	-
11 W-C	4-5-48	9:30 a.m	Bear Creek at Oak Ridge Turnpike	0	-	0.0±0.5	-
11 W	4-5-48	12:00 a.m	Poplar Creek influent to K-25	0	-	0.0±0.5	-
17 W	4-5-48	12:30 p.m.	Recirculating water K-27	0	-	0.4±0.6	-
12 W	4-5-48	12:45 p.m	Clinch River influent to K-25	0	-	0.0±0.5	-
22 W	4-5-48	1:00 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.0±0.5	-
21 W	4-5-48	1:20 p.m.	S-50 Sewer outfall	33	-	-	-
10 W	4-5-48	1:20 p.m	Clinch River immediately below S-50 Sewer Outfall	0	-	0.5±0.5	-
16 W	4-6-48	8:45 a.m	Drinking water from K-1008-D	0	Less than 0.2	0.2±0.5	-

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SUPERVISOR D. L. Stoddard DATE 4-19-48

WCX-1012 (Ma 9)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
11 W	4-1-48	9:30 a.m.	Poplar Creek influent to K-25	0	Less than 0.2	0.2 ± 0.5	-
12 W	4-1-48	10:20 a.m.	Clinch River influent to K-25	0	Less than 0.2	0.2 ± 0.5	-
17 W	4-1-48	10:50 a.m.	Recirculating water K-25	0	-	0.3 ± 0.5	-
11 W-C	4-1-48	12:30 p.m.	Bear Creek at Oak Ridge Turnpike	0	-	0.2 ± 0.5	-
22 W	4-1-48	12:45 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.3 ± 0.5	-
21 W	4-1-48	12:55 p.m.	S-50 Sewer outfall	11	-	-	-
10 W	4-1-48	12:55 p.m.	Clinch River immediately below S-50 Sewer outfall	0	-	1.4 ± 0.7	-
1 W-A	4-1-48	1:15 p.m.	In ditch at east end of holding pond	0	- -	-	-
1 W-B	4-1-48	1:20 p.m.	Ten yards upstream from boundary fence	6	-	-	-
1 W-	4-1-48	1:20 p.m.	Poplar Creek N.E. of K-303-8	3	-	-	-
16 W	4-1-48	1:30 p.m.	Drinking water K-309-2	0	Less than 0.2	0.2 ± 0.5	-
14 W-B	4-2-48	12:10 p.m.	Manhole at S.E. Corner of Avenue F and 6th Street	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-14-48

WCX-1012 (Ma

REPORT No. 6

WORKS LABORATORY DEPARTMENT

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	BETA
13 D	3-26-48	8:40 a.m.	Clinch River effluent from K-25	0	-	0.4±0.5	-
24 D	3-26-48	9:25 a.m.	Water effluent from Water Purification Plant	0	-	0.5±0.5	1.9
13 D	3-29-48	8:35 a.m.	Clinch River effluent from K-25	0	-	0.2±0.5	-
24 D	3-29-48	9:00 a.m.	Water effluent from Water Purification Plant	0	-	0.1±0.5	0.0
13 D	3-30-48	9:30 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.2±0.5	-
24 D	3-30-48	10:00 a.m.	Water effluent from Water Purification Plant	0	-	0.3±0.5	0.0
13 D	3-31-48	10:30 a.m.	Clinch River effluent from K-25	0	-	0.6±0.6	-
24 D	3-31-48	10:55 a.m.	Water effluent from Water Purification Plant	0	-	0.1±0.5	0.0

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SUPERVISOR D. L. Stoddard DATE 4-12-48

WCX-1012 (M 8)

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
6-H-A	3-30-48	3:00 p.m	Drainage from K-631	There was no	water in the drain line.		
6-H-B	3-30-48	12:45 p.m	Drainage from K-131	0	-	-	-
6-H	3-30-48	1:00 p.m	~~Drainage from behind K-131 into~~ Poplar Creek	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-7-48

WCX-1012 (Ma

REPORT NO. _____

WORKS LABORATORY DEPARTMENT

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	BETA
13 E	3-24-48	3:30 p.m	Mud from Clinch River bottom at sampling position 13-D	None Detected	-	-	-
10 E	3-25-48	1:30 p.m	Mud from Clinch River bottom at sampling position 10-W	None Detected	-	-	-
15 E	3-25-48	1:45 p.m	Sludge from Sewage Disposal Plant at sampling position 15-W	None Detected	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-7-48

WCX-1012 (M 3)

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REPORT No. _____

WORKS LABORATORY DEPARTMENT

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	BETA
6 W	3-22-48	1:40 p.m	Drainage into Poplar Creek from behind K-131	0	-	-	-
22 W	3-22-48	1:00 p.m	Poplar Creek immediately before junction with the Clinch River	0	-	0.8±0.6	-
14 W-C	3-23-48	2:00 p.m	Sewage drain at slope on south side of K-402-1	0	-	-	-
14 W	3-23-48	2:00 p.m	Influent to Sewage Disposal Plant	0	-	-	-
14 W-A	3-23-48	3:15 p.m	Manhole at edge of Avenue F between R Area and 1300 Area gate	5	-	-	-
14 W-B	3-23-48	3:30 p.m	Sewer at S.E. corner of Avenue F and Sixth Street	0	-	-	-
11 W-C	3-24-48	9:00 a.m	Bear Creek at Oak Ridge Turnpike	0	-	0.7±0.6	-
21 W	3-24-48	9:50 a.m	S-50 Sewer outfall	10	-	-	-
10 W	3-24-48	9:50 a.m	Clinch River immediately below S-50 Sewer outfall	0	-	0.2±0.5	-
20 W	3-24-48	1:45 p.m	Cafeteria cooking water	0	Less than 0.2	0.7±0.6	-
16 W	3-24-48	1:35 p.m	Drinking water, K-413 Building	0	Less than 0.2	0.4±0.5	-

SUPERVISOR D. L. Stoddard DATE 4-7-48

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WCX-1012 (Ma

REPORT No. 56

WORKS LABORATORY DEPARTMENT

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	BETA
21 W	3-17-48	3:00 p.m	S-50 Sewer outfall	23	-	-	-
10 W	3-17-48	3:00 p.m	Clinch River immediately below S-50 Sewer outfall	0	-	0.3±0.5	-
20 W	3-17-48	3:15 p.m	Cafeteria Cooking Water	0	Less than 0.2	0.3±0.5	-
11 W-C	3-19-48	2:30 p.m	Bear Creek at Oak Ridge Turnpike	0	-	0.3±0.6	-
1 W-A	3-22-48	10:05 a.m.	At mouth of 24" concrete pipe from K-1037 at E. end of holding pond	0	-	-	-
1 W-B	3-22-48	10:10 a.m	Ten yards upstream from boundary fence	2	-	-	-
1 W	3-22-48	10:10 a.m	Poplar Creek inlet N.E. of K-303-8	1	-	-	-
17 W	3-22-48	10:25 a.m	Recirculating water K-27	0	-	0.5±0.6	-
11 W	3-22-48	10:35 a.m	East branch of Poplar Creek	0	-	0.5±0.5	-
12 W	3-22-48	10:50 a.m	Clinch River influent to K-25	0	-	0.6±0.6	-
6 W-A	3-22-48	12:25 p.m.	Drainage from K-631	0	-	-	-
6 W-B	3-22-48	12:35 a.m	Drainage from K-131	0	-	-	-

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SUPERVISOR D. L. Stoddard DATE 4-7-48

WCX-1012 (Mar 3)

REPORT No. _____

WORKS LABORATORY DEPARTMENT

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	BETA
13 D	3-17-48	9:00 a.m	Clinch River effluent from K-25	0	-	1.7 ± 0.7	-
24 D	3-17-48	9:30 a.m	Water effluent from Water Purification Plant	0	-	0.2 ± 0.5	0.4
13 D	3-18-48	9:30 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.4 ± 0.6	-
24 D	3-18-48	3:15 p.m	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.1
13 D	3-19-48	9:20 a.m	Clinch River effluent from K-25	0	-	0.9 ± 0.6	-
24 D	3-19-48	10:00 a.m	Water effluent from Water Purification Plant	0	-	0.5 ± 0.6	0.8
13 D	3-22-48	8:45 a.m	Clinch River effluent from K-25	0	-	0.4 ± 0.6	0.2
24 D	3-22-48	11:00 a.m	Water effluent from Water Purification Plant	0	-	0.5 ± 0.6	2.31 ± 2.37
13 D	3-23-48	10:40 a.m	Clinch River effluent from K-25	0	-	0.8 ± 0.6	-
13 D	3-24-48	8:40 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.8 ± 0.6	-
24 D	3-24-48	9:20 a.m	Water effluent from Water Purification Plant	0	-	0.4 ± 0.6	0.0
13 D	3-25-48	9:50 a.m	Clinch River effluent from K-25	0	-	0.9 ± 0.6	0.0
24 D	3-25-48	10:30 a.m	Water effluent from Water Purification Plant	0	-	0.4 ± 0.5	0.0

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SUPERVISOR D. L. Stoddard DATE [illegible]7-48

WCX-1012 (Me

WORKS LABORATORY DEPARTMENT

SPECIAL ANALYSIS SECTION

REPORT OF WATER SURVEY ANALYSES

REPORT NO. 54

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
3 M	3- 1-48	9:45 a.m.	Drainage from Process north of K-303-8	0	-	-	-
25 M	3- 1-48	1:30 p.m.	Clinch River above Elza Gate	0	Less than 0.2	0.4±0.5	-
19 M	3- 8-48	3:40 p.m.	Powerhouse intake	0	-	-	-
18 M	3-8-48	3:45 p.m.	Powerhouse discharge	0	-	-	-
2 M	3- 8-48	4:00 p.m.	Drainage from Pond S.W. of Garage Area	0	-	-	-
8 M	3-10-48	3:20 p.m.	Drainage from "hot scrap yard" into bay N.E. of Gallaher Gate	0	-	1.4±0.7	-
9 M	3-10-48	4:00 p.m.	Clinch River west of Jones Scrap Yard	0	-	-	-
5 M	3-18-48	4:00 p.m.	Drainage from Process behind K-306-5	0	-	-	-
4 M	3-18-48	4:00 p.m.	Drainage from Process behind K-304-1	0	-	-	-
23 M	3-19-48	12:10 p.m.	Ground water adjacent to K-1239 Sludge pit	0	-	-	-
26 & 27 M	3-19-48	12:45 p.m.	Drainage from Laboratories A,B,C,&D	2	-	1.0±0.6	-

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SUPERVISOR D. L. Stoddard DATE 4-5-48

WCX-1012 (Ma 9)

REPORT NO. 5.

WORKS LABORATORY DEPARTMENT

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	BETA
13 D	3-9-48	9:35 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.6 ±0.6	-
24 D	3-9-48	10:30 a.m	Water effluent from Water Purification Plant	0	-	0.0±0.5	0.0
13 D	3-10-48	9:00 a.m	Clinch River effluent from K-25	0	-	0.5±0.6	-
24 D	3-10-48	9:30 a.m	Water effluent from Water Purification Plant	0	-	0.1±0.5	0.0
13 D	3-11-48	10:05 a.m	Clinch River effluent from K-25	0	-	0.2±0.5	-
24 D	3-11-48	10:35 a.m	Water effluent from Water Purification Plant	0	-	0.0±0.5	1.0
13 D	3-12-48	1:35 p.m	Clinch River effluent from K-25	0	-	0.2±0.5	-
24 D	3-12-48	2:32 p.m	Water effluent from Water Purification Plant	0	-	0.0 ±0.5	0.0
13 D	3-15-48	8:45 a.m	Clinch River effluent from K-25	0	Less than 0.2	0.9 ±0.6	-
24 D	3-15-48	9:47 a.m	Water effluent from Water Purification Plant	0	-	0.1±0.5	0.0
13 D	3-16-48	12:20 p.m	Clinch River effluent from K-25	0	-	1.2 ±0.6	-
24 D	3-16-48	12:50 p.m	Water effluent from Water Purification Plant	0	-	0.0±0.5	0.0

SUPERVISOR D. L. Stoddard DATE [illegible]-48

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WCX-1012 (Ma

Report No. 5

Works Laboratory Department

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	Beta
11 W	3-15-48	9:05 a.m.	Poplar Creek influent to K-25	0	-	0.2±0.5	-
1 W	3-15-48	9:15 a.m.	Poplar Creek inlet N.E. of K-303-8	0	-	0.1±0.5	-
17 W	3-15-48	9:20 a.m.	Recirculating water K-25	0	-	0.5±0.6	-
14 W	3-15-48	9:25 a.m.	Influent to Sewage Disposal Plant	0	-	-	-
15 W	3-15-48	9:30 a.m.	Effluent from Sewage Disposal Plant	0	-	-	-
12 W	3-15-48	9:45 a.m.	Clinch River influent to K-25	3	-	2.3±0.7	-
6 W-B	3-15-48	1:10 p.m.	Drainage from K-131 Building	0	-	-	-
6 W	3-15-48	1:15 p.m.	Drainage into Poplar Creek from behind K-131	0	-	-	-
1 W-A	3-15-48	2:00 p.m.	Drainage at east end of Holding Pond	0	-	-	-
1 W-B	3-15-48	2:30 p.m.	In drainage ditch, ten yards upstream from boundary fence	3	-	-	-
22 W	3-15-48	2:45 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.2±0.5	-
16 W	3-17-48	2:30 p.m.	Drinking water, Administration Bldg.	0	Less than 0.2	0.6±0.6	-

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Supervisor D. L. Stoddard Date 3-31-48

Works Laboratory Department
Special Analysis Section

Report No. 3A

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
11-W	3-8-48	10:30 a.m.	Poplar Creek Influent to K-25	0	-	0.5±0.6	-
1 W	3-8-48	10:45 a.m.	Poplar Creek Inlet N.E. of K-303-9	6	-	-	-
17 W	3-8-48	12:50 p.m.	Recirculating Water K-27	0	-	0.3±0.5	-
14 W	3-8-48	1:00 p.m.	Influent to Sewage Disposal Plant	0	-	-	-
15 W	3-8-48	1:00 p.m.	Effluent from Sewage Disposal Plant	0	-	-	-
12 W	3-8-48	1:15 p.m.	Clinch River Influent to K-25	0	-	0.6±0.6	-
16 W	3-8-48	1:40 p.m.	Drinking Water from K-310-3	0	Less than 0.2	0.1±0.5	-
20 W	3-8-48	1:50 p.m.	Cafeteria Cooking Water	0	Less than 0.2	0.3±0.5	-
6 W	3-8-48	3:30 p.m.	Drainage into Poplar Creek from behind K-131 building	0	-	-	-
22 W	3-9-48	3:10 p.m.	Poplar Creek Immediately before junction with Clinch River	0	-	0.5±0.6	-
21 W	3-9-48	3:20 p.m.	S-50 Sewer outfall	1	-	-	-
10 W	3-9-48	3:25 p.m.	Clinch River Immediately below S-50 Sewer outfall	0	-	0.1±0.5	-

Supervisor D. L. Stoddard Date 3-25-48

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Works Laboratory Department
Special Analysis Section

Report No. _____

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
13 D	3-1-48	9:15 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 0.6	-
24 D	3-1-48	10:35 a.m.	Water effluent from Water Purification plant	0	-	1.5 ± 0.7	0.0
13 D	3-2-48	10:20 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.2 ± 0.5	-
24 D	3-2-48	12:40 p.m.	Water effluent from Water Purification Plant	0	-	0.1 ± 0.5	0.2
13 D	3-3-48	9:30 a.m.	Clinch River effluent from K-25	0	-	0.2 ± 0.5	-
24 D	3-3-48	10:05 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	3-4-48	12:00 p.m.	Clinch River effluent from K-25	0	0.3	0.2 ± 0.6	-
24 D	3-4-48	12:55 p.m.	Water effluent from Water Purification Plant	0	-	0.2 ± 0.5	1.9
13 D	3-5-48	9:30 a.m.	Clinch River effluent from K-25	0	-	0.3 ± 0.5	-
24 D	3-5-48	10:15 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.4
13 D	3-6-48	10:20 a.m.	Clinch River effluent from K-25	0	-	0.1 ± 0.5	-
24 D	3-6-48	1:20 p.m.	Water effluent from Water Purification Plant	0	-	1.4 ± 0.7	0.0

Supervisor D. L. Stoddard Date 3-17-48

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Works Laboratory Department
Special Analysis Section

Report No. 47

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
11 W	3-1-48	9:35 a.m	Poplar Creek influent to K-25	0	Less than 0.2	0.3±0.5	-
1 W	3-1-48	9:50 a.m	Poplar Creek inlet N.E. of 303-8	0	-	-	-
17 W	3-1-48	9:55 a.m	Recirculating water K-25	0	-	0.2±0.5	-
14 W	3-1-48	10:05 a.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	3-1-48	10:05 a.m	Effluent from Sewage Disposal Plant	0	-	-	-
12 W	3-1-48	10:25 a.m	Clinch River influent to K-25	0	Less than 0.2	0.6±0.6	-
6 W	3-2-48	12:20 p.m	K-131 drainage into Poplar Creek	0	-	-	-
22 W	3-2-48	1:00 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.1±0.5	-
21 W	3-2-48	1:30 p.m	S-50 Sewer outfall	40	-	-	-
10 W	3-2-48	1:30 p.m	Clinch River immediately below the S-50 Sewer outfall	0	-	0.1±0.5	-
20 W	3-2-48	1:50 p.m	Cafeteria cooking water	0	Less than 0.2	0.2±0.5	-
16 W	3-4-48	1:10 p.m	Drinking water from Guard Headquarters	0	Less than 0.2	0.1±0.5	

Supervisor D. L. Stoddard Date 3-15-48

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Ames Laboratory Department
Special Analysis Section

REPORT OF DAILY SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling location	Uranium Conc. [illegible]	Fluorine Conc. [illegible]	[illegible]	[illegible]
13 D	2-25-48	10:35 a.m.	Clinch River effluent from K-25	0	-	0.2±0.5	-
24 D	2-25-48	11:00 a.m.	Water effluent from Water Purification Plant	0	-	0.1±0.5	0.0
13 D	2-26-48	1:30 p.m.	Clinch River effluent from K-25	0	-	0.3±0.5	-
24 D	2-26-48	2:15 p.m.	Water effluent from Water Purification Plant	0	-	0.3±0.5	0.0
13 D	2-27-48	9:45 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.3±0.5	-
24 D	2-27-48	10:20 a.m.	Water effluent from Water Purification Plant	0	-	0.1±0.5	0.0

Distribution: A. F. Huber
L. J. Costello, L.D.
A. F. Dunlap (2)
G. T. S. Shelton
S. Visner ✓
Ames Lab. Central File
File

Supervisor D. L. Stoddard Date 3-11-48

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Works Laboratory Department
Special Analysis Section

Report No. 47

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml. Alpha	Beta
13 D	2-18-48	10:30 a.m.	Clinch River effluent from K-25	0	-	0.2 ± 0.5	-
24 D	2-18-48	1:30 p.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.0
13 D	2-19-48	8:50 a.m.	Clinch River effluent from K-25	0	0.2	0.0 ± 0.5	-
24 D	2-19-48	11:00 a.m.	Water effluent from Water Purification Plant	0	-	0.8 ± 0.6	0.0
13 D	2-20-48	9:30 a.m.	Clinch River effluent from K-25	0	-	0.2 ± 0.5	-
24 D	2-20-48	10:05 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	2-23-48	9:45 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.1 ± 0.5	-
24 D	2-23-48	12:30 p.m.	Water effluent from Water Purification Plant	0	-	0.1 ± 0.5	0.0
13 D	2-24-48	9:00 a.m.	Clinch River effluent from K-25	0	-	0.4 ± 0.5	-
24 D	2-24-48	9:40 a.m.	Water effluent from Water Purification Plant	0	-	0.2 ± 0.5	0.0

Distribution:
A. P. Huber
M. J. Costello, M.D.
A. P. Dunlap (2)
G. T. E. Sheldon
S. Visner
Works Lab. Central File
File

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Supervisor D. L. Stokford Date 3-8-48

Works Laboratory Department
Special Analysis Section

Report No. 46

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
8 M	2-2-48	1:00 p.m	Drainage from Hot Scrap Yard into bay N.E. of Gallaher Gate	0	-	0.1 ± 0.5	-
18 M	2-2-48	1:15 p.m	Powerhouse discharge	0	-	-	-
2 M	2-2-48	1:20 p.m	Drainage from pond S.E. of garage area into Poplar Creek	0	-	-	-
3 M	2-2-48	2:30 p.m	Drainage into Poplar Creek behind K-303-3	0	-	-	-
19 M	2-2-48	3:15 p.m	Powerhouse intake	0	-	-	-
25 M	2-6-48	3:00 p.m	Clinch River above Elza Gate	0	Less than 0.2	0.2 ± 0.5	-
5 M	2-16-48	12:50 p.m	Drainage from Process west of 306-3	0	-	-	-
4 M	2-16-48	1:00 p.m	Drainage from Process west of 303-1	0	-	-	-
9 M	2-16-48	2:45 p.m	Clinch River west of Jones scrap yard	0	-	-	-
26 & 27 M	2-16-48	4:10 p.m	Drainage from Labs. A, B, C, & D	3	-	2.1 ± 0.7	-
23 M	2-20-48	10:15 a.m	Ground water adjacent to K-1239 sludge pit	0	-	-	-

Distribution:
A. P. Huber
M. J. Costello, M.D.
A. P. Dunlap (2)
G. T. E. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 3-5-48

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Norris Laboratory Department
Special Analysis Section

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. [illegible]	Fluoride Conc. [illegible]	[illegible]	
16 W	2-16-48	9:30 a.m	Drinking water, K-1049 Building	0	Less than 0.2	0.1±0.5	-
11 W	2-16-48	1:10 p.m	Poplar Creek influent to K-25	0	-	0.1±0.5	-
1 W	2-16-48	1:20 p.m	Poplar Creek inlet N.E. K-303-8	0	-	-	-
22 W	2-16-48	1:45 p.m	Poplar Creek immediately before junction with Clinch River	0	-	0.3±0.5	-
21 W	2-16-48	2:00 p.m	S-50 Sewer outfall	20 ✓	-	-	-
17 W	2-16-48	2:15 p.m	Recirculating water K-25	0	-	0.2±0.5	-
12 W	2-16-48	2:30 p.m	Clinch River influent to K-25	0	-	0.1±0.5	-
10 W	2-16-48	3:00 p.m	Clinch River immediately below S-50 Sewer outfall	0	-	0.0±0.5	-
14 W	2-17-48	10:00 a.m	Influent to Sewage Disposal Plant	2 ✓	-	-	-
15 W	2-17-48	10:00 a.m	Effluent to Sewage Disposal Plant	0	-	-	-
6 W	2-19-48	9:00 a.m	Drainage into Poplar Creek behind K-131 Building	0	-	-	-
20 W	2-20-48	10:20 a.m	Cafeteria cooking water	0	Less than 0.2	0.1±0.5	-

Distribution: A. F. Huber
M. J. Costello, M.D.
A. F. Dunlap (2)
[illegible] Sheldon
S. Visner ✓
Norris Lab. Central File
File

