Film deterioration makes parts of the document illegible
RNL 1-6-89

[redacted] -1-

Copy 1 - H.M.Parker
2 - C.N.Gross-J.T.Maider
3 - A.B.Greninger
4 - W.K.MacCready-R.S.Bell
5 - W.D.Norwood-P.A.Fuqua
6 - C.Capertsfelier-J.W.Healy
7 - W.Singlevich
8 - C.M.Patterson
9 - K.L.Mickelson-300 file
10 - 700 file
11 - Pink file
12 - Yellow file
13 - Extra file
14 - Extra file

This document consists of 5 pages #1 of 14 copies, Series A
~~(2) Chart. maps HW-7832~~
~~HW-7833~~

October 20, 1947

H.I. "ENVIRONS" REPORT FOR MONTH OF SEPTEMBER 1947

Water Monitoring

Two hundred and three samples of drinking water were taken during the month. The maximum alpha contamination was in the 300 Area, but the level was much lower than the last few months, averaging about 5 d/m/liter; the maximum being 8 d/m/liter from the #2 well. The only other positive result for alpha contamination was at White Bluffs, which had 2 d/m/liter. There were 8 special samples at Benton City, which have had slight positive alpha counts the last few months, but none of these had more than 2 d/m/liter. None of the drinking water samples had beta activity as high as 10^{-5} d/m/liter. There are some indications that part of Kennewick's water supply taken from the Columbia River has positive beta counts determined by special counts taken on some of the samples. The level is below the normal detectible level of 10^{-5}, - but it is apparently real.

Ten test well samples were taken, and none of these had positive results for either alpha or beta.

Seventy eight samples were taken from the Columbia River, and there was no positive alpha count. The results were as follows:

Location	No. of samples	alpha (uc/ml/liter) Maximum	alpha (uc/ml/liter) Average	beta (uc/liter) Maximum	beta (uc/liter) Average
183-B	0	--	--	--	--
183-D	5	< 2	< 2	< 10^{-5}	< 5×10^{-5}
183-F	5	< 2	< 2	45×10^{-5}	45×10^{-5}
Hanford	16	< 2	< 2	132×10^{-5}	45×10^{-5}
300 Area	6	< 2	< 2	20×10^{-5}	10×10^{-5}
Richland	11	< 2	< 2	16×10^{-5}	15×10^{-5}
Ferry Landing (upper line)	25	< 2	< 2	< 5×10^{-5}	< 5×10^{-5}
Above 100-B	1	< 2	< 2	5×10^{-5}	< 5×10^{-5}
Below Richland (to Eucalyptus Park)	9	< 2	< 2	9×10^{-5}	< 5×10^{-5}

Seventeen samples were taken from the Yakima River, and there was no positive count for either alpha or beta.

Air Monitoring.

The average dosage-rates obtained with detachable chambers were:

Location	Average mrep/hr August	Average mrep/hr September
100 Areas & Environs		
Rt. 1, Mi.8	0.01	0.01
Rt. 2, Mi.10	0.01	<0.01
Rt. 2N, Mi.5	0.01	0.02
Rt. 11A, Mi.1	0.05	0.02
Rt. 1 and Rt. 4N	0.02	0.02
Within 5 miles 200-E Area:		
Rt. 1S, Mi.6	0.04	0.02
Rt. 11A, Mi.6	0.03	0.03
Rt. 3, Mi.1	0.04	0.03
Meteorology 200-ft.	0.05	0.03
Within 10 miles 200-E Area:		
Rt. 1S, Mi.10	0.02	0.03
Rt. 10, Mi.1	0.02	0.02
Rt. 10, Mi.3	0.02	0.01
Rt. 2S, Mi.4	0.03	0.03
Near 300 Area:		
Rt. 1S, Mi.16	0.02	0.02
Rt. 4S, Mi.22	0.02	0.02

The atmospheric monitoring stations gave the following results:

Location	Average Dose in mrep/24 hrs. Integrator August	Integrator September	C. Chambers August	C. Chambers September
100-B	0.6	0.8	0.2	0.3
100-D	1.4	1.3	0.3	0.4
100-F	0.9	1.0	0.3	0.3
200-W	0.7	1.0	0.3	0.3
200-E	2.2	0.8	0.4	0.3
Outlying Areas	0.9	0.8	0.3	0.4

The chamber stations in the BX Construction Area indicated an average dosage-rate of 0.03 mrep/hr, which is the same as reported last month.

[redacted] 10/29/47

CCG-file.

The constant iodine monitors and air filters gave the following results:

Location	µc/liter (CI unit) 8-hr. period Maximum	µc/liter Average
200-E, SE corner	3.2×10^{-7}	2.7×10^{-9}
200-E, Tower #11	3.2×10^{-7}	2.2×10^{-9}
Gable Mt.	$<1.0 \times 10^{-7}$	1.0×10^{-10}
Richland	2.0×10^{-7}	$<1.0 \times 10^{-10}$
Pasco	---	5×10^{-10}
300 Area	---	5.2×10^{-10}
200-E, Tower #18	---	7.7×10^{-9}
100-D	---	4.6×10^{-9}
200-W gate	---	6.3×10^{-9}
Benton City	---	7.2×10^{-10}
Hanford 614	---	3.3×10^{-10}

Eighty-one rain samples were taken, with the following results:

Location	µc/liter Maximum	µc/liter Average
Within 200-E Area	1.9×10^{-2}	1.2×10^{-2}
Within 200-W Area	3.1×10^{-3}	6.9×10^{-3}
100 Areas & Environs	2.3×10^{-3}	4.6×10^{-4}
Intermediate On-Area	2.1×10^{-2}	3.2×10^{-3}
Outlying Off-Area	1.1×10^{-3} *	2.0×10^{-4}

*obtained at the Benton City 614 Bldg.