Supervisor D. L. Stoddard Date 3-3-48

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REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per Liter Alpha	Beta
14 W	2-23-48	10:15 a.m	Influent to Sewage Disposal Plant	0	-	-	-
15 W	2-23-48	10:15 a.m.	Effluent to Sewage Disposal Plant	0	-	-	-
17 W	2-23-48	10:25 a.m	Recirculating water K-27	0	-	0.3 ± 0.5	-
12 W	2-23-48	12:40 p.m	Clinch River influent to K-25	0	Less than 0.2	0.0 ± 0.5	-
22 W	2-23-48	1:00 p.m	Poplar Creek immediately before junction with Clinch River	0	Less than 0.2	0.2 ± 0.5	-
21 W	2-23-48	1:05 p.m.	S-50 Sewer outfall	2	Less than 0.2	-	-
10 W	2-23-48	1:10 p.m.	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.0 ± 0.5	-
11 W	2-23-48	1:20 p.m	Poplar Creek influent to K-25	0	Less than 0.2	0.2 ± 0.5	-
1 W	2-23-48	1:20 p.m	Poplar Creek inlet N.E. K-303-8	1 ✓	-	-	-
16 W	2-23-48	2:30 p.m.	Drinking water K-131 Building	0	Less than 0.2	0.1 ± 0.5	-
6 W	2-23-48	3:00 p.m	Drainage into Poplar Creek behind K-131 Building	0	-	-	-
20 W	2-23-48	3:10 p.m	Cafeteria cooking water	0	Less than 0.2	0.2 ± 0.5	-

Distribution: A. P. Huber
M. J. Costello, M.D.
A. P. Dunlap (2)
G. T. E. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 3-3-48

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Laboratory Department
Special Analysis Section

REPORT OF [illegible]

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. [illegible]	Fluoride Conc. [illegible]	[illegible]	[illegible]
13 D	2-10-48	10:20 a.m.	Clinch River effluent from K-25	0	-	0.7 ± 0.6	-
24 D	2-10-48	8:35 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	2-11-48	9:05 a.m.	Clinch River effluent from K-25	0	-	0.5 ± 0.6	-
24 D	2-11-48	10:45 a.m.	Water effluent from Water Purification Plant	0	-	0.6 ± 0.6	0.8
13 D	2-12-48	9:45 a.m.	Clinch River effluent from K-25	0	-	0.7 ± 0.6	-
24 D	2-12-48	10:15 a.m.	Water effluent from Water Purification Plant	0	-	0.2 ± 0.5	1.0
13 D	2-13-48	9:50 a.m.	Clinch River effluent from K-25	0	-	0.1 ± 0.5	-
24 D	2-13-48	10:30 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.5
13 D	2-16-48	10:10 a.m.	Clinch River effluent from K-25	0	-	0.2 ± 0.5	-
24 D	2-16-48	11:10 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	2-17-48	10:50 a.m.	Clinch River effluent from K-25	0	-	0.1 ± 0.5	-
24 D	2-17-48	10:15 a.m.	Water effluent from Water Purification Plant	0	-	0.5 ± 0.6	0.0

Distribution: [illegible] Hauser
[illegible] J. Costello, [illegible]
[illegible] Dunlap (2)
G. E. [illegible] Shelson
[illegible] Visner
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-26-48

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Works Laboratory Department
Industrial Hygiene Section

Report No. 42

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. P.P.M.	Fluoride Conc. P.P.M.	Counts per Minute per 100 ml Alpha	Counts per Minute per 100 ml Beta
11 W	2- 9-48	9:45 a.m.	Poplar Creek influent to K-25	0	-	0.1 ± 0.5	-
1 W	2- 9-48	9:50 a.m.	Poplar Creek inlet N.E. of K-303-8	0	-	-	-
14 W	2- 9-48	10:00 a.m.	Influent to Sewage Disposal Plant	0	-	-	-
15 W	2- 9-48	10:00 a.m.	Effluent from Sewage Disposal Plant	0	-	-	-
12 W	2- 9-48	1:10 p.m.	Clinch River influent to K-25	0	-	0.1 ± 0.5	-
22 W	2- 9-48	1:40 p.m.	Poplar Creek immediately before junction with Clinch River	0	-	0.5 ± 0.5	-
21 W	2- 9-48	2:00 p.m.	S-50 Sewer outfall	10 ✓	-	-	-
10 W	2- 9-48	2:00 p.m.	Clinch River immediately below S-50 Sewer Outfall	0	-	0.3 ± 0.5	-
16 W	2- 9-48	2:30 p.m.	Drinking Water K-310-3	0	Less than 0.2	0.0 ± 0.5	-
17 W	2- 9-48	2:45 p.m.	Recirculating Water K-27	0	-	0.1 ± 0.5	-
20 W	2- 9-48	3:00 p.m.	Cafeteria cooking water	0	Less than 0.2	0.0 ± 0.5	-
6 W	2-13-48	1:30 p.m.	Drainage into Poplar Creek behind K-131	1 ✓	-	-	-

Distribution:
A. F. Huber
F. J. Costello, M.D.
A. C. Dunlap (2)
G. T. S. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-23-48

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Works Laboratory Department
Industrial Hygiene Section

Report No. 41

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml Alpha	Beta
13 D	2- 2-48	10:40 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 0.5	-
24 D	2- 2-48	1:55 p.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.4
13 D	2- 3-48	10:00 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.3 ± 0.5	-
24 D	2- 3-48	12:20 p.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	2- 4-48	1:45 p.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 0.5	-
24 D	2- 4-48	11:00 a.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.5
13 D	2- 5-48	10:30 a.m.	Clinch River effluent from K-25	0	0.3	0.5 ± 0.5	-
24 D	2- 5-48	3:30 p.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.6
13 D	2- 6-48	9:25 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 0.5	-
24 D	2- 6-48	10:30 a.m.	Water effluent from Water Purification Plant	0	-	0.5 ± 0.5	0.0
13 D	2- 9-48	9:30 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.3 ± 0.5	-
24 D	2- 9-48	10:20 a.m.	Water effluent from Water Purification Plant	0	-	0.1 ± 0.5	1.4

Distribution:
A. F. Huber
W. J. Costello, M.D.
A. F. Dunlap (2)
G. T. J. Sheldon
S. Visner
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-18-48

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Works Laboratory Department
Industrial Hygiene Section

Report No. 40

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml. Alpha	Counts per Minute per 100 ml. Beta
12 W	2- 2-48	1:45 p.m.	Clinch River influent to K-25	0	Less than 0.2	0.1 ± 0.5	-
14 W	2- 2-48	1:40 p.m.	Influent to Sewage Disposal Plant	0	-	-	-
15 W	2- 2-48	1:40 p.m.	Effluent from Sewage Disposal Plant	0	-	-	-
17 W	2- 2-48	2:00 p.m.	Recirculating water K-25	0	-	0.0 ± 0.5	-
1 W	2- 2-48	2:40 p.m.	Poplar Creek inlet N.E. of K-303-8	2	-	-	-
11 W	2- 2-48	3:00 p.m.	Poplar Creek influent to K-25	0	Less than 0.2	0.0 ± 0.5	-
22 W	2- 2-48	3:00 p.m.	Poplar Creek immediately before junction with Clinch River	0	Less than 0.2	0.1 ± 0.5	-
20 W	2- 2-48	3:30 p.m.	Cafeteria cooking water	0	Less than 0.2	0.0 ± 0.5	-
21 W	2- 3-48	2:45 p.m.	S-50 Sewer outfall	80	0.3	-	-
10 W	2- 3-48	3:00 p.m.	Clinch River immediately below S-50 Sewer outfall	1	Less than 0.2	0.9 ± 0.6	-
6 W	2- 3-48	3:00 p.m.	Drainage into Poplar Creek behind K-131 Bldg.	16	-	-	-
16 W	2- 5-48	3:40 p.m.	Drinking water K-1037 Bldg.	0	Less than 0.2	0.3 ± 0.5	-

Distribution:
A. F. Huber
M. J. Costello, M.D.
A. C. Dunlap (2)
G. T. S. Sheldon
S. Wiener
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-18-48

299

Works Laboratory Department
Industrial Hygiene Section

Report No. 39

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml Alpha	Beta
26 & 27- M	1-29-48	2:15 p.m.	Drainage from all laboratories	3	-	0.4 ± 0.5	

Distribution:
A. F. Huber
M. J. Costello, M.D.
A. F. Dunlop (2)
G. T. E. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-6-48

200

Works Laboratory Department
Industrial Hygiene Section

Report No. 38

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml Alpha	Counts per Minute per 100 ml Beta
12 W	1-28-48	12:30 p.m.	Clinch River influent to K-25	0	Less than 0.2	2.0±0.7	-
21 W	1-28-48	12:50 p.m.	S-50 Sewer Outfall	800	0.3	-	-
10 W	1-28-48	12:55 p.m.	Clinch River immediately below S-50 Sewer outfall	0	Less than 0.2	0.1±0.5	-
16 W	1-28-48	1:10 p.m.	Drinking water from K-131	0	Less than 0.2	1.4±0.7	-
17 W	1-28-48	1:10 p.m.	Recirculating water K-27	0	-	0.4±0.5	-
11 W	1-28-48	1:30 p.m.	Poplar Creek Influent to K-25	0	Less than 0.2	0.9±0.6	-
1 W	1-28-48	1:40 p.m.	Poplar Creek inlet N.E. of K-303-E	2	-	-	-
22 W	1-29-48	12:45 p.m.	Poplar Creek immediately below junction with Clinch River	0	Less than 0.2	0.5±0.5	-
6 W	1-29-48	1:15 p.m.	Drainage into Poplar Creek behind K-131	6	-	-	-
14 W	1-29-48	2:00 p.m.	Influent to Sewage Disposal Plant	0	-	-	-
15 W	1-29-48	2:15 p.m.	Effluent from Sewage Disposal Plant	0	-	-	-
20 W	1-29-48	2:20 p.m.	Cafeteria cooking water	0	Less than 0.2	0.2±0.5	

Distribution:
A. F. Huber
H. J. Costello, M.D.
A. F. Dunlap (2)
G. T. S. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-6-48

301

Works Laboratory Department
Industrial Hygiene Section

Report No. 37

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml	
						Alpha	Beta
13 D	1-28-48	11:00 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.3±0.5	-
24 D	1-28-48	12:40 p.m.	Water effluent from Water Purification Plant	0	-	0.5±0.6	0.0
13 D	1-29-48	9:00 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.7±0.6	-
24 D	1-29-48	12:30 p.m.	Water effluent from Water Purification Plant	0	-	0.0±0.5	0.0
13 D	1-30-48	9:00 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.1±0.5	-
24 D	1-30-48	9:30 a.m.	Water effluent from Water Purification Plant	0	-	0.2±0.5	0.7

Distribution:
A. F. Huber
M. J. Costello, M.D.
A. L. Dunlap (2)
G. T. S. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-6-48

302

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. P.P.B.	Fluoride Conc. P.P.M.	Counts per Minute per 100 ml. Alpha	Beta
3 N	1- 5-48	10:00 a.m.	Drainage from Process Buildings into Poplar Creek north of K-303-8	0	-	-	-
2 N	1-13-48	3:45 p.m.	Drainage from pond S.W. of Garage Area into Poplar Creek	0	-	-	-
25 N	1-16-48	10:20 a.m.	Clinch River above Elza Gate	0	Less than 0.2	0.8 ± 0.6	-
19 N	1-19-48	1:00 p.m.	Powerhouse water intake	0	-	-	-
18 N	1-19-48	1:10 p.m.	Powerhouse water discharge	0	-	-	-
4 N	1-19-48	2:30 p.m.	Drainage from Process Buildings into Poplar Creek opposite 305-2	0	-	-	-
5 N	1-19-48	2:30 p.m.	Drainage from Process Buildings into Poplar Creek opposite 306-4	0	-	-	-
23 N	1-19-48	3:00 p.m.	Ground water adjacent to K-1239 Sludge Pit	0	-	-	-
9 N	1-20-48	10:00 a.m.	Clinch River west of Jones Scrap Yard	0	-	-	-
8 N	1-20-48	10:10 a.m.	Drainage from Hot Scrap Yard into bay N.W. of Gallaher Gate	0	-	0.4 ± 0.5	-

Distribution:
A. F. Huber
M. J. Costello, M.D.
A. F. Dunlap (2)
G. T. S. Sheldon
S. Visner
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-2-48

303

Works Laboratory Department
Industrial Hygiene Section

Report No. _____

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.m.	Fluoride Conc. p.p.m.	Counts per Minute per 100 ml Alpha	Counts per Minute per 100 ml Beta
6 W	1-19-48	11:00 a.m.	Drainage into Poplar Creek behind K-131 building	130	-	-	-
17 W	1-19-48	12:30 p.m.	Recirculating water K-27	0	-	1.1 ± 0.6	-
14 W	1-19-48	12:40 p.m.	Influent to Sewage Disposal Plant	0	-	-	-
15 W	1-19-48	12:40 p.m.	Effluent from Sewage Disposal Plant	0	-	-	-
22 W	1-19-48	1:10 p.m.	Poplar Creek immediately before junction with the Clinch River	0	Less than 0.2	2.1 ± 0.7	-
10 W	1-19-48	1:00 p.m.	Clinch River immediately below S-50 sewer outfall	0	Less than 0.2	0.6 ± 0.6	
21 W	1-19-48	1:10 p.m.	S-50 sewer outfall	4	Less than 0.2	-	-
12 W	1-19-48	1:15 p.m.	Clinch River influent to K-25	0	Less than 0.2	0.0 ± 0.5	
16 W	1-23-48	2:45 p.m.	Drinking Water K-1050	0	Less than 0.2	0.2 ± 0.5	
20 W	1-23-48	3:00 p.m.	Cafeteria Drinking Water	0	Less than 0.2	0.1 ± 0.5	

Distribution:
A. P. Huber
M. J. Costello, M.D.
A. C. Dunlap (2)
C. F. E. Sheldon
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 2-2-48

304

Works Laboratory Department
Industrial Hygiene Section

Report No. 34

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluorine Conc. p.p.m.	Counts per Minute per 100 ml alpha	beta
13 D	1-21-48	9:50 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 0.5	-
24 D	1-21-48	10:15 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	1-22-48	10:20 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 0.5	-
24 D	1-22-48	11:00 a.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.0
13 D	1-23-48	10:30 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.1 ± 0.5	-
24 D	1-23-48	2:50 p.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	1-26-48	10:10 a.m.	Clinch River effluent from K-25	0	Less than 0.2	1.2 ± 0.6	-
24 D	1-26-48	1:40 p.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.8
13 D	1-27-48	9:05 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.3 ± 0.5	-
24 D	1-27-48	10:00 a.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.3

Distribution:
A. F. Huber
M. J. Costello, M.D.
A. C. Dunlap (2)
G. T. E. Sheldon
S. Visner
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 1-30-48

305

Works Laboratory Department
Industrial Hygiene Section

Report No. 33

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. [illegible]	Fluoride Conc. [illegible]	Counts per Minute per [illegible] Alpha	Counts per Minute per [illegible] Beta
13 D	1-13-48	9:00 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.8 ± 0.6	-
24 D	1-13-48	10:00 a.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	7.8
13 D	1-14-48	10:30 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.7 ± 0.6	-
24 D	1-14-48	11:00 a.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.6
13 D	1-15-48	1:00 p.m.	Clinch River effluent from K-25	0	Less than 0.2	0.2 ± 0.5	-
24 D	1-15-48	1:40 p.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.7
13 D	1-16-48	9:40 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 0.5	-
24 D	1-16-48	11:00 a.m.	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5	0.0
13 D	1-19-48	9:30 a.m.	Clinch River effluent from K-25	0	Less than 0.2	3.3 ± 0.8	-
24 D	1-19-48	1:20 p.m.	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5	0.0
13 D	1-20-48	9:15 a.m.	Clinch River effluent from K-25	0	Less than 0.2	0.4 ± 0.5	-
24 D	1-20-48	10:20 a.m.	Water effluent from Water Purification Plant	0	-	0.4 ± 0.5	0.0

Distribution:
A. P. Huber
V. J. Costello, M.D.
A. [illegible] Dunlap (2)
G. T. E. Sheldon
S. Vanner
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 1-29-48

306

REPORT OF WATER SAMPLE ANALYSIS

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Counts per Minute per Liter alpha	beta
17 W	1-12-48	10:20 a.m.	Recirculating Water K-25	0	-	0.3 ± 0.5	-
16 W	1-12-48	10:28 a.m.	Drinking Water, K-131 Building	0	Less than 0.2	0.0 ± 0.5	-
14 W	1-12-48	10:35 a.m.	Influent to Sewage Disposal Plant	12	-	-	-
15 W	1-12-48	10:35 a.m.	Effluent from Sewage Disposal Plant	0	-	-	-
12 W	1-12-48	11:00 a.m.	Clinch River influent to K-25	0	Less than 0.2	0.8 ± 0.6	-
22 W	1-13-48	10:10 a.m.	Poplar Creek immediately before junction with Clinch River	0	Less than 0.2	0.5 ± 0.6	-
20 W	1-13-48	10:20 a.m.	Cafeteria drinking water	0	Less than 0.2	0.5 ± 0.6	-
6 W	1-14-48	10:00 a.m.	Drainage into Poplar Creek behind K-131	4	-	-	-
21 W	1-14-48	11:00 a.m.	S-50 Sewer outfall	30	0.4	-	-
10 W	1-14-48	11:00 a.m.	Clinch River immediately below S-50 sewer outfall	0	0.3	0.5 ± 0.6	-
11 W	1-19-48	10:00 a.m.	Poplar Creek influent to K-25	5	Less than 0.2	0.2 ± 0.5	
1 W	1-19-48	10:35 a.m.	Poplar Creek inlet N.E. of K-303-8	1	-	-	-

Distribution: [illegible]
[illegible] Costello, M.D.
[illegible] Dunlap (2)
G. T. [illegible] Shelson
S. Visner ✓
Works Lab. Central File
File

Supervisor D. L. Stoddard Date 1-28-48

302

Works Laboratory Department
Industrial Hygiene Section

Report No. 31

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc [illegible]	Fluoride Conc [illegible]	Counts per Minute per [illegible] Alpha	Counts per Minute per [illegible] Beta
11 W	1- 5-48	9:45 A.M.	Poplar Creek influent to K-25	0	Less than 0.2	0.0 ± 0.5	
17 W	1- 5-48	10:10 A.M.	Recirculating Water K-27	0	-	0.2 ± 0.6	
14 W	1- 5-48	10:15 A.M.	Influent to Sewage Disposal Plant	6	-	-	
15 W	1- 5-48	10:15 A.M.	Effluent from Sewage Disposal Plant	0	-	-	
12 W	1- 5-48	10:30 A.M.	Clinch River influent to K-25	0	Less than 0.2	0.7 ± 0.7	
21 W	1- 5-48	3:40 P.M.	S-50 sewer outfall	0	0.3	-	
10 W	1- 5-48	3:45 P.M.	Clinch River immediately below S-50 Sewer Outfall	0	Less than 0.2	0.0	
22 W	1- 5-48	4:00 P.M.	Poplar Creek immediately before junction with Clinch River	0	Less than 0.2	0.1 ± 0.5	
6 W	1- 8-48	1:30 P.M.	K-131 drainage into Poplar Creek	8	-	-	
16 W	1- 8-48	2:00 P.M.	Drinking Water, Garage Area	0	Less than 0.2	0.9 ± 0.6	
20 W	1- 8-48	2:30 P.M.	Cafeteria cooking water	0	Less than 0.2	1.6 ± 0.7	
1 W	1- 9-48	9:30 A.M.	Poplar Creek inlet N.E. of K-303-8	4	-	-	

Distribution:
A. P. Huber
[illegible] J. Costello, M.D.
[illegible] Dunlap (?)
G. T. [illegible] Sheldon
[illegible] Vischer ✓
Works Lab. Central Fil
File

Supervisor D. L. Stoddard

1-23-48

308

Works Laboratory Department
Industrial Hygiene Section

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. [illegible]	Fluoride Conc. [illegible]	Counts per Minute per 100 ml	
						[illegible]	[illegible]
11 W	1-12-48	10:10 A.M.	Poplar Creek influent to K-25	0	0.2	2.7 ± 0.8	
1 W	1-12-48	10:20 A.M.	Poplar Creek inlet N.E. K-303-8	4	-	-	

Distribution:
A. F. Huber
M. J. Costello, M.D.
A. [illegible] Dunlap (2)
G. T. E. Sheldon
J. Visner
Works Lab. Central File
File.

Supervisor D. L. Stoddard Date 1-23-48

309

Works Laboratory Department
Industrial Hygiene Section

Report no. _____

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	1- 2-48	9:15 A.M	Clinch River effluent from K-25	0	Less than 0.2	0.0 ± 0.5
24 D	1- 2-48	10:00 A.M	Water effluent from Water Purification Plant	0	-	0.2 ± 0.6
13 D	1- 5-48	9:15 A.M	Clinch River effluent from K-25	0	Less than 0.2	0.2 ± 0.7
24 D	1- 5-48	10:30 A.M	Water effluent from Water Purification Plant	0	-	-
13 D	1- 6-48	9:15 A.M	Clinch River effluent from K-25	0	Less than 0.2	0.1 ± 0.5
24 D	1- 7-48	11:00 A.M	Water effluent from Water Purification Plant	0	-	0.3 ± 0.5
13 D	1- 7- 48	10:30 A.M	Clinch River effluent from K-25	0	Less than 0.2	0.4 ± 0.6
24 D	1- 8-48	2:00 P.M	Water effluent from Water Purification Plant	0	-	0.8 ± 0.6
13 D	1- 8-48	1:00 P.M	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 0.6
24 D	1- 9-48	4:00 P.M	Water effluent from Water Purification Plant	0	-	0.6 ± 0.6
13 D	1- 9-48	9:00 A.M	Clinch River effluent from K-25	0	Less than 0.2	0.2 ± 0.5
24 D	1-12-48	10:50 A.M	Water effluent from Water Purification Plant	0	-	0.0 ± 0.5
13 D	1-12-48	9:50 A.M	Clinch River effluent from K-25	0	Less than 0.2	1.9 ± 0.7

Distribution:

310 A. F. Huber
K. J. Costello, M.D.
A. F. Dunlap (2)
Works Lab. Central File
G. [illegible] Sheldon
S. Visner

OK
W/b

Supervisor D. L. Stoddard Date 1-21-48

Works Laboratory Department
Industrial Hygiene Section

Report No. 30 (cont)

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. [illegible]	Fluoride Conc. [illegible]	Coverage per [illegible]	
24 D	12-31-47	10:40 A.M	Water effluent from Water Purification Plant	-	-		0.0
24 D	1- 2-48	10:00 A.M	"	-	-		1.1
24 D	1- 5-48	10:30 A.M	"	-	-		0.0
24 D	1- 7-48	11:00 A.M	"	-	-		1.3
24 D	1- 8-48	2:00 P.M	"	-	-		0.0
24 D	1- 9-48	4:00 P.M	"	-	-		0.0
24 D	1-12-48	10:50 A.M	"	-	-		0.4

Distribution: [illegible]
[illegible] Costello, [illegible]
[illegible] Dunlap (2)
[illegible] Sheldon
[illegible] Visner
Works Lab. Central File
File

OK
Supervisor D. L. Stoddard Date 1-21-48

311

G-2

SUMMARY OF WATER

SURVEY PROGRAM RESULTS

MARCH, 1948
APRIL, 1948

Classification changed to: UNCLASSIFIED
(level and category)

24 Jul 95
ADC or ADD signature (first reviewer) Date

Thomas W. Kelley 7/28/95
ADD signature (final reviewer) Date

312

Appendix (Part 1)
to Report of Health
Physics Activities
for March and April, 1948

APPENDIX

TABLE I

Water Survey Program
March, 1948
April

3/3

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.		Beta Counts per min. per 100 ml.
13 D	Clinch River, five miles downstream of last K-25 effluent	3-1-48	0	Less than 0.2	0.5	0.6	-
		3-2-48	0	Less than 0.2	0.2	0.5	-
		3-3-48	0	-	0.2	0.5	-
		3-4-48	0	0.3	0.2	0.6	-
		3-5-48	0	-	0.3	0.5	-
		3-8-48	0	-	0.1	0.5	-
		3-9-48	0	Less than 0.2	0.6	0.6	-
		3-10-48	0	-	0.5	0.6	-
		3-11-48	0	-	0.2	0.5	-
		3-12-48	0	-	0.2	0.5	-
		3-15-48	0	Less than 0.2	0.9	0.6	-
		3-16-48	0	-	1.2	0.6	-
		3-17-48	0	-	1.7	0.7	-
		3-18-48	0	Less than 0.2	0.4	0.6	-
		3-19-48	0	-	0.9	0.6	-
		3-22-48	0	-	0.4	0.6	0.2
		3-23-48	0	-	0.8	0.6	-
		3-24-48	0	Less than 0.2	0.8	0.6	-
		3-25-48	0	-	0.9	0.6	0.0
		3-26-48	0	-	0.4	0.5	-
		3-29-48	0	-	0.2	0.5	-
		3-30-48	0	Less than 0.2	0.2	0.5	-
		3-31-48	0	-	0.6	0.6	-
		4-1-48	0	-	0.1	0.5	-
		4-2-48	0	-	0.1	0.5	-
		4-5-48	0	Less than 0.2	0.4	0.6	-
		4-6-48	0	-	1.6	0.7	-
		4-7-48	0	-	0.2	0.5	-
		4-8-48	0	-	0.2	0.5	-
		4-9-48	0	-	0.3	0.5	-

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.		Beta Counts per min. per 100 ml.
		4-12-48	0	-	0.3	0.5	-
		4-13-48	0	-	0.5	0.6	-
		4-14-48	0	-	0.0	0.5	4.1
		4-15-48	0	Less than 0.2	0.6	0.6	-
13 W		4-20-48	0	Less than 0.2	0.3	0.5	-
		4-26-48	0	Less than 0.2	0.7	0.6	-
24 D	Effluent Water from K-25 Water Purification Plant	3-1-48	0	-	1.5	0.7	0.0
		3-2-48	0	-	0.1	0.5	0.2
		3-3-48	0	-	0.0	0.5	0.0
		3-4-48	0	-	0.2	0.5	1.9
		3-5-48	0	-	0.0	0.5	0.4
		3-8-48	0	-	1.4	0.7	0.0
		3-9-48	0	-	0.0	0.5	0.0
		3-10-48	0	-	0.1	0.5	0.0
		3-11-48	0	-	0.0	0.5	1.0
		3-12-48	0	-	0.0	0.5	0.0
		3-15-48	0	-	0.1	0.5	0.0
		3-16-48	0	-	0.0	0.5	0.0
		3-17-48	0	-	0.2	0.5	0.4
		3-18-48	0	-	0.0	0.5	0.1
		3-19-48	0	-	0.5	0.6	0.8
		3-22-48	0	-	0.5	0.6	2.31 2.37
		3-24-48	0	-	0.4	0.6	0.0
		3-25-48	0	-	0.4	0.5	0.0
		3-26-48	0	-	0.5	0.5	1.9
		3-29-48	0	-	0.1	0.5	0.0
		3-30-48	0	-	0.3	0.5	0.0
		3-31-48	0	-	0.1	0.5	0.0
		4-1-48	0	-	0.4	0.5	2.0
		4-2-48	0	-	0.7	0.5	0.8
		4-5-48	0	-	0.4	0.6	0.8
		4-6-48	0	-	0.2	0.5	0.0
		4-7-48	0	-	0.3	0.5	0.0
		4-8-48	0	-	0.8	0.6	0.0
		4-9-48	0	-	0.6	0.6	3.1

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.		Beta Counts per min. per 100 ml.
		4-12-48	0	-	0.2	0.5	2.6
		4-13-48	0	-	0.1	0.5	1.6
		4-14-48	0	-	0.1	0.5	1.1
		4-15-48	0	-	0.0	0.5	1.6
		4-16-48	0	-	0.0	0.5	0.0
		4-19-48	0	-	0.0	0.5	0.0
		4-20-48	0	-	0.0	0.5	0.0
		4-21-48	0	-	0.3	0.5	3.8
		4-22-48	0	-	0.0	0.5	0.4
		4-23-48	0	Less than 0.2	0.1	0.5	0.0
		4-26-48	0	Less than 0.2	0.0	0.5	2.7
		4-27-48	0	-	0.4	0.5	4.1
		4-28-48	0	-	0.2	0.5	0.0
		4-29-48	0	-	0.0	0.5	0.0
		4-30-48	0	-	0.5	0.5	1.8
12 W	Clinch River Influent to K-25	3-1-48	0	Less than 0.2	0.6	0.6	-
		3-8-48	0	-	0.6	0.6	-
		3-15-48	3	-	2.3	0.7	-
		3-22-48	0	-	0.6	0.6	-
		4-1-48	0	Less than 0.2	0.2	0.5	-
		4-5-48	0	-	0.0	0.5	-
		4-12-48	0	-	0.1	0.5	-
16 W	K-25 Drinking Water at Guard Headquarters, K-310-3, Administration Bldg., and K-413	3-4-48	0	Less than 0.2	0.1	0.5	-
		3-8-48	0	Less than 0.2	0.1	0.5	-
		3-17-48	0	Less than 0.2	0.6	0.6	-
		3-24-48	0	Less than 0.2	0.4	0.5	-
16 W	K-25 Drinking Water at K-1008-D, K-25, & K-1131	4-1-48	0	Less than 0.2	0.2	0.5	-
		4-6-48	0	Less than 0.2	0.2	0.5	-
		4-12-48	0	Less than 0.2	0.2	0.5	-
		4-20-48	0	Less than 0.2	0.1	0.5	-
		4-27-48	0	Less than 0.2	0.2	0.5	-

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Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts Per min. per 100 ml.
10 W	Clinch River immediately below S-50 sewer outfall	3-2-48	0	-	0.1 0.5	-
		3-9-48	0	-	0.1 0.5	-
		3-17-48	0	-	0.3 0.5	-
		3-24-48	0	-	0.2 0.5	-
		4-1-48	0	-	1.4 0.7	-
		4-5-48	0	-	0.5 0.5	-
		4-12-48	0	-	0.2 0.5	-
		4-20-48	0	Less than 0.2	0.2 0.5	-
		4-27-48	0	0.2	0.2 0.5	-
10 WE		4-15-48	Water level above normal - could not sample			
		4-22-48				
		4-30-48				
21-W	S-50 Sewer outfall	3-2-48	40	-	-	-
		3-9-48	1	-	-	-
		3-17-48	23	-	-	-
		3-24-48	10	-	-	-
		4-1-48	11	-	-	-
		4-5-48	33	-	-	-
		4-12-48	10	-	-	-
		4-23-48	No sample - high water			
		4-30-48	No sample - high water			
14 W	Sewage disposal plant influent	3-1-48	0	-	-	-
		3-8-48	0	-	-	-
		3-15-48	0	-	-	-
		3-23-48	0	-	-	-
		4-2-48	0	-	-	-
		4-6-48	0	-	-	-
		4-13-48	0	-	-	-
		4-20-48	0	-	-	-
		4-27-48	0	-	-	-
15 W	Sewage disposal plant effluent	3-1-48	0	-	-	-
		3-8-48	0	-	-	-
		3-15-48	0	-	-	-
		This sample discontinued to facilitate upstream testing.				

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Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts per min. per 100 ml.
15 W	Sewage disposal plant effluent	4-20-48	0	-	- -	-
		4-27-48	0	-	-	-
6 W	K-27 Drainage into Poplar Creek	3-2-48	0	-	-	-
		3-8-48	0	-	-	-
		3-15-48	0	-	-	-
		3-22-48	0	-	-	-
		3-30-48	0	-	-	-
		4-6-48	1	-	-	-
		4-12-48	0	-	-	-
		4-22-48	0	-	-	-
		4-27-48	0	-	-	-
11 W	Poplar Creek influent to K-25	3-1-48	0	Less than 0.2	0.3 0.5	-
		3-8-48	0	-	0.5 0.6	-
		3-15-48	0	-	0.2 0.5	-
		3-22-48	0	-	0.5 0.5	-
		4-1-48	0	Less than 0.2	0.2 0.5	-
		4-5-48	0	-	0.0 0.5	-
		4-12-48	0	-	0.8 0.6	-
		4-19-48	0	-	0.1 0.5	0.0
		4-26-48	0	-	0.4 0.5	0.0
17 W	Recirculating water K-25	3-1-48	0	-	0.2 0.5	-
	K-27	3-8-48	0	-	0.3 0.5	-
	K-25	3-15-48	0	-	0.5 0.6	-
	K-27	3-22-48	0	-	0.5 0.6	-
	K-25	4-1-48	0	-	0.3 0.5	-
	K-27	4-5-48	0	-	0.4 0.6	-
	K-25	4-12-48	0	-	0.0 0.5	-
22 W	Poplar Creek immediately before junction with Clinch River	3-2-48	0	-	0.1 0.5	-
		3-9-48	0	-	0.8 0.6	-
		3-15-48	0	-	0.2 0.5	-
		3-22-48	0	-	0.8 0.6	-

318

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts per min. per 100 ml.
22 W	Poplar Creek immediately before junction with Clinch River	4-1-48	0	-	0.3 0.5	-
		4-5-48	0	-	0.0 0.5	-
		4-12-48	0	-	0.1 0.5	-
		4-20-48	0	-	0.5 0.6	-
		4-28-48	0	-	0.0 0.5	-
1 W	Poplar Creek inlet NE of K-303-8	3-1-48	0	-	-	-
		3-8-48	6	-	-	-
		3-15-48	0	-	0.1 0.5	-
		3-22-48	1	-	-	-
		4-1-48	3	-	-	-
		4-6-48	2	-	-	-
		4-12-48	0	-	-	-
		4-19-48	0	-	-	-
		4-26-48	0	-	-	-
20 W	Cafeteria Cooking Water	3-2-48	0	Less than 0.2	0.2 0.5	-
		3-8-48	0	Less than 0.2	0.3 0.5	-
		3-17-48	0	Less than 0.2	0.3 0.5	-
		3-24-48	0	Less than 0.2	0.7 0.6	-
		4-2-48	0	Less than 0.2	0.1 0.5	-
		4-7-48	0	Less than 0.2	0.6 0.6	-
		4-12-48	0	Less than 0.2	0.4 0.6	-
		4-20-48	0	Less than 0.2	0.0 0.5	-
		4-27-48	0	Less than 0.2	0.0 0.5	
2 M	Drainage from Pond SW of Garage Area into Poplar Creek	3-8-48	0	-	-	-
		4-7-48	1	-	-	-
3 M	Drainage from Process Bldgs. into Poplar Creek North of K-303-8	3-1-48	0	-	-	-
		4-5-48	0	-	-	-

319

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts per min. per 100 ml.
4 M	Drainage from Process bldgs. into Poplar Creek opposite K-305-2	3-18-48 4-13-48	0 0	- -	- -	- -
5 M	Drainage from Process bldgs. into Poplar Creek opposite K-306-4	3-18-48 4-13-48	0 4	- -	- -	- -
8 M	Drainage from Hot Scrap yard into bay NW of Gallaher Gate	3-10-48 4-1-48	0 0	- Less than 0.2	1.4 0.7 0.4 0.5	- -
9 M	Clinch River W of Jones Scrap Yard	3-10-48 4-1-48	0 0	- -	- -	- -
23 M	Ground Water adjacent to K-1239 Sludge Pit	3-19-48 4-26-48	0 0	- -	- -	- -
18 M	Powerhouse Water Discharge	3-8-48 4-1-48	0 0	- -	- -	- -
19 M	Powerhouse Water Intake	3-8-48 4-1-48	0 0	- -	- -	- -
25 M	Clinch River above Elza Gate	3-1-48 4-2-48	0 0	Less than 0.2 -	0.4 0.5 0.1 0.5	- -
26 M & 27 M	Drainage from Laboratories A, B, C, & D	3-19-48 4-22-48	2 0	- -	1.0 0.6 0.5 0.6	- -
28 M	To check on A.E.C. Hot Scrap Yard and burial yard, Bear Creek at Oak Ridge Turnpike	3-19-48 3-24-48	0 0	- -	0.3 0.6 0.7 0.6	- -

320

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts per min. per 100 ml.
	To check on positive results at point 1-W (Poplar Creek inlet draining parts of Process Stores and K-1300 Areas)					
1 W	Inlet sample proper	3-22-48	1	-	-	-
1 WB	Upstream of all Process and Stores Area Drainage	3-22-48	2	-	-	-
1 WA	Upstream of all Process, Stores and K-1300 Area Drainage	3-22-48	0	-	-	-
	To check on positive results at K-27 area drainage point.					
6 W	K-27 Area Drainage	3-22-48	0	-	-	-
6 WB	Drainage from K-131 only	3-22-48	0	-	-	-
6 WA	Drainage from K-631 only	3-22-48	0	-	-	-
6 W	K-27 Drainage	3-30-48	0	-	-	-
6 WB	K-131 Drainage	3-30-48	0	-	-	-
6 WA	K-631 Drainage	3-30-48	Drain line found dry.			
	To check on positive results at K-25 Sewage Disposal Plant influent					
14 W	Sewage Disposal Plant Influent	3-23-48	0	-	-	-

Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts per min. per 100 ml.
14 WC	Sewage Mains upstream of K-27 Process Area installations	3-23-48	5	-	-	-
14 WB	Sewage Mains upstream of K-25 Process Area installations	3-23-48	0	-	-	-
14 WA	Sewage Mains upstream of Laboratory, Conditioning & Stores area (i.e. drainage from K-1300,1405 and 1037 bldgs.)	3-23-48	0	-	-	-
13 E	Mud samples to check on possibility of precipitation River bottom mud under 13-D sample point in Clinch River five miles downstream of last K-25 effluent	3-24-48	None detected			
10 E	River bottom mud under 10-W sample point immediately below S-50 sewer outfall	3-25-48	None detected			
15 E	River bottom mud under 15-W sample point, Sewage disposal plant effluent	3-25-48	None detected			
10 WE	Mud sample at 10W point	4-22,48 4-30-48	River level too high to permit sampling.			

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Plot Plan Reference Number	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per min. per 100 ml.	Beta Counts per min. per 100 ml.
	To check on A.E.C. Hot Scrap and Burial Yard					
11 WC	Bear Creek at Oak Ridge Turnpike	4-1-48	0	-	0.2 0.5	-
		4-5-48	0	-	0.0 0.5	-
		4-12-48	0	-	-	-

WATER ANALYSIS SUMMARY

December 1948

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	pH	DISINTEGRATIONS PER MINUTE PER 100 ML ALPHA	BETA
24-A	12-1	Water Purification Plant Effluent	0	—	—	0.2 ± 1.1	27 ± 8
	12-3		0	—	—	0.0 ± 1.1	26 ± 8
	12-5		0	<0.2	—	0.0 ± 1.1	37 ± 8
	12-7		0	—	—	0.3 ± 1.1	37 ± 8
	12-9		0	—	—	0.0 ± 1.1	33 ± 8
	12-11		0	—	—	0.0 ± 1.1	9 ± 8
	12-13		0	<0.2	—	0.0 ± 1.1	20 ± 8
	12-15		0	—	—	0.5 ± 1.1	9 ± 8
	12-17		0	—	—	0.0 ± 1.1	35 ± 21
	12-19		0	—	—	0.1 ± 1.1	38 ± 21
	12-21		0	—	—	0.3 ± 1.1	52 ± 21
	12-23		0	<0.2	—	0.5 ± 1.1	25 ± 21
	12-25	Average 27 34 High	0	—	—	0.1 ± 1.1	23 ± 21
	12-27		0	<0.2	—	0.0 ± 1.1	35 ± 21
	12-29		0	—	—	0.1 ± 1.1	15 ± 21
	12-31		0	—	—	0.2 ± 1.1	Insufficient Sample
3-W	12-6	Clinch River five miles downstream	0	<0.2	—	0.1 ± 1.1	—
	12-13	of last K-25 effluent	0	<0.2	—	0.0 ± 1.1	—
	12-20		0	0.3	7.8	0.0 ± 1.1	60 ± 24
	12-27		0	<0.2	7.9	0.1 ± 1.1	12 ± 21

mple No.	Date	Location	PPB Uranium	PPM Fluoride	pH	DISINTEGRATIONS PER MINUTE PER 100 ML ALPHA	BETA
'6-W	12-6	Drinking water at K-1003	0	<0.2	—	0.0 ± 1.1	—
	12-13	at K-1401	0	<0.2	7.6	0.2 ± 1.1	14 ± 8
	12-20	at K-802	0	<0.2	7.2	0.1 ± 1.1	40 ± 21
	12-28		0	<0.2	7.8	0.4 ± 1.1	20 ± 21
0-W	12-6	Clinch river below S-50 sewer outfall	0	<0.2	—	0.0 ± 1.1	—
	12-13		0	<0.2	—	0.0 ± 1.1	—
	12-20		0	<0.2	—	0.2 ± 1.1	—
	12-27		0	<0.2	—	0.0 ± 1.1	—
C W	12-1	Clinch River upstream of K-25	0	<0.2	7.7	0.0 ± 1.1	23 ± 11
	12-7		0	<0.2	7.6	0.1 ± 1.1	169 ± 8
	12-13		0	<0.2	7.9	0.3 ± 1.1	18 ± 8
	12-20		0	<0.2	7.8	0.1 ± 1.1	168 ± 67
	12-28		0	<0.2	8.0	0.2 ± 1.1	35 ± 21
4-W	12-6	Sewage Disposal Plant influent	3	—	—	—	—
	12-13		0	—	—	—	—
	12-20		0	—	—	—	—
	12-27		0	—	—	—	—
6-W	12-6	K-27 drainage to Poplar Creek	0	—	—	—	—
	12-13		10	—	—	—	—
	12-20		0	—	—	—	—
	12-27		1	—	—	—	—
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Sample No	Date	Location	PPB Uranium	PPM Fluoride	pH	Disintegrations per minute per 100 ml ALPHA	BETA
1-W	12-6	Poplar Creek influent to K-25	0	—	7.4	0.1 ± 1.1	15 ± 8
	12-13		0	—	7.7	0.2 ± 1.1	0 ± 8
	12-20		0	—	7.0	0.2 ± 1.1	0 ± 21
	12-27		0	—	7.5	0.2 ± 1.1	8 ± 21
2-W	12-6	Poplar Creek immediately before	0	—	8.0	0.2 ± 1.1	0 ± 11
	12-13	junction with Clinch River	0	—	7.7	0.6 ± 1.1	5 ± 8
	12-20		0	—	7.3	0.4 ± 1.1	53 ± 21
	12-27		0	—	7.5	0.5 ± 1.1	9 ± 21
3	12-13	Poplar Creek inlet NE of K-303-5	0	—	—	0.9 ± 1.1	—
	12-27		2	—	—	29 ± 1.1	—
4-W	12-6	Pitch at W end of Holding Pond	16	—	—	8.8 ± 1.1	—
	12-20		10	—	—	18.2 ± 1.1	—
10-W	12-6	Cafeteria cooling water	0	< 0.2	—	0.0 ± 1.1	—
	12-13		0	—	7.7	0.1 ± 1.1	18 ± 8
	12-20		0	—	7.3	0.1 ± 1.1	59 ± 24
	12-28		0	—	7.7	0.2 ± 1.1	9 ± 21
3-M	12-8	Drainage from Hot Scrap Yard	0	—	—	0.4 ± 1.1	—
-M	12-8	Clinch River West of Jones Scrap Yard	0	—	—	—	—
1-K-25	12-21	Recirculating Water K-25	0	—	—	0.2 ± 1.1	325 —

Sample No.	Date	Location	PPB Uranium	P.P.M. Fluoride	PH Fluoride	DISINTEGRATIONS PER MIN PER 100 MG ALPHA	BETA
7-Y-27	12-21	Recirculating Water K-27	0	—	—	0.5 ± 1.1	—
5-M	12-21	Sewage Disposal Plant Effluent	0	—	—	—	—
21-M	12-8	S-50 Sewer outfall	5	—	—	—	—
23-M	12-21	Ground water at Sludge Pit	0	—	—	—	—
25-Y	12-8	Clinch river above Elza	0	<0.2	—	0.0 ± 1.1	—
6, 7M	12-21	Drainage from labs A, B, C & D.		—	—	4.9 ± 1.1	—
28-M		Bear Creek at O.R. Turnpike					
13-E	12-15	Bottom Mud five miles down Clinch	290	59.4	—	3.3 ± 0.4	—
10-E	12-15	Bottom mud below S-50 Sewer outfall	440	95	—	2.5 ± 0.3	—
5-M-E		Sewage disposal plant sludge (each batch)					
4-M-E	12-15	Sanitary Water Plant sludge from set basins	875	—	—	13.9 ± 2.7	13,674
		—— " ——					
Covering		reports Nos. 136, 137,	138,	139,	140,	141, 142,	143,

WATER ANALYSIS SUMMARY

November 1948

Sample No	Date	Location	PPB Uranium	PPM Fluoride	Disintegrations per minute per 100 ml ALPHA	BETA
24-H	11-3	Water Purification Plant Effluent	0	—	0.5 ± 1.1	19 ± 8
	11-5		0	<0.2	0.2 ± 1.1	27 ± 8
	11-7		0	<0.2	0.2 ± 1.1	66 ± 8
	11-9		0	—	0.2 ± 1.1	141 ± 8
	11-11		0	—	0.2 ± 1.1	122 ± 8
	11-13		0	—	0.3 ± 1.1	64 ± 8
	11-15		0	—	0.0 ± 1.1	18 ± 8
	11-17		0	<0.2	0.1 ± 1.1	30 ± 8
	11-19		0	—	0.3 ± 1.1	27 ± 8
	11-21		0	<0.2	0.3 ± 1.1	426 ± 8
	11-23		0	—	0.0 ± 1.1	103 ± 8
	11-25		0	—	0.0 ± 1.1	66 ± 8
	11-27		0	—	0.0 ± 1.1	37 ± 8
	11-29		0	<0.2	0.1 ± 1.1	93 ± 8
	~~11-30~~					
13-W	11-1	Clinch River five miles downstream	0	<0.2	0.4 ± 1.1	—
	11-8	of last K-25 effluent	1	<0.2	0.6 ± 1.1	—
	11-16		0	<0.2	0.1 ± 1.1	—
	11-22		0	0.2	0.3 ± 1.1	—
	11-29		0	0.2	0.3 ± 1.1	—
E	11-10	Bottom mud at above point	160	42.6	61 ± 1.0	—

ple No.	Date	Location	PPB Uranium	PPM Fluorine	DISINTEGRATIONS PER MIN. PER 100 M— ALPHA	BETA
'6-W	11-1	Drinking water at K-1030	*5/ 0	<0.2	0.5 ± 1.1	—
	11-10	" " at K-1131	0	<0.2	0.2 ± 1.1	—
	11-18	" " at K-402-1	0	<0.2	0.1 ± 1.1	—
	11-22	" " at K-413	0	<0.2	0.3 ± 1.1	—
	11-29	" " at K-1030	0	<0.2	0.1 ± 1.1	—
)-W	11-1	Clinch River immediately below	0	<0.2	0.2 ± 1.1	—
	11-10	S-50 sewer outfall.	*1/ 0	<0.2	0.0 ± 1.1	—
	11-17		0	<0.2	0.1 ± 1.1	—
	11-22		0	<0.2	0.4 ± 1.1	—
	11-29		0	<0.2	0.5 ± 1.1	—
-W	11-1	Sewage disposal plant Influent	0	—	—	—
	11-10		*½/ 2	—	—	—
	11-17		1	—	—	—
	11-22		1	—	—	—
	11-29		0	—	—	—
6-W	11-3	K-27 drainage into Poplar Creek	*10/ 0	—	—	—
	11-10		*½/ 2	—	—	—
	11-19		1/4/ 2	—	—	—
	11-22		5	—	—	—
	11-29		10/ 1	—	—	328