Land and Vegetation Contamination

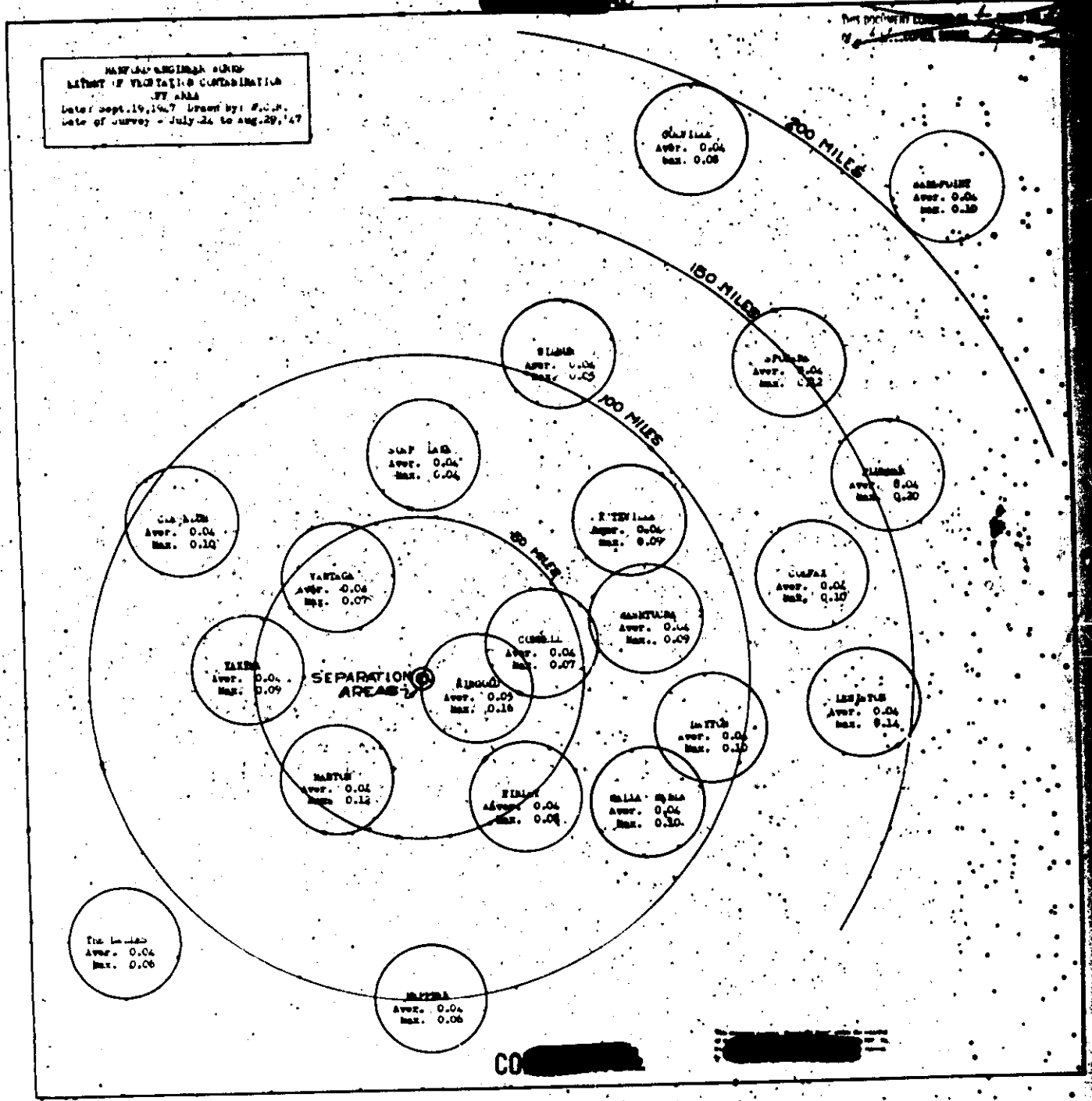
There were 304 routine vegetation samples taken during the month. The general average is continuing to decrease. Included are two maps showing results of a special survey of the Wahluke Plateau and a general Off-area survey, both of which were completed in July but not analyzed until this month. The results of the routine sampling are:

Location	µc/kg September Maximum	µc/kg September Average	µc/kg August Average
North of 200 Areas	0.11	<0.04	0.04
Near the 200 Areas	3.07	0.19	0.24
South of 200 Areas	0.17	<0.04	0.05
Richland	0.09	<0.04	<0.04
Pasco	0.10	<0.04	<0.04
Kennewick	0.11	<0.04	<0.04
Benton City	0.075	0.05	<0.04
Richland "Y"	0.09	<0.04	<0.04
Hanford	0.22	0.07	0.06

C.C. Gamertsfelder

CCG:swc

[redacted] DECLASSIFIED



14 sheets 1 of 2