* — [illegible] AFTER RAIN

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	DISINTEGRATIONS PER MIN PER 100 ML ALPHA	BETA
11-W	11-1	Poplar Creek influent to K-25	0	—	0.7 ± 1.1	4 ± 8
	11-10		*¼/ 0	—	0.1 ± 1.1	12 ± 11
	11-17		0	—	0.1 ± 1.1	11 ± 11
	11-22		0	—	0.0 ± 1.1	1 ± 8
	11-29		0	—	0.2 ± 1.1	0 ± 8
22-W	11-1	Poplar Creek immediately before	0	—	0.5 ± 1.1	—
	11-10	junction with Clinch river	*1/ 0	—	0.4 ± 1.1	—
	11-17		0	—	0.0 ± 1.1	—
	11-22		0	—	0.2 ± 1.1	—
	11-29		0	—	0.4 ± 1.1	—
-W	11-3	Poplar Creek inlet NE of K-303-5	*10/ 3	—	—	—
	11-10		*¼/ 5	—	—	—
	11-19		¼/ 0	—	—	—
	11-22		0	—	—	—
	11-29		10/ 0	—	—	—
9-W	11-3	Ditch at West end of holding pond	*10/ 8	—	8.8 ± 1.1	—
	11-10		*¼/ 5	—	4.2 ± 1.1	—
	11-19		¼/ 5	—	3.8 ± 1.1	—
	11-22		6/ 6	—	8.7 ± 1.1	—
	11-29		10/ 8	—	—	—
						329

* [illegible] METHOD PRIN

Sample No	Date	Location	P.P.B. Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 M — ALPHA	BETA
20-W	11-1	Cafeteria cooking water	0	<0.2	0.4 ± 1.1	—
	11-10		0	<0.2	0.0 ± 1.1	—
	11-18		0	<0.2	0.0 ± 1.1	—
	11-22		0	<0.2	0.1 ± 1.1	—
	11-29		0	<0.2	0.2 ± 1.1	—
5-M	11-3	Drainage from Hot Scrap Yard	10/ 0	—	0.5 ± 1.1	—
9-M	11-10	Clinch River West of Jones Scrap Yard	1/2 0	—	0.1 ± 1.1	—
[illegible]-M-25	11-17	Recirculating Water K-25	0	—	0.3 ± 1.1	—
17-M-27	11-17	Recirculating Water K-27	0	—	0.4 ± 1.1	—
21-M	11-3	S-50 Sewer Outfall	10/ 8	—	—	—
28-M	11-3	Bear Creek at O.R. turnpike	10/ 1	—	0.8 ± 1.1	8 ± 11
15-ME		Sewage Disposal Plant Sludge				
24-ME	11-10	Sanitary Water Plant Set Basin Sludge	10,000	—	39.8 ± 6.8	3058
[illegible]-MA	11-2	Composite from Hot Scrap Yard drain area soil	440	—	—	—
						330
Covering	Reports	No. — 126, 127, 128, 129, 130, 131, 132, 133, 134, 135				

* — [illegible] after rain

WATER ANALYSIS SUMMARY

October 1948

Sample No	Date	Location	PPB Uranium	PPM Fluoride	Counts per minute per 100 ml. Alpha	Beta
24-A	10-1	Water Purification Plant effluent	0	—	0.2 ± 1.1	17 ± 8
	10-3		0	—	0.0 ± 1.1	4 ± 8
	10-5		0	0.2	0.0 ± 1.1	25 ± 8
	10-7		0	—	0.4 ± 1.1	5 ± 8
	10-9		0	—	0.0 ± 1.1	5 ± 8
	10-11		0	<0.2	0.0 ± 1.1	26 ± 8
	10-13		0	—	0.2 ± 1.1	3 ± 8
	10-15		0	—	0.2 ± 1.1	15 ± 8
	10-17		0	—	0.2 ± 1.1	2 ± 8
	10-19		0	<0.2	0.1 ± 1.1	3 ± 8
	10-21		0	—	0.1 ± 1.1	11 ± 8
	10-23		0	—	0.0 ± 1.1	6 ± 8
	10-25		0	<0.2	0.0 ± 1.1	23 ± 8
	10-27		0	—	0.0 ± 1.1	0 ± 8
	10-29		0	—	0.0 ± 1.1	8 ± 8
	10-31		0	—	0.2 ± 1.1	8 ± 8
13-W	10-4	Clinch River five miles downstream	0	<0.2	0.0 ± 1.1	—
	10-13	of last K-25 effluent.	0	<0.2	0.0 ± 1.1	—
	10-18		0	<0.2	0.0 ± 1.1	—
	10-25		0	<0.2	0.2 ± 1.1	—
13-E	10-14	Bottom mud at above point	0	664	9.0 ± 1.5	—

2

Sample No	Date	Location	PPB Uranium	PPM Fluoride	Counts per min per liter ml ALPHA	BETA
16-W	10-5	Drinking water at K-1034	0	<0.2	0.5 ± 1.1	—
	10-13	K-1028-18	0	<0.2	0.1 ± 1.1	—
	10-18	K-631	0	<0.2	0.0 ± 1.1	—
	10-25	K-1401	0	<0.2	0.2 ± 1.6	—
10-W	10-4	Clinch River immediately below	0	<0.2	0.1 ± 1.1	—
	10-13	S-3 sewer outfall.	0	<0.2	0.1 ± 1.1	—
	10-18		0	<0.2	0.0 ± 1.1	—
	10-25		0	<0.2	0.1 ± 1.1	—
1 E		Bottom mud at above point.				
14-W	10-4	Sewage disposal plant influent	1	—	—	—
	10-11		6	—	—	—
	10-18		2	—	—	—
	10-25		2	—	—	—
6-W	10-4	K-27 Drainage into Poplar Creek	2	—	—	—
	10-11		2	—	—	—
	10-18		0	—	—	—
	10-25		1	—	—	—

(3)

Sample No	Date	Location	PPB Uranium	PPM Fluoride	Counts per minute per 100 ML Alpha	Beta
11-W	10-4	Poplar Creek inflent to K-25	0	—	0.3 ± 1.6	24 ± 5
	10-11		0	—	0.0 ± 1.1	8 ± 8
	10-18		0	—	0.1 ± 1.1	0 ± 11
	10-25		0	—	0.1 ± 1.1	0 ± 11
22-W	10-4	Poplar Creek immediately before	0	—	0.2 ± 1.1	—
	10-11	junction with Clinch River	0	—	0.0 ± 1.1	—
	10-18		0	—	0.0 ± 1.1	—
	10-25		0	—	0.3 ± 1.1	—
[illegible] W	10-4	Poplar Creek inlet NE of K-303-F	3	—	—	—
	10-11		2	—	—	—
	10-18		0	—	—	—
	10-25		5	—	—	—
29-W	10-4	Ditch at W end of holding pond	5	—	5.1 ± 1.1	—
	10-11		5	—	23.1 ± 1.1	—
	10-18		4	—	3.3 ± 1.1	—
	10-25		5	—	8.8 ± 1.1	—
20-W	10-5	Cafeteria cooking water	0	<0.2	0.0 ± 1.1	—
	10-13		0	<0.2	0.0 ± 1.1	—
	10-18		0	<0.2	0.0 ± 1.1	—
	10-25		0	<0.2	0.5 ± 1.1	—

Sample No	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
8-M	10-18	Drainage from Hot Scrap Yard	0	—	0.0 ± 1.1	—
7-M	10-18	Clinch River West of Jones Scrap Yard	0	—	0.0 ± 1.1	—
7-M-25	10-27	Recirculating water K-25	2	~~0.9~~	0.7 ± 1.1	—
7-M-27	10-27	Recirculating water K-27	0	~~0.1 ± 1.1~~	0.7 ± 1.1	—
21-M	10-18	S-50 Sewer outfall	50	—	—	—
28-M	10-4	Bear Creek at U.R. turnpike	0	—	0.6 ± 1.6	1 ± 8
-M-E		Sewage Disposal Plant Sludge	No sample this month			
4-M-E	10-14	Sanitary Water Plant Set Basin sludge	2500	—	31.0 ± 5.3	[illegible]41
		Covering Reports No.				
		119				
		120				
		121				
		122				
		123				
		124				
		125				

WATER SURVEY PROGRAM SUMMARY

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SAMPLE NUMBER	LOCATION	ANALYSIS RESULTS JULY THRU SEPTEMBER: TOTAL SAMPLES	LESS THAN FIVE PPB	FIVE THRU TWENTY PPB	OVER TWENTY PPB	FREQUENCY AND ANALYSIS: PRESENT	LAB. DIV. PROPOSED	HEALTH PHYS. PROPOSAL	REMARKS
24-D	Effluent from K-25 Water Purification Plant	58	58	0	0	~~Every other day — inc. week-ends~~ Daily, not inc. Sat., Sunday U α β (F once a week)	Every other day, including Sat. and Sun. U α β (F once a week	Every other day — plus continuous throughout beta monitor U α β F	Fluoride & alpha consistently low. Several unexplained relatively high but below tolerance beta counts.
13-W	Clinch River five miles downstream of last K-25 effluent	13	13	0	0	Weekly U α F (mud once a month)	Weekly U α β pH and F weekly mud once a month	Weekly U α β F pH	Fluoride negative, alpha remained at background.
16-W	Drinking water spot check	13	13	0	0	Weekly U α F	Weekly U α β F pH	Weekly U α β F pH	Fluoride results negative, alpha counts at background
0-W	Clinch River immediately below S-50 Sewer out fall	13	13	0	0	Weekly U F α mud once a month	Discontinue		Fluoride negative alpha counts at background.
-W	Clinch River upstream of K-25	—	—	—	—	None	Weekly U F α β pH	Weekly U F α β pH	
-W	Sewage Disposal Plant Influent	13	13	0	0	Weekly U only	Discontinue		
-W	K-27 Ground drainage into Poplar Creek	13	12	1	0	Weekly U only	Discontinue		
-W	Poplar Creek Influent to K-25	13	13	0	0	Weekly U α β	Weekly U α β pH	Weekly U α β pH	Alpha and beta at background
-W	Poplar Creek [illegible]	13	13	0	[illegible]	Weekly U α	~~Discontinue~~ [illegible]		Alpha counts at background

SAMPLE NUMBER	LOCATION	ANALYSIS RESULTS JULY THRU SEPTEMBER: TOTAL SAMPLES	LESS THAN FIVE PPB	FIVE THRU TWENTY PPB	OVER TWENTY PPB	FREQUENCY AND ANALYSIS: PRESENT	PROPOSED MODIFICATIONS	REMARKS
-W	Poplar Creek Inlet NE of K-303-8	13	13	0	0	Weekly Uranium only	Discontinue	This point carries entire ground drainage from stores, conditioning, decontamination, etc in NE K-25
29-W	Ditch at W end of holding pond	9	8	1	0	Weekly Uranium & alpha	Discontinue	Temporary sample to check new decontamination installation. Uranium inconclusive positive, alpha at twice background
20-W	Cafeteria cooking water	13	13	0	0	Weekly U, F, α.	Weekly U, β, α, pH.	Fluoride negative alpha at bkgd.
21-M	S-50 Sewer outfall	2	1	1	0	Monthly U only	Discontinue	
15-M	Sewage Disposal Plant Effluent	2	2	0	0	Monthly U only	Discontinue	
17-M-25	K-25 Recirculating Water	2	2	0	0	Monthly U, α.	Discontinue	
1-M-27	K-27 Recirculating Water	2	2	0	0	Monthly U, α	Discontinue	
3-M	Process Drainage into Poplar Creek N of K-303-9	2	2	0	0	Monthly U only.	Discontinue	
4-M	Process Drainage into Poplar Creek W of K-305-2	2	2	0	0	Monthly U only	Discontinue	
5-M	Process Drainage into Poplar Creek W of K-306-2	2	2	0	0	Monthly U. only	Discontinue	
8-M	Hot Scrap Yard drainage into Clinch at inlet NW of Gallaher Gate	2	2	0	0	Monthly U alpha	Discontinue	Alpha at background level
9-M	Clinch River West of Jones Scrap Yard.	2	2	0	0	Monthly U only	Discontinue	

SAMPLE NUMBER	LOCATION	ANALYSIS RESULTS JULY THRU SEPTEMBER TOTAL SAMPLES	LESS THAN FIVE PPB	FIVE THRU TWENTY PPB	OVER TWENTY PPB	FREQUENCY AND ANALYSIS PRESENT	PROPOSED MODIFICATIONS	REMARKS
21-M	S-50 Sewer Outfall	2	1	1	0	Monthly U only	Discontinue	
23-M	Ground Water at Sludge Pit	2	2	0	0	Monthly U only	Monthly U only	
25-M	Clinch River above Elza	2	2	0	0	Monthly U, α, F.	Discontinue	
26 & 27-M	Drainage from labs A, B, C & D.	2	2	0	0	Monthly U, β, α.	Discontinue	
28-M	Crossing of Bear Creek at Oak Ridge Turnpike	2	2	0	0	Monthly U, α, β.	Discontinue	Requested by U.S.A.E.C.
3-E	Bottom mud from 13-W Sample point Clinch River five miles downstream of K-25	2	0	0	2	Monthly U F α.	Monthly U, F, α.	Alpha counts at background level Fluoride approx fifty P.P.M.
0-E	Bottom mud at 10-W Sample point Clinch river below S-50 Sewer outfall	2	0	0	2	Monthly U, F, α.	Monthly U, F, α	Alpha counts were 0.0 and 31 respectively Fluoride approx. fifty P.P.M.
5-M-E	Sewage Disposal Plant Sludge	2	0	0	2	Monthly U, α	Monthly U, α.	Uranium average 45 PPM, alpha 347 c/m per gram dry.
4-M-E	Sanitary Water Plant sludge from Settling Basins	1	0	0	1	Monthly U, α, β.	Monthly U, α, β.	Uranium 5 PPM α 43 c/m/gm β 2098 c/m/gm based on dry weigh

WATER ANALYSIS SUMMARY

September 1948

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	Counts per minute per 100 ml Alpha	Beta
24-A	9-1	Water Purification Plant	0	<0.2	0.0 ± 1.1	17 ± 8
	9-3	Effluent	0	—	0.0 ± 1.1	8 ± 8
	9-5		0	—	0.0 ± 1.1	3 ± 8
	9-7		0	<0.2	0.0 ± 1.1	0 ± 8
	9-9		0	—	0.2 ± 1.1	5 ± 8
	9-11		0	—	0.0 ± 1.1	26 ± 8
	9-13		0	<0.2	0.0 ± 1.1	13 ± 8
	9-15		0	—	0.0 ± 1.1	46 ± 8
	9-17		0	—	0.1 ± 1.1	18 ± 8
	9-19		0	—	0.0 ± 1.1	14 ± 8
	9-21		0	<0.2	0.3 ± 1.1	14 ± [illegible]
	9-23		0	—	0.0 ± 1.1	19 ± 8
	9-25		0	—	0.0 ± 1.1	11 ± 8
	9-27		0	<0.2	0.0 ± 1.1	19 ± 8
	9-29		0	—	0.2 ± 1.1	23 ± 8
13-W	9-1	Clinch River five miles downstream	0	<0.2	0.0 ± 1.1	—
	9-7	of last K-25 effluent	0	<0.2	0.0 ± 1.1	—
	9-13		0	<0.2	0.1 ± 1.1	—
	9-20		0	<0.2	0.5 ± 1.1	—
	9-27		0	<0.2	0.3 ± 1.1	—
13-E	9-8	Bottom mud at above point	5000	45.8	4.3 ± 0.7	—

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	Counts per minute per 100 ml Alpha	Beta
16-W	9-1	Drinking water at K-1049	0	<0.2	0.0 ± 1.1	—
	9-7	" " " K-1004-D	0	<0.2	0.3 ± 1.1	—
	9-13	" " " K-131	0	<0.2	0.1 ± 1.1	—
	9-20	" " " K-131	0	<0.2	0.1 ± 1.1	—
	9-27	" " " K-1032	0	<0.2	0.3 ± 1.1	—
0-W	9-1	Clinch River immediately below	0	<0.2	0.0 ± 1.1	—
	9-7	S-50 sewer outfall	0	<0.2	0.1 ± 1.1	—
	9-14		0	<0.2	0.2 ± 1.1	—
	9-20		0	<0.2	0.0 ± 1.1	—
	9-27		0	<0.2	0.3 ± 1.1	—
~~10-E~~		~~Bottom mud at above point~~				
14-W	9-1	Sewage disposal plant influent	0	—	—	—
	9-7		2	—	—	—
	9-13		0	—	—	—
	9-20		1	—	—	—
	9-27		3	—	—	—
6-W	9-1	K-27 drainage into Poplar Creek	2	—	—	—
	9-7		4	—	—	—
	9-13		0	—	—	—
	9-20		1	—	—	—
	9-27		0	—	—	—

(3)

Sample No	Date	Location	PPB Uranium	PPM Fluoride	Counts per minute per 100 ml Alpha	Beta
11-W	9-1	Poplar Creek influent to K-25	0	—	0.2 ± 1.1	1 ± 11
	9-7		1	—	0.1 ± 1.1	5 ± 11
	9-13		0	—	0.3 ± 1.1	6 ± 8
	9-20		0	—	0.3 ± 1.1	6 ± 11
	9-27		0	—	0.3 ± 1.1	1 ± 8.
22-W	9-1	Poplar Creek immediately before	1	—	0.0 ± 1.1	—
	9-7	junction with Clinch River	0	—	0.0 ± 1.1	—
	9-14		0	—	0.4 ± 1.1	—
	9-20		0	—	0.0 ± 1.1	—
	9-27		0	—	0.4 ± 1.1	—
1-W	9-1	Poplar Creek inlet NE of K-3038	0	—	—	—
	9-7		0	—	—	—
	9-13		1	—	—	—
	9-20		2	—	—	—
	9-27		3	—	—	—
29-W	9-1	Ditch at West end of holding pond	0	—	1.0 ± 1.1	—
	9-7		1	—	4.6 ± 1.1	—
	9-14		0	—	3.9 ± 1.1	—
	9-20		8	—	6.7 ± 1.1	—
	9-27		4	—	3.3 ± 1.1	—

Sample No.	Date	Location	P.P.B. Uranium	PPM Fluoride	Counts per minute per 100 ml. Alpha	Beta
20-W	9-1	Cafeteria cooling water	0	<0.2	0.0 ± 1.1	—
	9-7		0	<0.2	0.0 ± 1.1	—
	9-14		0	<0.2	0.0 ± 1.1	—
	9-20		0	<0.2	0.0 ± 1.1	—
	9-27		0	<0.2	0.2 ± 1.1	—
25-M	9-7	Crossing of Bear Creek at O.R. Turnpike	1	—	0.5 ± 1.1	0 ± 11
15-ME	9-8	Sewage Disposal Plant Sludge	50000	—	328 ± 56	—
2[illegible]-ME	9-20	Sludge from Water Treatment Plant Flock Settling Basins	7500	—	11.5 ± 3.8	150 ±
		Covering Reports No.				
		111				
		112				
		113				
		114				
		115				
		116				
		117				
		118				

WATER ANALYSIS SUMMARY

AUGUST 1945

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
24-D	8-2	Influent water to K-25	0	<0.2	1.4 ± 1.1	2 ± 2
	8-3	Water Purification Plant	0	–	0.0 ± 1.1	4 ± 2
	8-4		0	–	0.1 ± 1.1	4 ± 2
	8-5		0	–	0.0 ± 1.1	5 ± 2
	8-6		0	–	0.0 ± 1.1	7 ± 2
	8-9		0	<0.2	0.0 ± 1.1	3 ± 2
	8-10		0	–	0.0 ± 1.1	4 ± 2
	8-11		0	–	0.2 ± 1.1	7 ± 2
	8-12		0	–	0.2 ± 1.1	2 ± 2
	8-13		0	–	0.0 ± 1.1	6 ± 5
	8-16	Geometry factor of 3 included	0	<0.2	0.0 ± 1.1	29 ± 8
	8-17	from now on.	0	–	0.1 ± 1.1	33 ± 8
	8-18		0	–	0.4 ± 1.1	41 ± 8
	8-19		0	–	0.3 ± 1.1	38 ± 8
	8-20	Factor varies with tube used Range 3 to 7 to being corrected to 100% geometry (based on Normal uranium)	0	–	1.2 ± 1.1	38 ± 8
	8-23		0	<0.2	0.4 ± 1.1	29 ± 8
	8-24		0	–	0.2 ± 1.1	51 ± 8
	8-25		0	–	0.0 ± 1.1	17 ± 8
	8-26		0	–	0.0 ± 1.1	18 ± 8
	8-27		0	–	0.0 ± 1.1	17 ± 8
	8-30		0	–	0.1 ± 1.1	13 ± 8
	8-31		0	–	0.0 ± 1.1	35 ± 8

Sample No	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
13-W	8-2	Clinch River five miles downstream	0	< 0.2	0.0 ± 1.1	—
	8-9	of last K-25 effluent	0	< 0.2	0.1 ± 1.1	—
	8-16		0	< 0.2	0.5 ± 1.1	—
	8-23		0	< 0.2	0.0 ± 1.1	—
13-E	8-2	Bottom mud at above point	1500	57.4	4.0 ± 0.7	—
16-W	8-2	Drinking water at K-702	0	< 0.2	0.0 ± 1.1	—
	8-9	" " " K-1501	0	< 0.2	0.1 ± 1.1	—
	8-17	" " " K-1005	0	< 0.2	0.5 ± 1.1	—
	8-23	" " "	0	< 0.2	0.0 ± 1.1	—
10-W	8-2	Clinch River immediately below	0	< 0.2	1.1 ± 1.1	—
	8-9	S-50 sewer outfall	0	0.2	1.4 ± 1.1	—
	8-16		0	< 0.2	0.4 ± 1.1	—
	8-23		0	< 0.2	0.2 ± 1.1	—
0-E	8-12	Bottom mud at above point	1000	78.4	31 ± 5	—
4-W	8-2	Sewage disposal plant influent	0	—	—	—
	8-9		0	—	—	—
	8-16		0	—	—	—
	8-23		0	—	—	—

Sample No	Date	Location	PPB Ammonia	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
6-W	8-2	K-27 drainage into Poplar Creek	11	—	—	—
	8-9		0	—	—	—
	8-17		0	—	—	—
	8-23		1	—	—	—
11-W	8-2	Poplar Creek influent to K-25	0	—	0.0 ± 1.1	0 ± 2
	8-9		0	—	0.4 ± 1.1	0 ± 2
	8-16		0	—	0.4 ± 1.1	—
	8-23		0	—	0.4 ± 1.1	2 ± 1.1
2 -W	8-2	Poplar Creek immediately before	0	—	0.0 ± 1.1	—
	8-9	junction with Clinch River	0	—	0.1 ± 1.1	—
	8-16		0	—	0.6 ± 1.1	
	8-23		0	—	0.2 ± 1.1	—
1-W	8-2	Poplar Creek inlet Northeast	0	—	—	—
	8-9	of K-303-8	0	—	—	—
	8-16		0	—	—	—
	8-23		0	—	—	—
20-W	8-4	Cafeteria cooking water	0	<0.2	0.2 ± 1.1	—
	8-9		0	<0.2	0.1 ± 1.1	—
	8-17		0	<0.2	0.4 ± 1.1	—
	8-23		0	<0.2	0.0 ± 1.1	

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	Counts per min per 100 ml Alpha	Beta
3-M	8-10	Process drainage into Pop. Crk. N of 302-8	0	—	—	—
4-M	8-10	Process drainage into Pop Crk. W of 305-2	0	—	—	—
5-M	8-10	Process drainage into Pop Crk. W of 306-2	0	—	—	—
8-M	8-10	Drainage from Hot Scrap Yard into Clinch at inlet Northwest of Gallation Gate	0	—	0.1 ± 1.1	—
9-M	8-10	Clinch River West of Jones Scrap Yard	0	—	—	—
[illegible] M	8-23	Effluent from Sewage Disposal Plant	0	—	—	—
15-M-E	8-23	Sewage Disposal Plant Sludge	50000	—	347 ± 59	—
17-M-25	8-2	Recirculating water K-25	0	—	0.0 ± 1.1	—
7-M-27	8-2	Recirculating water K-27	0	—	0.0 ± 1.1	—
21-M	8-16	S-50 Sewer outfall	10	—	—	—
23-M	8-19	Ground water at sludge pit	0	—	—	—
25-M	8-9	Clinch River above Elza	0	<0.2	0.2 ± 1.1	—
26 & 27 M	8-17	Drainage from Labs A B C & D	3	—	0.8 ± 1.1	345 —

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
24-NE	8-16	Sludge from Water Treatment Plant	5000	–	43 ± 7	2098
		Flock settling beds.				
28-M	8-9	Crossing of Bear Creek at O.R. Turnpike	0	–	0.5 ± 1.1	0 ± 2
29-W	8-6	Ditch at W end of holding pond	4	–	2.9 ± 2.2	–
	8-9		0	–	0.9 ± 1.1	–
	8-17		0	–	1.8 ± 1.1	–
	8-23		0	–	1.0 ± 1.1	–

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WATER ANALYSIS SUMMARY

JULY 1945

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
24-D	7-1	Effluent water → K-25	1	–	0.6 ± 0.6	5 ± 3
	7-2	Water Purification Plant	0	–	0.6 ± 0.6	2 ± 3
	7-6		0	–	0.6 ± 0.6	2 ± 3
	7-7		0	<0.2	0.2 ± 0.5	2 ± 3
	7-8		0	–	0.8 ± 1.1	1 ± 2
	7-9		0	–	0.0 ± 1.1	1 ± 2
	7-12		0	–	0.5 ± 1.1	0 ± 2
	7-13		0	<0.2	0.2 ± 1.1	1 ± 3
	7-14		0	–	1.0 ± 1.1	2 ± 2
	7-15		0	–	0.7 ± 1.1	51 ± 26
	7-16		0	–	0.4 ± 1.1	5 ± 2
	7-19		0	–	0.5 ± 1.1	2 ± 2
	7-20		0	<0.2	0.3 ± 1.1	3 ± 3
	7-21		0	–	0.2 ± 1.1	10 ± 2
	7-22		0	–	0.4 ± 1.1	6 ± 2
	7-23		0	–	0.4 ± 1.1	2 ± 2
	7-26		0	<0.2	0.7 ± 1.1	3 ± 3
	7-27		0	–	0.3 ± 1.1	3 ± 3
	7-28		0	–	0.4 ± 1.1	1 ± 2
	7-29		0	–	0.1 ± 1.1	2 ± 2
	7-30		0	–	0.2 ± 1.1	3 ± 2

(2)

Sample No	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
13-W	7-6	Clinch River five miles downstream	0	<0.2	0.2±1.1	–
	7-12	of last K-25 effluent	0	<0.2	0.1 ±1.1	–
	7-19		0	<0.2	0.1 ±1.1	–
	7-26		0	<0.2	0.8 ±1.1	–
13-E	7-15	Bottom mud at above point	500	49.6	0.1	–
9-W	7-6	Drinking water at K-1405	0	<0.2	0.5±1.1	–
	7-12		0	<0.2	0.3 ±1.1	–
	7-19		0	<0.2	0.0 ±1.1	–
	7-26		0	<0.2	0.2 ±1.1	–
10-W	7-6	Clinch River immediately below	0	<0.2	0.5±1.1	–
	7-12	S-50 sewer outfall	0	<0.2	0.5±1.1	–
	7-19		0	<0.2	0.3±1.1	–
	7-26		0	<0.2	0.3 ±1.1	–
10-E	7-26	Bottom mud at above point	1000	49.2	0.0	–
8-M	7-26	S-50 Sewer outfall	0	–	–	–

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Sample No.	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA
14-W	7-6	Sewage disposal plant influent	0	—	—	—
	7-12		4	—	—	—
	7-19		0	—	—	—
	7-26		0	—	—	—
15-M	7-26	Sewage disposal plant effluent	0	—	—	—
9-E	7-26	Sewage Disposal Plant Sludge	40000	—	—	—
9-W	7-6	K-27 Drainage into Poplar Crk.	0	—	—	—
	7-15		0	—	—	—
	7-21		0	—	—	—
	7-26		0	—	—	—
7-M-27	7-6	Recirculating Water K-27	0	—	0.2 ± 1.1	—
16-W	7-6	Poplar Creek influent to K-25	0	—	0.5 ± 0.6	0 ± 0
	7-12		0	—	0.7 ± 1.1	0 ± 2
	7-19		0	—	0.2 ± 1.1	2 ± 2
	7-26		0	—	0.4 ± 1.1	0 ± 2
17-M-25	7-6	Recirculating Water K-25	0	—	0.6 ± 1.1	—

(4)

Sample No.	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
22-W	7-5	Poplar Creek Immediately before	0	—	0.1 ± 1.1	—
	7-12	junction with Clinch River	0	—	0.4 ± 1.1	—
			0	—	0.3 ± 1.1	—
	7-26		0	—	0.4 ± 1.1	—
1-W	7-6	Poplar Creek inlet NE of K-303.5	1	—	—	—
	7-12		0	—	—	—
	7-19		0	—	—	—
	7-26		0	—	—	—
[illegible]-W	7-6	Cafeteria cooking water	0	<0.2	0.3 ± 1.1	—
	7-12		0	<0.2	0.3 ± 1.1	—
	7-21		0	<0.2	0.8 ± 1.1	—
	7-26		0	<0.2	0.4 ± 1.1	—
2E-M	7-12	Crossing of Bear Creek at OR turnpike	0	—	0.9 ± 1.1	2 ± 2
-M	7-26	Drainage from Process into Pop. Crk. N of 305-8	0	—	—	—
4-M	7-7	Drainage from Process into Pop. Crk. W of 305-2	0	—	—	—
5-M	7-7	Drainage from Process into Pop Crk. W of 306-2	0	—	—	—
-M	7-26	Drainage from Hot Scrap Yard into	0	—	0.2 ± 1.1	—
		Clinch River at inlet N of Gallaher Gate				

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Sample No.	Date	Location	PPB Uranium	PPM Fluoride	COUNTS PER MINUTE PER 100 ML ALPHA	BETA
9-M	7-26	Clinch River W of Jones Scrap Yard	0	—	—	—
23-M	7-26	Ground Water at Sludge Pit	0	—	—	—
25-M	7-16	Clinch River above Elza	0	<0.2	0.1 ±1.1	—
6 & 21-M	7-26	Drainage from Labs A, B, C, & D	1	—	0.4 ±1.1	1 ±2
W.E						
W		Ditch at W end Holding Pond				

REVISED WATER SAMPLE PROGRAM

PROPOSED BY DR. F.W. HURD,
K.W. BAHLER, E.B. OLSZEWSKI
AND R.W. LEVIN, AUG. 15, 194

(1) Change 24-D to once every other day running continuously including weekends. Analysis for Uranium, alpha, beta and fluorides

(2) Continue 23-M (Ground water at sludge pit)
15-M-E (Sewage plant sludge)
24-M-E (Sanitary water plant sludge)

(3) Discontinue
1-W (Poplar creek inlet NE of K-303-8)
6-W (K-27 Ground water drainage
14-W (Sewage disposal plant influent)
~~20-W (Cafeteria cooking water)~~
~~22-W ((Poplar Creek mouth))~~
29-W (Ground water in ditch at holding pond)
10-W (Clinch river off S-50)
10-M-E (Monthly mud sample at above point)

(4) Add 12-W (Clinch river one (or more) miles upstream of K-25

(5) Add pH determinations.

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(6) Summed up this proposal gives the following program.

Sample	Location	Analysis
24-H	Water Plant effluent	U, α, β, (F). pH
13-W	Clinch River downstream	U, α, β, (F), pH
12-W	Clinch River upstream	U, α, β, (F), pH
20-W	Cafeteria Cooking Water	U, α, β, pH
16-W	Drinking water spot check	U, α, β, F, pH
11-W	Poplar Creek upstream	U, α, β, pH
23-M	Ground water at sludge pit	U, α.
15-M-E	Sewage plant sludge	U, α.
2-M-E	Sanitary water plant sludge	U, α, β.

No mention was made of the remaining mud samples. It is the opinion of Health Physics that these should be retained in any program adopted.

Discontinue all monthly samples, except 15-M-E, 23-M & 24 M-E

~~Discontinue~~

Change 24-D to once every other day and run continuously, including weekends.

Discontinue the following

10-W & E	14-W
6-W	22-W
1-W	20-W
29-W	

Add 12-W (Clinch upstream)

Old Program				New Temporary Program		
23	~~30~~	1	— Daily	— ½	—	15
	40	10	— Weekly	— 8	—	16
	17	17	— Monthly	— 0	—	0
	87		— Total per month	—	—	31
	90					

ANALYSIS RESULT SUMMARY FOR WATER SAMPLING PROGRAM 50

MARCH - TO JUNE, 1945 INCLUSIVE, 31

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SAMPLE NUMBER	LOCATION	TOTAL NUMBER OF SAMPLES	URANIUM ANALYSIS RESULTS OF ALL SAMPLES TAKEN, MARCH THRU JUNE: LESS THAN FIVE PPB	FIVE THRU TEN PPB	OVER TEN PPB	SAMPLING FREQUENCY	TYPE OF ANALYSIS	REMARKS
4-D	Effluent from Water Purification Plant	85	85	0	0	Daily	Uranium Fluoride Alpha Beta	Unexplained rise in beta activity to three times normal from May 22nd to nineteenth was considered to be no hazard, since this figure remained one hundredth of tolerance concentration for worst possible contaminant. Fluoride & alpha remained effectively zero.
3-W	Clinch river five miles downstream of K-25	45	45	0	0	Weekly	Uranium Fluoride Alpha	Fluoride and alpha results remained at background.
1-W	Drinking water at points throughout K-25	17	17	0	0	Weekly	Uranium Fluoride Alpha	All results satisfactorily low.
2-W	Clinch river below S-50 sewer outlet	17	17	0	0	Weekly	Uranium Fluoride Alpha	Old contamination gradually being removed, this point is now down to negligible levels.
1-W	S-50 sewer outlet	14	6	5	3	Weekly	Uranium	At above point, low analysis results indicate removal of old contamination.
4-W	Sewage Disposal Plant influent	18	18	0	0	Weekly	Uranium	
5-W	Sewage Disposal Plant effluent	14	14	0	0	Weekly	Uranium	Sources of high readings formerly reported here have apparently been controlled.
-W	K-27 drainage from Process Bldgs. into Poplar Creek	18	18	0	0	Weekly	Uranium	Improved operating procedures have minimized losses of contaminated wash solutions.
2-M	Recirculating water in K-27 Process	11	11	0	0	Monthly	Uranium Alpha	One sample monthly in both K-25 and K-27 taken. Alpha counts negligible.
1-W	Poplar Creek influent to K-25	18	18	0	0	Weekly	Uranium Alpha Beta	Both alpha and beta counts have remained negligible.
2-W	Poplar Creek effluent from [illegible] junction [illegible]	18	18	0	0	[illegible]	Uranium Alpha	No significant alpha count results.

RESULTS OF ALL SAMPLES TAKEN MAY 1970

SAMPLE NUMBER	LOCATION	TOTAL NUMBER OF SAMPLES	LESS THAN FIVE PER B	FIVE THRU TWENTY PER B	[illegible]	SAMPLING FREQUENCY	TYPE OF ANALYSIS	REMARKS
-W	Poplar creek inlet NE of K-303-8	18	17	1	0	Weekly	Uranium	This point empties ground drainage from North half of process, stores, conditioning area, plus all of K-1300, 1405 and steam plant area.
0-W	Cafeteria cooking water.	18	18	0	0	Weekly	Uranium Fluoride Alpha	This point gives results which are the same as drinking water samples, No above background samples have been found to date.
-M	Drainage from Process buildings N of K-303-8	4	4	0	0	Monthly	Uranium	
-M	Drainage from Process buildings W of K-305-2	4	4	0	0	Monthly	Uranium	
-M	Drainage from Process buildings W of K-306-2	4	4	0	0	Monthly	Uranium	
-M	Drainage from Hot Scrap Yard into Clinch River	4	4	0	0	Monthly	Uranium Alpha	Alpha counts at background level
-M	Clinch River West of Jones Scrap Yard	4	4	0	0	Monthly	Uranium	
3-M	Ground Water at Sludge Pit	4	4	0	0	Monthly	Uranium	
5-M	Clinch River above Elza	4	4	0	0	Monthly	Uranium Fluoride Alpha	Fluoride and alpha results negligable
6 & 27-M	Drainage from Labs A, B, C & D	4	3	1	0	Monthly	Uranium Alpha	Alpha counts at background level
28-M	Crossing of Bear Creek at Oak Ridge Turnpike	4	4	0	0	Monthly	Uranium Alpha Beta	Alpha & beta counts at background level.
0-W-E	Clinch River bottom mud from point downstream of S-50 sewer outlet	7	0	0	7	Weekly	Uranium Fluoride Alpha	Present results of all mud samples a only roughly indicative, pending results of lab development program
-W-E	Clinch River bottom mud at point five miles downstream of K-25	10	0	0	10	Weekly	Uranium Fluoride Alpha	
-M-E	Sewage Disposal Plant Sludge	3	0	0	3	Monthly	Uranium	Results of 60,000; 100,000 and 4500 parts per billion plus or minus 50% have been reported. Fifty per cent precision on sludge analyses has been established. High alpha count on June sample indicates possibility of concentrations above normal.

24-D	[illegible]			Fecal	
13-W	"	"	"	"	pH
12-W	"	"		"	pH
22-W	"			"	pH
11-M	"	"	"		
~~28-M~~	~~"~~	~~"~~	~~"~~		~~pH~~

WATER ANALYSIS SUMMARY

JUNE 1948

SAMPLE No.	DATE	LOCATION	P.P.B. Uranium	P.P.M. Fluoride	COUNTS PER MINUTE PER 100 ML. ALPHA	BETA
84-D	6-1	Effluent water from K-25	0	<0.2	0.0 ± 0.5	3 ± 3
	6-2	Water Purification Plant	0	–	0.1 ± 0.5	7 ± 3
	6-3		0	–	0.4 ± 0.5	4 ± 3
	6-4		0	–	0.1 ± 0.5	3 ± 3
	6-7		0	–	0.0 ± 0.5	1 ± 3
	6-8		0	–	0.0 ± 0.5	2 ± 3
	6-9		0	<0.2	0.0 ± 0.5	2 ± 3
	6-10		0	–	0.2 ± 0.5	3 ± 3
	6-11		0	–	0.1 ± 0.5	2 ± 3
	6-14		0	–	0.1 ± 0.5	2 ± 3
	6-15		0	–	0.3 ± 0.5	5 ± [illegible]
	6-16		0	–	0.1 ± 0.5	1 ± 3
	6-17		0	–	0.5 ± 0.6	0 ± 3
	6-18		0	<0.2	0.7 ± 0.6	0 ± 3
	6-21		0	<0.2	0.1 ± 0.5	1 ± 3
	6-22		0	–	0.5 ± 0.5	1 ± 3
	6-23		0	–	0.0 ± 0.5	0 ± 3
	6-24		0	–	0.2 ± 0.5	0 ± 3
	6-25		0	–	0.0 ± 0.5	1 ± 3
	6-28		0	<0.2	0.6 ± 0.6	1 ± 3
	6-29		No sample taken			
	6-30		0	–	0.3 ± 0.5	4 ± 3

Sample No.	Date	Location	Uranium	Fluoride	Counts per minute Alpha	Counts per minute Beta
15-W	6-1	Clinch River five miles down-	0	<0.2	0.3 ± 0.5	—
	6-7	stream at last K-25 effluent	1	<0.2	0.0 ± 0.5	—
	6-15		0	<0.2	0.2 ± 0.5	—
	6-21		0	<0.2	0.3 ± 0.5	—
	6-28		0	0.2	0.1 ± 0.5	—
13-E	6-1	Bottom mud at above point	400	28.2	2 ± 3	—
	6-7		500	48.8	2	—
	6-15		1300	55.1	2	—
	6-21		500	52.0	2	—
	6-28		400	95.8	1.0	
12-W	6-1	Drinking water at K-1020	0	<0.2	0.1 ± 0.5	—
	6-9	at K-1030	0	<0.2	0.1 ± 0.5	—
	6-15		0	<0.2	0.0 ± 0.5	—
	6-21		0	<0.2	0.0 ± 0.5	—
	6-28		0	<0.2	0.2 ± 0.5	—
10-W	6-1	Clinch River immediately below	0	<0.2	0.4 ± 0.5	—
	6-9	S-50 sewer outfall	0	<0.2	0.0 ± 0.5	—
	6-14		0	<0.2	0.2 ± 0.5	—
	6-21		0	0.2	0.2 ± 0.5	—
	6-28		0	<0.2	0.1 ± 0.5	—
10-W-E	6-1	Bottom mud at above point	500	28.8	1 ± 2	
	6-9		300	64.1	1	
	6-14		300	59.8	2	
	6-21		1300	82.4	2	
	6-28		400	93.6	0.5	—

AMPLE NO.	DATE	LOCATION	URANIUM	FLUORINE	COUNTS PER MINUTE ALPHA	BETA
21-W	6-1	S-5-J Sewer outfall	Water level too high, no sample			
	6-9		4	—	—	—
	6-14		3	—	—	—
	6-21		18	—	—	—
	6-28		14	—	—	—
14-W	6-1	Sewage disposal plant influent	0	—	—	—
	6-7		0	—	—	—
	6-15		0	—	—	—
	6-21		0	—	—	—
	6-28		1	—	—	—
5 W	6-1	Sewage disposal plant effluent	0	—	—	
	6-7		0	—	—	—
	6-15		0	—	—	—
	6-21		3	—	—	—
	6-28		0	—	—	—
15-M-E	6-15	Sewage Disposal Plant sludge	45000	—	260	—
5-W	6-2	K-27 drainage into Poplar Creek	0	—	—	—
	6-11		0	—	—	—
	6-15		0	—	—	—
	6-21		0	—	—	—
	6-28		0	—	—	—
7-M-25	6-15	Recirculating water K-25	0	—	0.2 ± 0.5	—
7-M-27	6-15	Recirculating water K-27	0	—	0.5 ± 0.5	360 —

(4)

SAMPLE NO.	DATE	LOCATION	URANIUM	FLUORIDE	COUNTS PER MINUTE ALPHA	COUNTS PER MINUTE BETA
11-W	6-1	Poplar Creek intake [illegible]	0	—	0.2 ± 0.5	3 ± 3
	6-7		0	—	0.5 ± 0.6	0 ± 3
	6-14		0	—	0.2 ± 0.5	0 ± 3
	6-21		0	—	0.0 ± 0.5	1 ± 3
	6-28		0	—	0.5 ± 0.5	0 ± 3
22-W	6-1	Poplar Creek immediately below	0	—	0.3 ± 0.5	—
	6-7	junction with Clinch River	0	—	0.4 ± 0.5	—
	6-14		0	—	0.3 ± 0.5	—
	6-21		0	—	0.0 ± 0.5	—
	6-28		0	—	0.7 ± 0.6	—
[illegible]-W	6-1	Poplar Creek inlet NE of K-303-5	0	—	—	—
	6-9		0	—	—	—
	6-15		1	—	—	—
	6-21		0	—	—	—
	6-28		2	—	—	—
20-W	6-1	Cafeteria cooking water	0	<0.2	0.2 ± 0.5	—
	6-9		0	<0.2	0.2 ± 0.5	—
	6-15		0	<0.2	0.1 ± 0.5	—
	6-21		0	<0.2	0.4 ± 0.5	—
	6-28		0	<0.2	0.0 ± 0.5	—

(5)

SAMPLE No.	DATE	LOCATION	URANIUM	FLUORIDE	COUNTS PER MINUTE ALPHA	COUNTS PER MINUTE BETA
T-M	6-1	Crossing of Bear Creek at JR Turnpike	0	—	0.6 ± 0.5	0 ± 3
M	6-15	Drainage from Process Bldgs into Poplar Creek N of 303-5	0	—	—	—
-M	6-17	Drainage from Process Bldgs into Poplar Creek W of 305-2	0	—	—	—
-M	6-17	Drainage from Process Bldgs into Poplar Creek W. of 306-2	0	—	—	—
-M	6-2	Drainage from Hot Scrap Yard into Clinch River at inlet N of Gallaher Gate	0	—	0.0 ± 0.5	—
-M	6-2	Clinch River W. of Jones Scrap Yard.	0	—	—	—
23-M	6-14	Ground water at Sludge Pit	0	—	—	—
5-M	6-1	Clinch River above Elza	0	<0.2	0.1 ± 0.5	—
0 & 27-M	6-18	Drainage from Labs A, B, C & D	3	—	0.1 ± 0.6	—

MUD SAMPLING RESULTS

Uranium in Parts per Billion
Fluoride in Parts per Million
Alpha in Counts per minute per gram of dry sample

SAMPLED DURING WEEK ENDING	13-W-E River bottom mud from 13-W point five miles downstream of K-25			10-W-E Clinch river bottom mud at point 10-W immediatly downstream of S-50 sewer outfall			15-M-E Sewage Disposal Plant Sludge	
	Uranium PPB	Fluoride	Alpha	Uranium PPB	Fluoride	Alpha	Uranium only	
4-23	500	65.6	0.5	—	—	—	60,000	α 377
4-30	750	67.0	0.3	—	—	—		
5-7	1000	62	1 ± 1	Water level high.		No sample		
5-14	800	57	1 ± 1	1000	61	0 ± 1	100,000	
5-21	1500	40	0 ± 1	1500	61	1 ± 2		
5-28	800	74	0 ± 1	1000	56	2 ± 3		
6-4	400	28.2	2 ± 3	500	28.8	1 ± 2		
6-11	500	48.8	2	300	64.1	1	Uranium PPB	Alpha counts per minute per gram dry
6-18	1300	55.1	2.	300	59.8	2	45000	260
6-25	500	52.0	2	1300	82.4	2		
7-2								
7-9								
7-16	500	49.6	0.1	1000	49.2	0.0	40000	
7-23	Special on slope at K-27	15-X	Uonly 6,300 PPB	Background Special at Clinch above Elza			WV-3 (4500)	α 277 β 49±21 elevated
7-30				380	82.2	α 0.1 β 11±11	EV-31 2500	α 0.1 β 0±11
8-6								
8-13							50,000	363 α 349 ± 59

Water Analysis Summary

MAY 1948

Date	Location	Uranium	Fluoride	Counts per minute per liter Alpha	Beta
5-3	Effluent water from 1-25	0	< 0.2	0.3 ± 0.5	2.4
5-4	Water Purification Plant	0	–	0.1 ± 0.5	0.0
5-5		0	–	0.1 ± 0.5	0.0
5-6		0	< 0.2	0.0 ± 0.5	9.7 ± 3.5
5-7		0	< 0.2	0.5 ± 0.6	–
5-10		0	–	0.1 ± 0.5	2.7 ± 2.7
5-11		2	–	0.6 ± 0.6	30 ± 30
5-12		0	–	0.1 ± 0.5	1.1 ± 2.8
5-13		0	–	0.2 ± 0.5	8.6 ± 4.3
5-14		0	–	0.2 ± 0.5	5.0 ± 3.0
5-17		0	< 0.2	0.0 ± 0.5	3.0 ± 3.
5-18		0	–	0.3 ± 0.5	9.0 ± 3.0
5-19		0	–	0.8 ± 0.6	5.0 ± 3.0
5-20		0	–	0.3 ± 0.5	3.0 ± 3.0
5-21		0	–	0.1 ± 0.5	2.0 ± 3.0
5-24		0	< 0.2	0.2 ± 0.5	0.0 ± 3.0
5-25		0	–	0.0 ± 0.5	1.0 ± 3.0
5-26		0	–	0.1 ± 0.5	1.0 ± 3.0
5-27		0	–	0.0 ± 0.5	0.0 ± 3.0
5-28		0	–	0.4 ± 0.5	0.0 ± 3.0

(2)

No.	Date	Location	Uranium	Fluoride	Counts per Minute Alpha	Counts per Minute Beta
13-W	5-6	Clinch River downstream	0	<0.2	0.2 ± 0.5	—
	5-11	Five miles of last K 25	0	<0.2	0.1 ± 0.5	—
	5-17	effluent	0	<0.2	0.0 ± 0.5	—
	5-24		0	<0.2	0.5 ± 0.6	—
3-W-E	5-6	Bottom mud at above point	1000	62	1 ± 1	—
	5-11		800	57	1 ± 1	—
	5-17		1500	40	0 ± 1	—
	5-24		800	74	0 ± 1	—
		Clinch river influent to K-25				
6-W	5-4	K25 Drinking water at K-1101	0	<0.2	0.1 ± 0.5	—
	5-13	K-25 " "	0	<0.2	0.6 ± 0.6	—
		at				
	5-24	K-25 " " at K-1024	0	<0.2	0.0 ± 0.5	—
-W	5-3	Clinch river immediately below	0	<0.2	0.0 ± 0.5	—
	5-10	5-50 sewer outfall.	0	<0.2	0.3 ± 0.5	—
	5-25		0	<0.2	0.0 ± 0.5	—

Sample No.	Date	Location	Uranium	Fluoride	Counts per minute Alpha	Counts per minute Beta
3-W-E	5-7	Clinch river as above, river bottom mud	Water level high. No sample			
	5-13		1000	61	0 ± 1	—
	5-18		1500	61	1 ± 2	—
	5-25		1000	56	2 ± 3	—
2-W	5-7	S-50 Sewer outfall	Water level high. No sample			
	5-17		0	—	—	—
	5-18		2	—	—	—
	5-24		3	—	—	—
4-W	5-3	Sewage disposal plant influent	0	—	—	—
	5-12		0	—	—	—
	5-17		0	—	—	—
	5-25		0	—	—	—
5-W	5-3	Sewage disposal plant effluent	0	—	—	—
	5-12		0	—	—	—
	5-17		0	—	—	—
	5-25		0	—	—	
5-M-E	5-12	Sewage disposal plant sludge	100,000	—	—	—

(4)

Sample No.	Date	Location	Uranium	Fluoride	Counts per minute Alpha	Counts per minute Beta
6-W	5-7	K-27 drainage into Poplar Creek	0	—	—	—
	5-12		0	—	—	—
	5-18		0	—	—	—
	5-25		0	—	—	—
11-W	5-3	Poplar creek influent to K-25	0	—	0.5 ± 0.5	0.0
	5-10		0	—	0.4 ± 0.5	0.0 ± 2.7
	5-17		0	—	0.0 ± 0.5	0.0 ± 3.0
	5-24		0	—	0.1 ± 0.5	0.0 ± 3.0
1-M-25	5-3	Recirculating water K-25	0	—	0.1 ± 0.5	—
17-M-27	5-3	Recirculating water K-27	0	—	0.0 ± 0.5	—
22-W	5-3	Poplar creek immediately ~~before~~	0	—	0.1 ± 0.5	—
	5-10	junction with Clinch river	0	—	0.5 ± 0.5	—
	5-17		0	—	0.1 ± 0.5	—
	5-24		0	—	0.1 ± 0.5	—
1-W	5-3	Poplar Creek inlet	0	—	—	—
	5-10	NE of K-303-8	0	—	—	—
	5-17		0	—	—	—
	5-24		0	—	—	—

(5)

Sample No.	Date	Location	Uranium	Fluoride	Counts per minute Alpha	Counts per minute Beta
26-W	5-3	Clinton cooking water	0	<0.2	0.0 ± 0.5	—
	5-10		0	<0.2	Insufficient Sample	—
	5-18		0	<0.2	0.4 ± 0.5	—
	5-25		0	<0.2	0.1 ± 0.5	—
28-M	5-3	Crossing of Bear Creek at O.R. Turnpike	0	—	0.1 ± 0.5	—
3-M	5-13	Drainage from Process Bldgs. into Poplar Ck. N of 303-8	0	—	—	—
-M	5-20	Drainage from Process Bldgs. into Poplar Ck. W of 305-2	0	—	—	—
5-M	5-20	Drainage from Proc. Bldgs. into Poplar Ck. W of 306-2	0	—	—	—
8-M	5-3	Drainage from Hot Storage Yard into Clinch River at inlet N. of Gallagher gate	0	—	0.2 ± 0.5	—
9-M	5-3	Clinch River W. of Jones Storage Yard	0	—	—	—
23-M	5-24	Ground water at sewage plant	0	—	—	—
25-M	5-10	Clinch River above [illegible]	0	<0.2	0.2 ± 0.5	—
26&27-M	5-6	Drainage from Labs A, B, C & D	10	—	3.5 ± 0.8	—

FOLLOW UP WATER SAMPLES

WEEKLY SAMPLES, ANALYZED FOR URANIUM ONLY.
Sample point 1 at Poplar Creek inlet, 6 at K-27 storm drain outlet, 14 at Sewage Disposal Plant influent.

SAMPLED DURING WEEK ENDING	MAR. 19	MAR. 26	APRIL 2	APRIL 9	APRIL 16	APRIL 23	APRIL 30	MAY 7	MAY 14	MAY 21	MAY 28
1	0	1	3	2	0	0	0	0	1	0	0
1-A	0	0	0	0	0	0	0	0	0	0	0
1-B	3	2	6	5	2	0	0	0	1	1	3
6	0	0	0	1	0	0	0	0	0	0	0
6-A		0	0	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
6-B	0	0	0	24	3	0	0	2.	1	4	0
14	0	0	0	0	0	0	0	0	0	0	.0
14-A		5	80	17	160	140	35	10	13	8	5
14-B		0	0	0	4	7	3	0.	1301 0	10	5
14-C		0	0	0	0	0	0	0	1435 53	30	50

F. W. Kittrell

Chief Stream Sanitation
Section TVA

304 McNutt Bldg

Knox.

3-22-48

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WATER SURVEY PROGRAM SUMMARY

SAMPLE NUMBER	LOCATION	ANALYSIS RESULTS THRU FEBRUARY: TOTAL SAMPLES	LESS THAN FIVE PPB	FIVE THRU TWENTY PPB	OVER TWENTY PPB	PRESENT SAMPLING FREQUENCY	PROPOSED SAMPLING FREQUENCY	PRESENT ANALYSES	PROPOSED ANALYSES	REMARKS
13-D	Clinch River, Effluent from K-25	103	[illegible]	[illegible]	[illegible]	Daily	Weekly	Uranium Fluoride Alpha	Same	Sample of river - bottom mud taken at the same time.
24-D	Effluent from K-25 Water Purification Plant	[illegible]	[illegible]	[illegible]	0	Daily	Daily	Uranium Alpha Beta	Same add Fluoride determination once a week	Move sample to influent line.
2-W	Clinch River influent to K-25	[illegible]	[illegible]	[illegible]	0	Weekly	Zero	Uranium Fluoride Alpha	None	Duplicates sample 24-D.
[illegible]	K-25 & K-27 Drinking Water	[illegible]	[illegible]	[illegible]	[illegible]	Weekly	Same	Uranium Fluoride Alpha	Same	
0-W	Clinch River immediately below S-50 sewer outfall	[illegible]	[illegible]	[illegible]	[illegible]	Weekly	Same	Uranium Fluoride Alpha	Same	
21-W	S-50 Sewer outfall	21	5	2	[illegible]	Weekly	Same	Uranium Fluoride	Uranium	
1-W	Influent to Sanitary Sewage Disposal Plant	[illegible]	[illegible]	[illegible]	[illegible]	Weekly	Same	Uranium	Same	A study is now in progress to determine the source of the Uranium found in these samples. Several additional samples at each system covered by these points will be taken.
[illegible]-W	Sanitary Sewage Disposal Plant Effluent	21	[illegible]	2	0	Weekly	Same	Uranium	Same	
-W	K-27 Drainage into Poplar Creek	20	6	11	3	Weekly	Same	Uranium	Same	
-W	Poplar Creek Inlet NE of K-303-F	[illegible]	[illegible]	[illegible]	[illegible]	Weekly	Same	Uranium	Same	
1-W	Poplar Creek influent to K-25	21	20	1	[illegible]	Weekly	Same	Uranium Fluoride Alpha	Same	This point has been moved upstream to beyond Bear Creek mouth at request of A.E.C.
-W	Process Recirculating Water					Weekly	Monthly	Uranium Alpha	Same	Two monthly samples one for K-25 and one for K-27 have been proposed.
W	[illegible] Creek immediately below [illegible]					Weekly		Uranium Fluoride Alpha		

PAGE TWO

WATER SURVEY PROGRAM SUMMARY

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SAMPLE NUMBER	LOCATION	ANALYSIS + RESULTS THRU FEBRUARY: TOTAL SAMPLES	LESS THAN FIVE PPB	FIVE THRU TWENTY PPB	OVER TWENTY PPB.	PRESENT SAMPLING FREQUENCY	PROPOSED SAMPLING FREQUENCY	PRESENT ANALYSES	PROPOSED ANALYSES	REMARKS
OW	Cafeteria Cooking Water	11	11	0	0	Weekly	Same	Uranium Fluoride Alpha	Same	Despite consistent negative results this point is sufficiently important to warrant continuance.
-M	Drainage from Pond SW of Garage area into Poplar Creek	5	5	0	0	Monthly	Zero	Uranium	None	
-M	Drainage from Process Buildings into Poplar Creek	—	—		0	Monthly	Same	Uranium	Same	
-M	Drainage from Process Bldg into Poplar Creek				0	Monthly	Same	Uranium	Same	
-M	Drainage from Process Bldgs into Poplar Creek				0	Monthly	Same	Uranium	Same	
-M	Drainage to Clinch River from Hot Scrap Yard				0	Monthly	Same	Uranium Alpha	Same	
-M	Clinch River offshore of Jones Scrap Yard	5		0	0	Monthly	Same	Uranium	Same	
8-M	Powerhouse discharge				0	Monthly	Zero	Uranium	None	Sample 19-M covers this point and no possibility of contamination in Powerhouse.
-M	Powerhouse [illegible]				0	Monthly	Zero	Uranium	None	Samples 12-W and 9-M cover this point.
3-M	Groundwater at K-1239 Sludge pit				0	Monthly	Same	Uranium	Same	
5-M	Clinch River above Elza Gate	11				Monthly	Same	Uranium Fluoride Alpha	Same	
6-M 7-M	Drainage from Labs A, B, C & D.	1		0	1	Monthly	Same	Uranium Alpha	Same	

I

FULL PROGRAM

To be put into effect for June on completion of present special follow up sampling at check points 1-W, 6-W and 14-W, to avoid overburdening the lab facilities.

Required lab work —

plus simple gravimetric solids content determ.

Maximum lab work could be held to Ten water analyses or Four mud analyses or any combination at 1 mud = 2.5 water. (For four weeks only)

Required Time (One man RHD) Approximately the entire month of June — with perhaps one day per week devoted to other duties.

Required Preparation

① ~~Recaulk & paint boat~~

② ~~Overhaul motor~~.

③ Build or assemble portable thermocouple (I.D. says this is feasible, would not take over one week)

④ Assemble tools, eqpt., calibrate lead lines etc.

⑥ Modify or improve present sampling pole

Approximate required time one and one half weeks. Field work would probably begin Monday June seventh, to be completed by end of month or July second at latest.

Other Requirements

Car or truck for at least one full day; possibly some portions of several others. Transportation to and/or from boat dock from Kress possibly one or two days per week.

Expected Results

Compilation of full data on:

1. Temperature stratification
2. Direction of strata flow
3. Silt content by strata & by absolute depth independent of strata.
4. U & F content of suspended silt.
5. U & F content of "background mud".
6. U & F gradient in bottom mud from shore to shore and from upstream background to downstream equivalent level.

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SAMPLE PROGRAM

To be put into effect for June. Most of actual sampling to be done by Industrial Hygiene section.

Required Lab work Approximately the same as old program (ten water or four mud or any combination at 1 mud = 2.5 water analyses) plus additional time for taking of samples by lab personnel.

Required Time (one man RHD) Approximately one week spread over entire month — exclusive of other time regularly devoted to present water survey program.

Required Preparation

1. Field trip, possibly with X-10 sample group.
2. Rebuild or modify present sampling equipment.

Other Requirements

Car or truck for at least one full day, possibly

part of others

Expected Results

Compilation of fairly full data on:

1. U & F. content of "background mud"
2. U & F gradient in bottom mud.
3. U & F content of suspended silt.

Number	Location and Purpose	Date	Uranium	Fluoride	Alpha	Beta
	To check positive results at					
	K-25 Sewage Disposal plant influent					
-W	Sewage Disposal Plant influent	4-2-48	0	—	—	—
-W-C	Upstream of K-27	4-2-48	0	—	—	—
-W-B	Upstream of K-25	4-2-48	0	—	—	—
-W-A	Upstream of Process K-25 & K-27, Labs & Conditioning	4-2-48	80	—	—	—
-W-	Total at SD Plant influent	4-6	0	—	—	—
-W-C	Upstream of K-27	4-6	0	—	—	—
-W-B	Upstream of K-25	4-6	0	—	—	—
-W-A	Upstream of Labs & Conditioning	4-6	17	—	—	—
-W-	Total	4-13	0	—	—	—
-C	Less K-27	4-13	0	—	—	—
-W-B	Less K-25	4-13	4	—	—	—
-W-A	Less Labs & Conditioning	4-13	160	—	—	—
-W-	Total	4-20	0	—	—	—
-W-C	Less K-27	4-20	0	—	—	—
-W-B	Less K-25	4-20	7	—	—	—
-W-A	Less Labs & Conditioning	4-20	140	—	—	—
-W-	Total					
-W-C	Less K-27					
-W-B	Less K-25					
-W-A	Less Labs & Conditioning					

Number	Location and Purpose	Date	Uranium	Fluoride	Alpha	Beta
	To check on positive results					
	at K 27 area drainage point					
W	K-27 area drainage	4-6	1	—	—	—
-W-B	Drainage from K-131 only	4-6	24	—	—	—
-W-A	Drainage from K-631 only	4-				
-W	K-27	4-12	0	—	—	—
-W-B	K-131	4-12	3	—	—	—
W-A	K-631	4-				
W	K-27	4-22	0	—	—	—
W-B	K-131	4-22	0	—	—	—
W-A	K-631	4-23	No drainage for sample			
W	K-27	4-				
W-B	K-131	4-				
W-A	K-631	4-				
-W	K-27	4-				
W-B	K-131	4-				
W-A	K-631	4-				

Works Laboratory Department
Industrial Hygiene Section

Report 29

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	[illegible]	[illegible]	Beta Counts per minute per 100 ml.
24 D	12-24-47		Effluent Water from K-25 Water Purification Plant			0
"	12-26-47		"			0
"	12-29-47		"			0
"	12-30-47		"			0
"	12-31-47		"			-

Distribution:

A. P. Huber
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. T. E. Sheldon
S. Visner

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Supervisor D. L. Stoddard Date 1-16-48

Works Laboratory Department
Industrial hygiene Section

Report No. 24

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	~~Uranium Conc.~~ ~~xxxxxx.~~	~~Chloride Conc.~~ ~~xxxxxx.~~	Beta Alpha Counts per minute per 100 ml.
24 D	12- 1-47		Effluent Water from K-25 Water Purification Plant			0
"	12- 2-47		"			0
"	12- 5-47		"			0
"	12- 8-47		"			0.26
"	12- 9-47		"			1.47
"	12-10-47		"			0.84
"	12-11-47		"			1.18
"	12-16-47		"			1.05
"	12-17-47		"			0
"	12-18-47		"			0
"	12-19-47		"			1.25
"	12-22-47		"			0
"	12-23-47		"			0

Distribution:

A. F. Huber
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. [illegible] Sheldon
S. Visner ✓

Supervisor D. L. Stoddard Date 1-16-48

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REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	12-23-47	9:00 A.M.	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 0.7
24 D	12-23-47	9:30 A.M.	Water effluent from Purification Plant	0	-	0.6 ± 0.8
24 D	12-24-47	11:00 A.M.	Water effluent from Purification Plant	0	-	1.6 ± 0.8
13 D	12-24-47	2:00 P.M.	Clinch River effluent from K-25	0	Less than 0.2	1.3 ± 0.7
13 D	12-26-47	10:00 A.M.	Clinch River effluent from K-25	0	Less than 0.2	0.5 ± 0.7
24 D	12-26-47	10:35 A.M.	Water effluent from Purification Plant	0	-	0.3 ± 0.6
13 D	12-29-47	10:00 A.M.	Clinch River effluent from K-25	0	Less than 0.2	0.4 ± 0.7
24 D	12-29-47	12:50 A.M.	Water effluent from Purification Plant	0	-	0.3 ± 0.7
13 D	12-30-47	10:00 A.M.	Clinch River effluent from K-25	0	Less than 0.2	0.4 ± 0.7
24 D	12-30-47	10:30 A.M.	Water effluent from Purification Plant	0	-	1.0 ± 0.7
13 D	12-31-47	10:05 A.M.	Clinch River effluent from K-25	0	Less than 0.2	0.2 ± 0.6
24 D	12-31-47	10:40 A.M.	Water effluent from Purification Plant	0	-	0.2 ± 0.6

Distribution:

A. P. Huber
M. J. Costello, M.D.
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G. L. W. Sheridon

381

Supervisor D. L. Stoddard Date 1-12-48

Works Laboratory Department
Industrial Hygiene Section

Report 26

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
11 W	12-29-47	10:30 A.M.	Poplar Creek, Influent to K-25	0	Less than 0.2	1.6 ± 0.8
1 W	12-29-47	10:35 A.M.	Inlet to Poplar Creek N.E. of K-303-6	2	-	-
17 W	12-29-47	10:45 A.M.	Recirculating Water K-25	0	-	0.8 ± 0.7
14 W	12-29-47	11:00 A.M.	Water Influent to Sewage Disposal	4	-	-
15 W	12-29-47	11:00 A.M.	Water effluent to Sewage Disposal	0	-	-
12 W	12-29-47	12:50 P.M.	Clinch River Influent to K-25	0	Less than 0.2	0.3 ± 0.7
22 W	12-29-47	4:10 P.M.	Poplar Creek Immediately before the Junction with Clinch River	0	Less than 0.2	0.4 ± 0.7
21 W	12-29-47	1:30 P.M.	S-50 Sewer outfall	40	0.2	-
10 W	12-29-47	1:35 P.M.	Clinch River Immediately Below the S-50 Sewer Outfall	0	Less than 0.2	0.7 ± 0.7
20 W	12-29-47	2:00 P.M.	Cafeteria Cooking Water	0	Less than 0.2	0.1 ± 0.6
6 W	1- 2-48	1:00 P.M.	Drainage from behind K-131 into Poplar Creek	8	-	-
16 W	1- 2-48	1:40 P.M.	Drinking water K-302-2	0	0.2	0.6 ± 0.7

Distribution:

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A. F. Dunlap (2)
Works Lab. Central File
G. [illegible] Sheridan
S. Wisner ✓

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Supervisor D. L. Stoddard Date 1-2-48

Laboratory Department
Industrial Hygiene Section

Classification changed to: Spec 1 (level and category)

ADC or ADD signature Date

ADD signature Date

REPORT OF WATER SURVEY ANALYSIS

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.m.	Fluoride Conc. p.p.m.	Alpha Counts per minute per liter
1 W	12-22-47	10:15 A.M	Poplar Creek inlet N.E. of K-303-8	2	-	-
17 W	12-22-47	10:20 A.M	Recirculating Water K-25	0	-	0.9 ± 0.7
14 W	12-22-47	10:30 A.M	Influent to Sewage Disposal Plant	1	-	-
15 W	12-22-47	10:30 A.M	Effluent from Sewage Disposal Plant	0	-	-
11 W	12-22-47	10:10 A.M	Poplar Creek, influent to K-25	0	Less than 0.2	0.7 ± 0.7
12-W	12-22-47	3:05 P.M	Clinch River, influent to K-25	0	Less than 0.2	1.0 ± 0.7
22 W	12-22-47	3:30 P.M	Poplar Creek, immediately before junction with Clinch River	0	Less than 0.2	2.4 ± 1.0
21 W	12-22-47	3:40 P.M	S-50 Sewer Outfall	40	0.3	-
10 W	12-22-47	3:45 P.M	Clinch River, immediately below S-50 Sewer Outfall	0	Less than 0.2	0.2 ± 0.6
16 W	12-22-47	4:00 P.M	Drinking water, Bldg. K-1001	0	Less than 0.2	0.3 ± 0.6
20 W	12-23-47	9:40 A.M	Cafeteria Cooking Water	0	Less than 0.2	0.2 ± 0.6
6 W	12-26-47	12:40 P.M	K-131 drainage into Poplar Creek	6	-	-

Distribution:

A. F. Huber ✓
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central
C. T. E. Sheldon
S. Visner

383

Classification changed to: UNCLASSIFIED (level and category)

24 Jul 95
ADC or ADD signature (first reviewer) Date

Supervisor C. B. Olszewski Date 12-31-47

Thomas W. Selby 7/28/95
ADD signature (final reviewer) Date

Works Laboratory Department
Industrial Hygiene Section

Spec. Hog

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	12-15-47	8:45 A.M	Clinch River, effluent from K-25	0	Less than 0.2	0.3 ± 0.8
24 D	12-15-47	2:25 P.M	Effluent water from K-25 Water Purification Plant	0	-	1
13 D	12-16-47	9:50 A.M	Clinch River, effluent from K-25	0	Less than 0.2	0.2 ± 0.8
24 D	12-16-47	10:45 A.M	Effluent water from K-25 Water Purification Plant	0	-	Less than 0.5
13 D	12-17-47	2:50 P.M	Clinch River, effluent from K-25	0	Less than 0.2	0.6 ± 0.7
24 D	12-17-47	3:15 P.M	Effluent water from K-25 Water Purification Plant	0	-	0.9 ± 0.7
13 D	12-18-47	10:25 A.M	Clinch River, effluent from K-25	0	Less than 0.2	1.4 ± 0.9
24 D	12-18-47	3:45 P.M	Effluent water from K-25 Water Purification Plant	0	-	0.4 ± 0.7
13 D	12-19-47	9:30 A.M	Clinch River effluent from K-25	0	Less than 0.2	1.5 ± 0.6
24 D	12-19-47	10:20 A.M	Effluent water from K-25 Water Purification Plant	0	-	1.3 ± 0.9
13 D	12-22-47	9:50 A.M	Clinch River effluent from K-25	0	Less than 0.2	1.3 ± 0.9
24 D	12-22-47	3:15 P.M	Effluent water from K-25 Water Purification Plant	0	-	1.6 ± 0.9

Distribution:

384

A. F. Huber ✓
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. [illegible], Sheldon
S. Wisner

Supervisor E. B. Olszewski Date 12-30-47

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
11 W	12-16-47	10:10 A.M	Poplar Creek influent to K-25	0	Less than 0.2	0.8 ± 0.7
1 W	12-16-47	10:20 A.M	Poplar Creek inlet N.E. of K-303-8	4	--	-
12 W	12-16-47	10:35 A.M	Clinch River influent to K-25	0	0.3	0.7 ± 0.7
17 W	12-16-47	1:05 P.M	Recirculating water K-27	0	--	Less than 0.5
14 W	12-16-47	1:15 P.M	Influent to Sewage Disposal Plant	4	---	-
15 W	12-16-47	1:15 P.M	Effluent from Sewage Disposal Plant	4	--	-
21 W	12-16-47	1:30 P.M	S-50 Sewer outfall	170	Less than 0.2	-
10 W	12-16-47	1:30 P.M	Clinch River, immediately below S-50 Sewer outfall	0	Less than 0.2	0.8 ± 0.7
22 W	12-16-47	1:45 P.M	Poplar Creek, immediately before junction with Clinch River	0	Less than 0.2	2.5 ± 0.8
16 W	12-17-47	4:00 P.M	Drinking water, Bldg. K-1024, Room 7	0	Less than 0.2	1.1 ± 0.9
20 W	12-17-47	4:10 P.M	Cafeteria Cooking Water	0	Less than 0.2	0.9 ± 0.7
6 W	12-19-47	9:30 A.M	K-131 drainage into Poplar Creek	4	--	-

Distribution:

385

A. F. Huber ✓
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. T. E. Sheridon
S. Visner

Supervisor E. B. Olszewski Date 12-30-47

Works Laboratory Department
Industrial Hygiene Section

~~RESTRICTED~~

Report No. 22

Spec Haz

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
9 M	12- 2-47	10:00 A.M	Clinch River west of Jones Scrap Yard	0	-	-
19 M	12- 2-47	10:30 A.M	Powerhouse water intake	0	-	-
18 M	12- 2-47	10:30 A.M	Powerhouse water discharge	0	-	-
2 M	12- 2-47	10:40 A.M	Drainage of pond S.W. of Garage Area into Poplar Creek	2	-	-
8 M	12- 3-47	10:40 A.M	Drainage from "hot" scrap yard into Clinch River	0	-	Less than 0.5
4 M	12- 3-47	1:30 P.M	Drainage from Process Bldgs. into Poplar Creek	0	-	-
5 M	12- 3-47	2:00 P.M	Drainage from Process Bldgs. into Poplar Creek	0	-	-
3 M	12- 4-47	9:45 A.M	Drainage from Process Bldgs. into Poplar Creek	0	-	-
23 M	12- 4-47	10:00 A.M	Ground water adjacent to K-1239 Sludge Pit	0	-	-
25 M	12- 5-47	10:00 A.M	Clinch River above Elza Gate	0	Less than 0.2	1
26 M & 27 M	12-23-47	9:35 A.M	Drainage from Labs A, B, C, & D	2	-	2.4 ± 0.8

Distribution:

A. P. Huber ✓
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. T[illegible]. Sheldon
S. Visner

386

Classification changed to: UNCLASSIFIED
(level and category)

[signature] 24 Jul 95
ADC or ADD signature (first reviewer) Date

Thomas W. Selby 7/28/95
ADD signature (final reviewer) Date

Supervisor E. B. Olszewski Date 12-29-47

Wo[illegible] Laboratory Department
Industrial hygiene Section

Report [illegible] 21

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	12- 9-47	10:00 A.M	Clinch River, effluent from K-25	0	Less than 0.2	1
24 D	12- 9-47	10:30 A.M	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	12-10-47	9:40 A.M	Clinch River, effluent from K-25	0	Less than 0.2	1
24 D	12-10-47	10:30 A.M	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	12-11-47	9:50 A.M	Clinch River, effluent from K-25	0	Less than 0.2	2
24 D	12-11-47	10:30 A.M	Effluent water from K-25 Water Purification Plant	0	---	2
13 D	12-12-47		Clinch River, effluent from K-25	0	Less than 0.2	0.5 ± 0.7
24 D	12-12-47	2:55 P.M	Effluent water from K-25 Water Purification Plant	0	---	2

Distribution:

A. F. Huber ✓
K. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. T. E. Sheldon
S. Visner

Supervisor E. B. Olszewski Date 12-26-47

Works Laboratory Department
Industrial Hygiene Section

Report No. 20

Sec Haz

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
11 W	12- 9-47	10:15 A.M	Poplar Creek, influent to K-25	0	Less than 0.2	1
6 W	12- 9-47	12:45 P.M	K-131 drainage into Poplar Creek	8	---	-
22 W	12- 9-47	1:30 P.M	Poplar Creek, immediately before junction with Clinch River	0	Less than 0.2	1
17 W	12-10-47	10:10 A.M	Recirculating water K-25	0	---	1
14 W	12-10-47	10:15 A.M	Influent to Sewage Disposal Plant	12	---	-
15 W	12-10-47	10:15 A.M	Effluent from Sewage Disposal Plant	0	---	-
12 W	12-10-47	1:13 P.M	Clinch River, influent to K-25	0	Less than 0.2	Less than 0.5
21 W	12-10-47	2:30 P.M	S-50 Sewer outfall	80	0.5	---
10 W	12-10-47	2:45 P.M	Clinch River, below S-50 Sewer outfall	0	Less than 0.2	2
1 W	12-10-47	2:55 P.M	Bank of Poplar Creek Inlet N.E. of K-303-8	12	---	-
16 W	12-10-47	3:30 P.M	K-27 drinking water	0	Less than 0.2	2
20 W	12-12-47	3:30 P.M	Cafeteria Cooking Water	0	Less than 0.2	1.3 ± 0.9

Distribution:

38
8

A. F. Huber ✓
N. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. [redacted]. Sheldon
S. Visner

Supervisor E. B. Olszewski Date 12-26-47

Spec. Hal

Wor[illegible] Laboratory Department
Industrial hygiene Section

Report 19

Classification changed to: UNCLASSIFIED
(level and category)

[signature] 7/16/95
ADC or ADD signature (first reviewer) Date

[signature] 7/28/95
ADD signature (final reviewer) Date

Rec. 12-16-47

REPORT OF WATER SURVEY ANALYSES

~~RESTRICTED~~

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	12-1-47	8:20 A.M	Clinch River, effluent from K-25	0	Less than 0.2	Less than 0.5
24 D	12-1-47	10:30 A.M	Effluent water from K-25 Water Purification Plant	0	---	Less than 0.5
13 D	12-2-47	8:40 A.M	Clinch River, effluent from K-25	0	Less than 0.2	1
24 D	12-2-47	9:20 A.M	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	12-3-47	9:00 A.M	Clinch River, effluent from K-25	0	Less than 0.2	Less than 0.5
24 D	12-3-47	10:26 A.M	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	12-4-47	9:10 A.M	Clinch River, effluent from K-25	0	Less than 0.2	1
24 D	12-4-47	10:15 A.M	Effluent water from K-25 Water Purification Plant	0	---	Less than 0.5
13 D	12-5-47	8:45 A.M	Clinch River, effluent from K-25	0	Less than 0.2	1
24 D	12-5-47	10:45 A.M	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	12-8-47	3:00 P.M	Clinch River, effluent from K-25	0	Less than 0.2	1
24 D	12-8-47	3:30 P.M	Effluent water from K-25 Water Purification Plant	0	---	1

Distribution:

A. P. Huber ✓
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. T. E. Sheldon
S. Wiener

389

Supervisor E. B. Olszewski Date 12-16-47

Wo s Laboratory Department
Industrial Hygiene Section

Report No.

Classification changed to: UNCLASSIFIED
(level and category)

ADC or ADD signature (first reviewer) Date 24 Jul 95

ADD signature (final reviewer) Date 7/28/95

RESTRICTED

REPORT OF WATER SURVEY ANALYSIS

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
11 W	12-1-47	9:45 A.M	Poplar Creek influent to K-25	0	Less than 0.2	1
1 W	12-1-47	9:50 A.M	Poplar Creek inlet N.E. of K-303-8	0	--	-
17 W	12-1-47	10:00 A.M	Recirculating water K-27	0	---	1
14 W	12-1-47	10:05 A.M	Influent to Sewage Disposal Plant	1	---	-
15 W	12-1-47	10:05 A.M	Effluent from Sewage Disposal Plant	0	---	-
22 W	12-1-47	10:45 A.M	Poplar Creek immediately before junction with Clinch River	0	Less than 0.2	1
12 W	12-1-47	3:45 P.M	Clinch River, influent to K-25	0	Less than 0.2	Less than 0.5
21 W	12-1-47	3:40 P.M	S-50 Sewer outfall	80	0.2	-
10 W	12-1-47	3:45 P.M	Clinch River, below S-50 Sewer outfall	0	Less than 0.2	1
16 W	12-2-47	10:50 A.M	K-25 Drinking Water, Garage Area	0	Less than 0.2	2
6 W	12-3-47	2:45 P.M	K-131 Drainage into Poplar Creek	8	---	-
20 W	12-3-47	10:10 A.M	Cafeteria Cooking Water	0	Less than 0.2	1

Distribution:

390

A. P. Huber
E. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. [illegible] Gordon
S. [illegible]

Supervisor E. B. Olszewski Date 12-16-47

Work Laboratory Department
Industrial Hygiene Section

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. P.P.M.	Fluoride Conc. P.P.M.	Alpha Counts per minute per liter ml
4 M	11-12-47 ✓	1:10 P.M	Drainage from Process Bldgs into Poplar Creek - opposite K-305-2	2	---	-
3 M	11-12-47 ✓	1:20 P.M	Drainage from Process Bldgs into Poplar Creek - opposite K-306-2	2	---	-
2 M	11-12-47 ✓	1:40 P.M	Drainage from pond S.W. of Garage Area	2	---	-
18 M	11-12-47 ✓	2:10 P.M	Powerhouse water discharge	0	---	-
5 M	11-12-47 ✓	2:45 P.M	Drainage from Process Bldgs. into Poplar Creek - North of K-303-10	0	---	-
19 M	11-12-47 ✓	3:25 P.M	Powerhouse intake water	0	---	-
9 M	11-12-47 ✓	3:35 P.M	Clinch River west of Jones Scrap Yard	0	---	-
8 M	11-12-47 ✓	3:45 P.M	Drainage from "hot" scrap yard into bay N.W. of Galaghar Gate	0	---	-
25 M	11-24-47 ✓	9:10 A.M	Clinch River, 1½ miles from Elza Gate	0	less than 0.2	1
27 M	11-28-47	10:20 A.M	Drainage from Labs A, B, C, & D	40	---	7
23 M	11-28-47	3:30 P.M	Ground water adjacent to K-1239 sludge pit	0	---	-

Distribution:

391

A. F. Huber ✓
M. J. Costello, M.D.
A. F. Dunlap (2)
Works Lab. Central File
D. T. A. Sheridan
S. Visner

Supervisor E. B. Olszewski Date December 5, 1947

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
12 W	11-24-47	12:40 P.M	Clinch River, influent to K-25	0	less than 0.2	2
21 W	11-24-47	1:00 P.M	S-50 Sewer outfall	200	0.4	-
10 W	11-24-47	1:05 P.M	Clinch River, immediately below S-50 Sewer Outfall	0	less than 0.2	2
11 W	11-24-47	1:20 P.M	Poplar Creek, influent to K-25	0	less than 0.2	less than 0.5
1 W	11-24-47	1:30 P.M	Inlet to Poplar Creek, N.E. of K-303-8	0	---	-
17 W	11-24-47	1:35 P.M	Recirculating water K-25	0	---	1
16 W ✓	11-24-47	1:45 P.M	Drinking water K-27 from Building K-131	0	less than 0.2	less than 0.5
14 W	11-24-47	3:30 P.M	Water influent to Sewage Disposal Plant	0	---	-
15 W	11-24-47	3:40 P.M	Water effluent from Sewage Disposal Plant	0	---	-
20 W	11-24-47	4:00 P.M	Cafeteria cooking water	0	less than 0.2	less than 0.5
22 W	11-25-47	9:45 A.M	Poplar Creek, immediately before junction with Clinch River	0	less than 0.2	1
6 W	11-25-47	2:00 P.M	K-131 drainage into Poplar Creek	4	---	-

Distribution:

392

A. F. Huber ✓
M. J. Costello, M.D.
A. F. Dunlap. (2)
Work Lab. Central File
G. [redacted] Sheldon
S. Wiener

Supervisor C. B. Olszewski Date December 5, 1947

Wo[illegible] Laboratory Department
Industrial Hygiene Section

Spec. Hazards
Report 16

Rec. 12-8-47

REPORT OF WATER SURVEY ANALYSES

Plot Plan Reference No.	Date Sampled	Time Sampled	Sampling Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	11-20-47	10:15 A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-20-47	10:45 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-21-47	8:50A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-21-47	9:15 A.M.	Effluent water from K-25 Water Purification Plant	0	---	2
13 D	11-24-47	10:30 A.M	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-24-47	12:50 P.M	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-25-47	8:45 A.M	Clinch River, effluent from K-25	0	less than 0.2	2
24 D	11-25-47	9:25 A.M	Effluent water from K-25 Water Purification Plant	0	---	2
13 D	11-26-47	8:45 A.M	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-26-47	9:25 A.M	Effluent water from K-25 Water Purification Plant	0	---	2
13 D	11-28-47	9:30 A.M	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-28-47	9:55 A.M	Effluent water from K-25 Water Purification Plant	0	---	1
24 D	11-28-47	9:55 A.M	Effluent water from K-25 Water Purification Plant			2 ≠ 1 Beta Counts per min. per 100 ml.

Distribution:

A. P. Huber
M. J. Costello, M.D.
A. P. Dunlap (2)
Works Lab. Central File
G. T. E. Sheldon
S. Visner

393

Supervisor E. B. Olszewski

Date December 5, 1947

#68

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO [illegible] LOCATION [illegible]

DATE [illegible] 1, 1947

ANSWERING LETTER DATE

ATTENTION

COPY TO [illegible] J. Costello, [illegible]
[illegible] Dunlap (2)
G. [illegible] Sheldon
[illegible] Fisher
[illegible] Lab. Central File
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Reports Number 14 and 15 are enclosed.

E. [illegible] Ketchum

[illegible]Ktae

WCX-80 THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Water Survey Program

Report No. 14 December 1, 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Gravimetric Conc. p.p.m.	Chloride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
11	11-17-47	9:45 A.M.	Poplar Creek, influent to [illegible]-25	0	less than 0.2	2
1	11-17-47	9:50 A.M.	Poplar Creek, inlet northeast of [illegible]	0	—	-
17	11-17-47	10:00 A.M.	Recirculating water, [illegible]-27	0	—	1
14	11-17-47	10:15 A.M.	Influent to [illegible] Disposal Plant	2	—	-
15	11-17-47	10:20 A.M.	Effluent from Sewage Disposal Plant	0	—	-
12	11-17-47	10:40 A.M.	Clinch River, influent to [illegible]-25	0	less than 0.2	1
6	11-17-47	1:15 P.M.	[illegible]-131 drainage into Poplar Creek	4	—	-
22	11-17-47	1:40 P.M.	Poplar Creek, immediately before junction with Clinch River	0	less than 0.2	1
16	11-17-47	2:15 P.M.	[illegible]-25 drinking water, Ground equipment storehouse	0	less than 0.2	less than 0.5
20	11-17-47	2:30 P.M.	Cafeteria cooking water	0	less than 0.2	1
10	11-18-47	11:00 A.M.	Clinch River, immediately below [illegible]-50 sewer outfall	0	less than 0.2	1
21	11-18-47	10:4[illegible] A.M.	[illegible]-50 sewer outfall	600	0.5	-

E. B. Olszewski

E. B. Olszewski

Approved: N. H. Ketchum

395

Water Survey Program

Report No. 15 December 1, 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluorine Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	11-14-47	8:45 A.M.	Clinch River, effluent from K-25	0	less than 0.2	2
24 D	11-14-47	9:15 A.M.	Effluent water from K-25 Water Purification Plant	0	---	2
13 D	11-17-47	9:20 A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-17-47	10:40 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-18-47	12:40 P.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-18-47	2:30 P.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-19-47	10:15 A.M.	Clinch River, effluent from K-25	0	less than 0.2	2
24 D	11-19-47	10:50 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1

E. B. Olszewski
E. B. Olszewski

Approved: H. H. Ketchen
H. H. Ketchen

396

W J

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber
LOCATION K-303-7

DATE November 24, 1947

ANSWERING LETTER DATE

ATTENTION
COPY TO
M. J. Costello, M.D.
A. P. Dunlap (2)
F. W. Hurd (Works Lab. Central File)
L. T. S. Sheldon
S. Vismer
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 13 is enclosed.

N. H. Ketcham

NHK:ae

Classification changed to UNCLASSIFIED
(Insert and Signature)
[signature] 24 Jul 95
ADC or ADD signature (Date)
[signature] 7/28/95
ADC signature (Final Reviewer) Date

397

WCX-80

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

398

Water Survey Program

Report No. 13 November 24, 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
11 W	11-11-47 ✓	10:45 A.M.	Poplar Creek, influent to K-25	2	0.2	3
22 W	11-11-47 ✓	10:45 A.M.	Poplar Creek inlet [illegible] K-[illegible]	12	---	-
17 W	11-11-47 ✓	12:00 N.	Recirculating Water, K-25	0	---	2
16 W	11-11-47 ✓	12:15 P.M.	Drinking Water, K-631 Bldg.	0	less than 0.2	less than 0.5
14 W	11-11-47 ✓	12:25 P.M.	Influent to Sewage Disposal Plant	2	---	-
15 W	11-11-47 ✓	12:25 P.M.	Effluent from Sewage Disposal Plant	0	---	-
12 W	11-11-47 ✓	1:00 P.M.	Clinch River, influent to K-25	0	less than 0.2	2
22 W	11-11-47 ✓	1:15 P.M.	Poplar Creek, immediately before junction with Clinch River	0	less than 0.2	1
21 W	11-11-47 ✓	3:00 P.M.	S-50 Sewer Outfall	150	0.4	-
10 W	11-11-47	3:00 P.M.	Clinch River below S-50 sewer outfall	2	less than 0.2	1
20 W	11-11-47	1:31 P.M.	Cafeteria cooking water	0	less than 0.2	2
6 W	11-11-47	1:30 P.M.	K-131 drainage into Poplar Creek	2	---	-

E. B. Olszewski

E. B. Olszewski

Approved: _____

[illegible] Fetcham

Walter

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber
LOCATION K-303-7

DATE November 24, 1947

ANSWERING LETTER DATE

ATTENTION
COPY TO M. J. Costello, M.D.
A. P. Dunlap (2)
F. S. Hurd (Works Lab. Central File)
G. T. E. Sheldon
S. Visner
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 12 is enclosed.

N. H. Ketcham

NHK:ae

Classification changed to UNCLASSIFIED (Level and category)

Peter Kaufmann 24 Feb 95
Authority (Signature) (Reviewer) Date

Thomas W. Selby 7/28/95
Date

399

WCX-80

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Water Survey Program

Report No. 12 November 24, 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per minute per 100 ml.
13 D	11-11-47	10:05 a.m.	Clinch River, effluent from K-25	0	less than 0.2	3
24 D	11-11-47	10:45 a.m.	Effluent water from K-25 water purification plant	0	---	1
13 D	11-12-47	8:44 a.m.	Clinch River, effluent from K-25	0	less than 0.2	2
24 D	11-12-47	9:15 a.m.	Effluent water from K-25 water purification plant	0	---	1
13 D	11-13-47	10:30 a.m.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-13-47	11:01 a.m.	Effluent water from K-25 water purification plant	0	---	2

E. B. Olszewski
E. B. Olszewski

Approved: [illegible]
[illegible]

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber
LOCATION K-303-7

DATE November 19, 1947

ANSWERING LETTER DATE

ATTENTION

COPY TO
M. J. Costello, M.D.
A. P. Dunlap (2)
F. W. Hurd (Works Lab. Central File)
G. T. E. Sheldon
S. Visner ✓
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 11

is enclosed.

N. H. Ketcham

N. H. Ketcham

NHK:ae

Classification changed to: UNCLASSIFIED
(level and category)

[signature] 2/7/95
ADC or ADD signature (first reviewer) Date

Thomas W. Selby 7/28/95
ADD signature (final reviewer) Date

401

WCX-80

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Water Sur[illegible] rogram

Report No. 11 Nov[illegible]er 1[illegible], 1947 [redacted]

204

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. P.p.m.	Fluoride Conc. P.p.m.	Alpha Counts per min per 100 ml.
14 [illegible]	11-3-47 ✓	10:10 A.M.	Influent to Sewage Disposal Plant	2	---	-
11 [illegible]	11-3-47 ✓	9:45 A.M.	Poplar Creek, influent to K-25	2	less than 0.2	2
1[illegible]	11-3-47	9:50 A.M.	Poplar Creek Inlet N.E. of K-303-[illegible]	4	---	-
15 [illegible]	11-3-47	10:10 A.M.	Effluent from Sewage Disposal Plant	2	---	-
17 [illegible]	11-3-47 ✓	10:[illegible]0 A.M.	Recirculating water K-27	0	---	4
16 [illegible]	11-3-47	12:1[illegible] P.M.	K-25 drinking water K-1001, Bldg "C"	0	less than 0.2	1
12 [illegible]	11-3-47	12:20 P.M.	Clinch River, influent to K-25	0	less than 0.2	2
22 [illegible]	11-3-47	12:40 P.M.	Poplar Creek, above junction with Clinch River	0	less than 0.2	2
21 N	11-3-47 ✓	12:50 P.M.	[illegible]-50 Sewer Outfall	300	0.3	-
10 N	11-3-47	12:50 P.M.	Clinch River, below [illegible]-50 Sewer Outfall	0	less than 0.2	1
6 N	11-3-47	2:30 P.M.	K-131 drainage into Poplar Creek	16	---	-

C. B. Olszewski
C. B. Olszewski

Approved: R. H. Ketchum
R. H. Ketchum

Clossey

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber

LOCATION

ATTENTION

COPY TO M. J. Costello, M.D.
A. P. Dunlap (2)
F. W. Hurd (Works Lab. Central File)
G. T. E. Sheldon
W. Visner
File

DATE November 19, 1947

ANSWERING LETTER DATE

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 10

is enclosed.

N. H. Ketcham

N. H. Ketcham

NHK:ae

Classification changed to UNCLASSIFIED
(level and category)

[signature] 24 Jul 95
ADC or ADD signature (final reviewer) Date

[signature] 7/28/95
ADD signature (final reviewer) Date

403

WCX-80

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Water Survey Program

Report No. 10 November 1[illegible], 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml.
13 D	11-4-47	9:29 A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-4-47	9:55 A.M.	Effluent water from K-25 Water Purification Plant	0	---	4
13 D	11-5-47	9:15 A.M.	Clinch River, effluent from K-25	0	less than 0.2	less than 0.5
24 D	11-5-47	9:50 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-6-47	1:50 A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	11-6-47	2:20 P.M.	Effluent water from K-25 Water Purification Plant	0	---	3
13 D	11-7-47	11:00 A.M.	Clinch River, effluent from K-25	0	0.2	1
24 D	11-7-47	2:00 P.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-10-47	9:30 A.M.	Clinch River, effluent from K-25	0	0.3	1
24 D	11-10-47	11:00 A.M.	Effluent water from K-25 Water Purification Plant		---	1

E. B. Olszewski
. . Olszewski

Approved: [illegible]
. . Fetcha

Clossey

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber
LOCATION

DATE November 12, 1947

ANSWERING LETTER DATE

ATTENTION
COPY TO M. J. Costello, M.D.
A. P. Dunlap (2)
F. K. Hurd (Works Lab. Central File)
G. T. S. Sheldon
S. Visner
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 9

is enclosed.

W. H. Ketcham

W. H. Ketcham

WHK:ae

Classification changed to: UNCLASSIFIED
(Level and category)
[illegible] 24 Jul 95
[illegible] Date
Thomas W. Sidney 7/20/95

405

WCX-80

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Water Survey Program

Report No. 9 November 1[illegible], 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per liter
11 W	10-28-47	10:35 A.M.	Poplar Creek, influent to K-25	2	less than 0.2	1
1 W	10-28-47	10:50 A.M.	Poplar Creek inlet, northwest of K-303-[illegible]	4	—	-
17 W	10-28-47	10:55 A.M.	Recirculating water K-25	0	—	less than 0.5
16 W	10-28-47	11:[illegible] A.M.	K-25 drinking water, building K-302-3	0	less than 0.2	1
6 W	10-28-47	2:30 P.M.	K-131 drainage into Poplar Creek	16	—	-
22 W	10-28-47	3:15 P.M.	Poplar Creek before junction with Clinch River	0	less than 0.2	1
21 W	10-28-47	3:20 P.M.	K-50 sewer outfall into Clinch River	80	0.2	-
10 W	10-28-47	3:40 P.M.	Clinch River, immediately below K-50 sewer outfall	2	less than 0.2	1
12 W	10-28-47	3:35 P.M.	Clinch River, influent to K-25	0	less than 0.2	1

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha counts per min per 100 ml
14 W	10-29-47	9:05 A.M.	Influent to Sewage Disposal Plant	0	---	---
15 W	10-29-47	9:05 A.M.	Effluent from Sewage Disposal Plant	2	---	---

E. B. Olszewski
E. B. Olszewski

Approved: W. H. Ketcham
W. H. Ketcham

Closed

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber

LOCATION

ATTENTION

COPY TO M. J. Costello, M.D.
A. P. Dunlap (2)
F. B. Hurd (Works Lab. Central File)
G. T. E. Sheldon
J. Visnor
File

DATE November 12, 1947

ANSWERING LETTER DATE

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 8

is enclosed.

N. H. Ketcham

N. H. Ketcham

NHK:ae

Classification UNCLASSIFIED

Peter P. Kottner 24 Jul 95

Thomas W. Selby 7/28/95

Date

408

WCX-80

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

Water Survey Program

Report No. 8 November 1, 1947

604

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per liter ml
13 D	10-29-47	9:45 A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	10-29-47	9:35 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	10-30-47	9:30 A.M.	Clinch River, effluent from K-25	0	less than 0.2	2
24 D	10-30-47	10:07 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	10-31-47	10:05 A.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24 D	10-31-47	10:30 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13 D	11-3 - 47	9:30 A.M.	Clinch River, effluent from K-25	0	less than 0.2	2
24 D	11-3 -47	10:30 A.M.	Effluent water from K-25 Water Purification Plant	0	---	1

E. B. Olszewski
E. B. Olszewski

Approved: W. H. Ketchum
W. H. Ketchum

Cossey

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber
LOCATION K-303-7

DATE November 11, 1947

ANSWERING LETTER DATE

ATTENTION

COPY TO
M. J. Costello, M.D.
A. P. Dunlap (2)
F. T. Hurd (Works Lab. Central File)
G. T. A. Sheldon
S. Visner
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 7

is enclosed.

H. H. Ketchen

H. H. Ketchen

HHK:ae

410

Water Survey Program

Report No. 7 November 11, 1947

Plot Plan Reference No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml.
13-D	10-23-47 ✓	12:35 P.M.	Clinch River, effluent from K-25	0	less than 0.2	1
24-D	10-23-47 ✓	1:31 P.M.	Effluent water from K-25 Water Purification Plant	0	---	0.5
13-D	10-24-47 ✓	8:30 A.M.	Clinch River, effluent from K-25	0	0.2	1
24-D	10-24-47	10:00 A.M.	Effluent water from K-25 Water Purification Plant	0	---	-
13-D	10-27-47	1:15 P.M.	Clinch River, effluent from K-25	0	less than 0.2	less than 0.5
24-D	10-27-47	3:35 P.M.	Effluent water from K-25 Water Purification Plant	0	---	1
13-D	10-28-47	10:20 A.M.	Clinch River, effluent from K-25	0	less than 0.2	less than 0.5
24-D	10-28-47	3:40 P.M.	Effluent water from K-25 Water Purification Plant	0	---	less than 0.5

E. B. Olszewski
E. B. Olszewski

Approved: [illegible]
[illegible] Wetcham

Closed

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS CORP. LOCATION Post Office Box P OAK RIDGE, TENN.

TO Mr. A. P. Huber
LOCATION K-303-7

DATE November 7, 1947

ANSWERING LETTER DATE

ATTENTION

COPY TO
N. J. Costello, K.L.
A. F. Dunlap (2)
F. A. Hurd (Works Lab. Central File)
G. T. K. Meldon
S. Visner
File

SUBJECT Water Survey Program Analyses

Water Survey Program Analysis Report No. 6

is enclosed.

N. H. Ketcham

N. H. Ketcham

NHK:ae

412

WCX-80 THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

H13

Water Survey Program

Report No. 6 Date November 7, 1947

Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml.
10-20-47 ✓	2:25 P.M.	Clinch River, influent to K-25 area	0	0.2	1
10-20-47 ✓	3:30 P.M.	S-50 Sewer outfall	0	less than 0.2	-
10-20-47 ✓	3:15 P.M.	Clinch River, below S-50 Sewer outfall	0	less than 0.2	1
10-21-47 ✓	10:00 A.M.	Poplar Creek, influent to K-25	4	less than 0.2	1
10-21-47 ✓	10:35 A.M.	Edge of Poplar Creek inlet, N.W. of K-303-8	8	--	-
10-21-47	1:20 P.M.	K-131 drainage into Poplar Creek	16	--	-
10-21-47	2:00 P.M.	Clinch River below mouth of Poplar Creek	0	less than 0.2	2
10-23-47 ✓	9:25 A.M.	Recirculating Water K-27	0	--	2
10-22-47 ✓	9:35 A.M.	Influent to Sewage Disposal Plant	120	--	-

414

Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml.
10-22-47	9:40 A.M.	Effluent from Sewage Disposal Plant	2	--	--
10-22-47	9:50 A.M.	Drinking Water from K-402-7	0	less than 0.2	1

E. B. Olszewski
E. B. Olszewski

Approved: N. H. Ketcham
N. H. Ketcham

G-2

47

Table I

Water Survey Program

October and November 1947

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
13 D	Clinch River, effluent from K-25	10- 2-47	0	—	-
		10- 9-47	0	0.2	Less than 0.5
		10-10-47	0	0.1	1
		10-13-47	0	0.4	Less than 0.5
		10-14-47	0	0.1	1
		10-15-47	2	0.1	Less than 0.5
		10-16-47	0	No analysis	1
		10-17-47	0	No analysis	2
		10-20-47	0	0.5	2
		10-21-47	0	0.5	1
		10-22-47	0	Less than 0.2	1
		10-23-47	0	Less than 0.2	1
		10-24-47	0	0.2	1
		10-27-47	0	Less than 0.2	Less than 0.5
		10-28-47	0	Less than 0.2	Less than 0.5
		10-29-47	0	Less than 0.2	1
		10-30-47	0	Less than 0.2	2
		10-31-47	0	Less than 0.2	1
		11- 3-47	0	Less than 0.2	2
		11- 4-47	0	Less than 0.2	1
		11- 5-47	0	Less than 0.2	Less than 0.5
		11- 6-47	0	Less than 0.2	1
		11- 7-47	0	0.2	1
		11-10-47	0	0.3	1
		11-11-47	0	Less than 0.2	3
		11-12-47	0	Less than 0.2	2
		11-13-47	0	Less than 0.2	1
		11-14-47	0	Less than 0.2	2
		11-17-47	0	Less than 0.2	1

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
13 D	Clinch River, effluent from K-25	11-18-47	0	Less than 0.2	1
		11-19-47	0	Less than 0.2	2
		11-20-47	0	Less than 0.2	1
		11-21-47	0	Less than 0.2	1
		11-24-47	0	Less than 0.2	1
		11-25-47	0	Less than 0.2	2
		11-26-47	0	Less than 0.2	1
		11-28-47	0	Less than 0.2	1
24 D	Effluent water from K-25 Water Purification Plant	10- 2-47	0	—	-
		10- 9-47	0	—	Less than 0.5
		10-10-47	0	—	Less than 0.5
		10-13-47	0	—	Less than 0.5
		10-14-47	0	—	1
		10-15-47	0	—	1
		10-16-47	0	—	1
		10-17-47	0	—	1
		10-20-47	0	—	2
		10-21-47	0	—	1
		10-22-47	0	—	0.5
		10-23-47	0	—	0.5
		10-24-47	0	—	1
		10-27-47	0	—	1
		10-28-47	0	—	Less than 0.5
		10-29-47	0	—	1
		10-30-47	0	—	1
		10-31-47	0	—	1
		11- 3-47	0	—	1
		11- 4-47	0	—	4
		11- 5-47	0	—	1
		11- 6-47	0	—	3
		11- 7-47	0	—	1
		11-10-47	0	—	1
		11-11-47	0	—	1
		11-12-47	0	—	1
		11-13-47	0	—	2

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
24 D	Effluent water from K-25 Water Purification Plant	11-14-47	0	---	2
		11-17-47	0	---	1
		11-18-47	0	---	1
		11-19-47	0	---	1
		11-20-47	0	---	1
		11-21-47	0	---	2
		11-24-47	0	---	1
		11-25-47	0	---	2
		11-26-47	0	---	2
		11-28-47	0	---	1 alpha 2 beta
Y-12 Potable Water	Bldg. 9212, Wing A	*	4	---	9
	Bldg. 9206, N.W.Corridor	*	0	---	Less than 0.5
	Bldg. 9212, Wing B	*	0	---	Less than 0.5
	Bldg. 9212, Wing B	*	2	---	1
	Bldg. 9212, ---	*	0	---	1
	Bldg. 9212, Wing C	*	0	---	1
	Bldg. 9212, Wing D	*	0	---	1
	Bldg. 9212, Wing D	*	2	---	4
	Bldg. 9206, S.Cent. Corridor	*	0	---	1
	Bldg. 9202, S.Cent. Corridor	*	2	---	1
	Bldg. 9204-3, K-23 Mech. Serv. Area		0	---	1
	Bldg. N-37, Chem. Process Area	*	0	---	0.5
	Bldg. 9203-3, K-23 Chem. Recovery Area	*	120	---	10
	Bldg. 9203-3, Refining Service Area	*	0	---	1
	Bldg. 9733-1, N. Corridor	*	2	---	1
	Bldg. 9733-1, S. Corridor	*	0	---	1
	Bldg. 9733-2, S. Corridor	*	0	---	1
	Bldg. 9733-4, Basement Corridor		0	---	2
	Bldg. 9733-2, N. Corridor	*	0	---	1
	Bldg. 9733-4, N. Corridor	*	0	---	2
	Bldg. 9733-3, N. Corridor	*	0	---	1
	Bldg. 9733-3, N. Corridor	*	0	---	Less than 0.5

* Sampling Date was not given.

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
Y-12 Potable Water	Bldg. 9731, F-2	*	0	---	1
	Bldg. 9735, S. Corridor	*	0	---	1
	Bldg. 9739, Central Corridor	*	0	---	1
	Bldg. 9766, ---	*	0	---	Less than 0.5
	Bldg. 9204-3, Chem. Recovery Area	*	0	---	2
	Bldg. 9204-3, Chem. Recovery Area	*	0	---	2
	Bldg. 9204-3, Chem. Recovery Area	*	0	---	2
	Bldg. 9204-3, Chem. Recovery Area	*	0	---	1
	* Sampling Date was not given				
12 W	Clinch River, influent to K-25				
		10-15-47	0	0.2	1
		10-20-47	0	0.2	1
		10-28-47	0	Less than 0.2	1
		11- 3-47	0	Less than 0.2	2
		11-11-47	0	Less than 0.2	2
		11-17-47	0	Less than 0.2	1
		11-24-47	0	Less than 0.2	2
16 W	K-25 and K-27 Drinking Water				
	Process Utilities Lab.	10- 1-47	0	---	-
	Bldg. K-1004-D, Room 011	10-16-47	0	0.4	Less than 0.5
	Bldg. K-402-7	10-22-47	0	Less than 0.2	1
	Bldg. K-302-3	10-28-47	0	Less than 0.2	1
	Bldg. K-1001, Wing C	11- 3-47	0	Less than 0.2	1
	Bldg. K-631	11-11-47	0	Less than 0.2	Less than 0.5
	Grounds Equipment Storehouse	11-17-47	0	Less than 0.2	Less than 0.5
	Bldg. K-131	11-24-47	0	Less than 0.2	Less than 0.5

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
10 W	Clinch River, below S-50 Sewer outfall	10-16-47	0	0.4	1
		10-20-47	0	Less than 0.2	1
		10-28-47	2	Less than 0.2	1
		11- 3-47	0	Less than 0.2	1
		11-11-47	2	Less than 0.2	1
		11-18-47	0	Less than 0.2	1
		11-24-47	0	Less than 0.2	2
21 W	S-50 Sewer Outfall	10- 1-47	0	—	-
		10-17-47	4000	0.8	-
		10-20-47	0	Less than 0.2	-
		10-28-47	80	0.2	-
		11- 3-47	800	0.3	-
		11-11-47	150	0.4	-
		11-18-47	600	0.3	-
		11-24-47	200	0.4	-
14 W	Influent to Sewage Disposal Plant	10- 1-47	16	—	-
		10-15-47	8	—	-
		10-22-47	120	—	-
		10-29-47	0	—	-
		11- 3-47	2	—	-
		11-11-47	2	—	-
		11-17-47	2	—	-
		11-24-47	0	—	-
15 W	Effluent from Sewage Disposal Plant	10- 1-47	12	—	-
		10-15-47	8	—	-
		10-22-47	2	—	-
		10-29-47	2	—	-
		11- 3-47	2	—	-
		11-11-47	0	—	-
		11-17-47	0	—	-
		11-24-47	0	—	-

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
6 W	K-131 Drainage into Poplar Creek	10- 2-47	30	---	-
		10-17-47	40	---	-
		10-21-47	16	---	-
		10-28-47	16	---	-
		11- 3-47	16	---	-
		11-11-47	2	---	-
		11-17-47	4	---	-
		11-25-47	4	---	-
11 W	Poplar Creek, influent to K-25	10- 6-47	1	---	-
		10-15-47	0	0.3	1
		10-21-47	4	Less than 0.2	1
		10-28-47	2	Less than 0.2	1
		11- 3-47	2	Less than 0.2	2
		11-11-47	2	0.2	3
		11-17-47	0	Less than 0.2	2
		11-24-47	0	Less than 0.2	Less than 0.5
17 W	Recirculating Water K-25	10- 2-47	0	---	-
	Recirculating Water K-25	10-15-47	0	---	1
	Recirculating Water K-27	10-23-47	0	---	2
	Recirculating Water K-25	10-28-47	0	---	Less than 0.5
	Recirculating Water K-27	11- 3-47	0	---	4
	Recirculating Water K-25	11-11-47	0	---	2
	Recirculating Water K-27	11-17-47	0	---	1
	Recirculating Water K-25	11-24-47	0	---	1
22 W	Poplar Creek, before junction with Clinch River	10- 6-47	0	---	-
		10-15-47	0	---	2
		10-21-47	0	Less than 0.2	2
		10-28-47	0	Less than 0.2	1
		11- 3-47	0	Less than 0.2	2
		11-11-47	0	Less than 0.2	1
		11-17-47	0	Less than 0.2	1
		11-25-47	0	Less than 0.2	1

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
1 W	Poplar Creek inlet, N.E. of K-303-8	10- 1-47	12	---	-
		10-15-47	4	---	-
		10-21-47	8	---	-
		10-28-47	4	---	-
		11- 3-47	4	---	-
		11-11-47	12	---	-
		11-17-47	0	---	-
		11-24-47	0	---	-
20 W	Cafeteria Cooking Water	10- 6-47	0	---	-
		11-11-47	0	Less than 0.2	2
		11-17-47	0	Less than 0.2	1
		11-24-47	0	Less than 0.2	Less than 0.5
2 M	Drainage from pond S.W. of Garage Area into Poplar Creek	10- 1-47	4	---	-
		11-12-47	2	---	-
3 M	Drainage from Process Bldgs. into Poplar Creek	10- 2-47	0	---	-
		11-12-47	2	---	-
4 M	Drainage from Process Bldgs. into Poplar Creek	10- 2-47	0	---	-
		11-12-47	2	---	-
5 M	Drainage from Process Bldgs. into Poplar Creek	10- 2-47	0	---	-
		11-12-47	0	---	-
19 M	Powerhouse water intake	10- 3-47	0	---	-
		11-12-47	0	---	-
18 M	Powerhouse water discharge	10- 3-47	0	---	-
		11-12-47	0	---	-
8 M	Drainage from "hot scrap yard" into Poplar Creek	10 - 2-47	0	---	-
		11-12-47	0	---	-

Plot Plan Reference No.	Location	Date Sampled	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Activity Alpha Counts per Min. per 100 ml.
9 M	Clinch River, west of Jones Scrap Yard	10- 2-47	0	---	-
		11-12-47	0	---	-
25 M	Clinch River, 1½ miles above Elsa Gate	11-24-47	0	Less than 0.2	1
27 M	Drainage from Labs A, B, C, and D	11-28-47	40	---	7
23 M	Ground water adjacent to K-1239 sludge pit	11-28-47	0	---	-

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Date 10-29-47

Works Laboratory

Industrial Hygiene Section

Water Survey Program

Results of Analyses

Distribution List

S. C. Barnett
C. K. Beck
C. E. Center
M. J. Costello, M.D.
S. Cromer
A. P. Dunlap
A. P. Huber
W. B. Humes
F. W. Hurd
J. A. Marshall
M. G. Means
D. H. Riley
G. T. E. Sheldon
S. Visner
File

Classification changed to: UNCLASSIFIED
(level and category)

Peter Kontur 24 Jul 95
ADC or ADD signature (first reviewer) Date

Thomas W. Selby 7/28/95
ADD signature (final reviewer) Date

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423

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Water Survey Program

Report No. 5 Date October 29, 1947

Sample No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml
11-D	10-16-47	10:35 A.M.	Clinch River, approximately 4 miles below K-25	0	Interference No analysis	1
12-D	10-16-47	1:25 P.M.	Outlet in Bldg. K-1515	0	---	1
13-D	10-17-47	10:10 A.M.	Clinch River, approximately 4 miles below K-25	0	Interference No analysis	2
14-D	10-17-47	12:30 P.M.	Outlet in Bldg. K-1515	0	---	1
15-D	10-20-47	8:40 A.M.	Clinch River, approximately 4 miles below K-25	0	0.5	2
16-D	10-20-47	9:15 A.M.	Water faucet in Bldg. K-1515	0	---	2
17-D	10-21-47	10:15 A.M.	South side Clinch River, 4 miles below K-25	0	0.5	1
18-D	10-21-47	2:25 P.M.	Faucet in Bldg. K-1515	0	---	1
19-D	10-22-47	8:47 A.M.	North side Clinch River, 4 miles below K-25	0	less than 0.2	1

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Sample No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml
20-D	10-22-47	10:10 A.M.	Faucet in laboratory in Building K-1515	0	—	.5

E. B. Olszewski
E. B. Olszewski

Approved: N. H. Ketcham
N. H. Ketcham

G-2.

Memo No. 4
Date 10-29-47

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Works Laboratory

Industrial Hygiene Section

Water Survey Program

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File

Classification changed to: UNCLASSIFIED
(level and category)
ADC or ADD signature (first reviewer) Date 24 Jul 95
(second reviewer) Date 7/28/95

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Water Survey Program

Report No. 4 Date October 29, 1947

Sample No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml
1-W	10-15-47	11:30 A.M.	Poplar Creek, influent to K-25	0	0.3	1
2-W	10-15-47	11:40 A.M.	Edge of POPLAR CREEK inlet, N.W. of K-303-8	4	---	-
3-W	10-15-47	1:30 P.M.	Recirculating Water, K-25	0	---	1
4-W	10-15-47	2:00 P.M.	Effluent from Sewage Disposal Plant	8	---	-
5-W	10-15-47	1:50 P.M.	Influent to Sewage Disposal Plant	8	---	-
6-W	10-15-47	2:30 P.M.	Poplar Creek before junction with Clinch River	0	Interference No analysis	2
7-W	10-15-47	3:20 P.M.	Clinch River, approximately ½ mile above Gallahar Gate	0	0.2	1
[illegible]	10-15-47	1:03 P.M.	Clinch River, downstream from S-50 area	0	0.4	1

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Sample No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml
9-W	10-16-47	3:00 P.M.	Tap water from tap in Room 011, K-1004-D	0	0.4	less than 0.5
10-W	10-17-47	1:50 P.M.	Outfall from K-131 INTO POPLAR CREEK	40	---	---
11-W	10-17-47	2:30 P.M.	S-50 Sewer outfall into Clinch River	4000	0.8	---

E. B. Olszewski

E. B. Olszewski

Approved: N. H. Ketcham

N. H. Ketcham

G-2

3

OCT 2 3 1947

Works Laboratory

Industrial Hygiene Section

Water Survey Program

Results of Analyses

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G. T. E. Sheldon
S. Visner ✓
File

Classification changed to: UNCLASSIFIED
(level and category)

24 Jul 95
ADC or ADD signature (first reviewer) Date

7/28/95
ADD signature (final reviewer) Date

429

Water Survey Program

Report No. 3 Date October 23, 1947

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Sample No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min per 100 ml
7-D	10-14-47	10:30 A.M.	Clinch River, approximately 4 miles below K-25	0	0.1	1
[illegible]-D	10-14-47	11:00 A.M.	Outlet in laboratory located in Building K-1515	0	---	1
9-D	10-15-47	10:45 A.M.	Clinch River, approximately 4 miles below K-25	2	0.1	less than 0.5
10-D	10-15-47	3:35 P.M.	Outlet in laboratory located in Building K-1515	0	---	1

E. B. Olszewski

E. B. Olszewski

Approved: N. H. Ketcham

N. H. Ketcham

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2

Date OCT 2 2 1947

Works Laboratory

Industrial Hygiene Section

Water Survey Program

Results of Analyses

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Classification changed to: UNCLASSIFIED
(level and category)

ADC or ADD signature (final reviewer) Date 24 Aug 95

Thomas W. Selby 7/28/95
ADD signature (final reviewer) Date

431

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Water Survey Program

Report No. 2 Date October 22, 1947

Sample No.	Date Sampled	Time Sampled	Location	Uranium Conc. p.p.b.	Fluoride Conc. p.p.m.	Alpha Counts per min. per 100 ml.
1-D	10- 9-47	1:30 P.M.	Outlet in Bldg. K-1515, Water Purification Plant.	0		Less than 0.5
2-D	10- 9-47	2:15 P.M.	Clinch River, approximately 8 miles below K-25.	0	0.2	Less than 0.5
3-D	10-10-47	10:15 A.M.	Clinch River, approximately 4 miles below K-25.	0	0.1	1
4-D	10-10-47	10:45 A.M.	Outlet in Bldg. K-1515, Water Purification Plant	0		Less than 0.5
5-D	10-13-47	10:45 A.M.	Clinch River, approximately 4 miles below K-25.	0	0.4	Less than 0.5
6-D	10-13-47	11:55 A.M.	Outlet in laboratory located in Bldg. K-1515.	0		Less than 0.5

E. B. Olszewski
E. B. Olszewski

Approved: N. H. Ketcham
N. H. Ketcham

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