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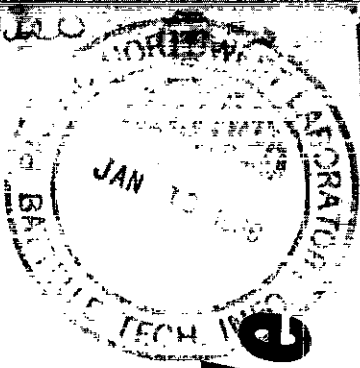
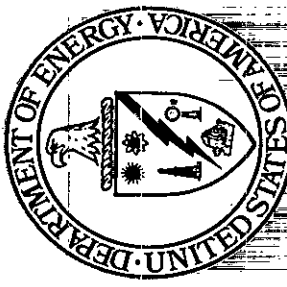
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plus restricted map.

RADIOACTIVE CONTAMINATION IN THE COLUMBIA RIVER AND IN THE AIR
AND
RADIATION LEVELS MEASURED IN THE AIR AT HANFORD WORKS AND VICINITY
FOR 1945, 1946, 1947, AND EARLY 1948

The attached tables summarize the radioactive contamination measured in the Columbia River and in the air, and the radiation levels measured in the air at the Hanford Works and vicinity for 1945, 1946, 1947, and early 1948.

Monthly average values are used throughout the summary, except in those cases where it was deemed more desirable because of changing conditions to list the average values weekly or twice monthly.

The attached map is a location map marking the approximate location of the instruments or samples taken as designated by the legend on the map.

It should be pointed out that some of the monthly averages tabulated in this summary were taken from the original data covering a period from the first to the last day of each month. These averages will then not necessarily correspond to the averages listed in some of the earlier quarterly and monthly summaries which were written on a report month basis ending the month or quarter at some date earlier than the last day of the calendar month.

This summary is merely a requested tabulation of the data for the listed specific measurements and no attempt is made, per this report, to correlate the data with atmospheric or operating conditions.

Radioactive Contamination in the Columbia and Yakima Rivers

Tables 1-A, 1-B, 1-C, and 1-D, summarize the monthly average alpha and beta contamination detected in samples taken from the Columbia and Yakima Rivers for the period, May, 1945, to April, 1948.

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All river water is analyzed by evaporating 500 ml. of the sample (some earlier samples were 100 ml.) and transferring the residue to a 1½ inch diameter stainless steel plate. The residue is counted directly for beta activity using a thin mica-window counter, and a standard alpha counter for the alpha activity.

All counting rates were corrected for counter geometry and sample decay, when known. The limit of sensitivity for the beta and gamma activity measurements in the river water for this type of analysis is approximately 5×10^{-5} μ c/liter.

Activity is conventionally expressed in microcuries on the basis of one microcurie corresponding to 3.7×10^4 disintegrations per second. Inasmuch as the relevant disintegration schemes are rarely known, the purist will note that the true microcurie content is seldom known. It is believed that the conventional microcurie statement is well understood in the biological field, and is more convenient than a statement of measured beta particles in the counters.

Radiation Levels Observed in Air

"C" Chambers and "M" and "S" Type Chambers

Tables 2-A, 2-B, 2-C, 2-D, and 2-E, summarize the radiation level as measured by the "C" type chamber for the period, September 14, 1945 to April, 1948, inclusive.

Tables 3-A, 3-B, 3-C, 3-D, 3-E, 3-F, 3-G and 3-H include the radiation level as measured by the "M" and "S" type chambers for the period July 13, 1945 to April, 1948, inclusive.

The "M" and "S" chambers are cylindrical ionization chambers with 50% of the wall composed of 1 mil aluminum foil. They are placed in pairs at the various locations, charged by a Victoreen minimeter, and the rate of discharge measured at regular intervals using the same minimeter. The "C" chamber is basically the same as the "M" and "S" chamber, except that the sides are constructed of heavy semi-waterproof cardboard. The "C" chamber walls will transmit approximately 25% of the beta radiation from 8-day radio-iodine.

Air Sampling (Filter) Program

Tables 4-A, 4-B, and 4-C, summarize the monthly average contamination levels detected in air using air filters for the period January, 1946, to April, 1948 inclusive.

The filter program consists of a continuous intake of air through a filter about 1-3/4 inches in diameter. The rate of air flow through the filter is about two cubic feet per minute. These filters are counted directly on thin mica-window counters. Corrections for rate of activity of these filters are made for geometry, collection efficiency and decay with the assumption that all beta activity comes from 8-day radio-iodine. Data which shows residual long-lived activity after the decay of I¹³¹ are not incorporated in this report.

W Singlevich/kz

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TABLE 1-A

Radioactive Contamination In The Columbia and Yakima Rivers

Beta and Gamma Activity

Units of 10^{-5} μ uc per liter

-1945-

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Above 100-B							< 5	< 5	< 5	< 5	< 5	< 5
181-B	-	-	-	-	< 5	< 5	< 5	< 5	< 5	9	< 5	< 5
181-D	-	-	-	-	25	< 5	< 5	16	39	65	147	114
181-F	-	-	-	-	< 5	< 5	< 5	< 5	14	66	138	111
Hanford S. Bank	-	-	-	-	37	25	7	15	31	134	684	222
N. Bank	-	-	-	-	-	-	8	-	-	-	-	-
300 Area	-	-	-	-	29	27	31	9	31	7	306	43
Richland	-	-	-	-	24	-	< 5	36	49	97	88	44
Pasco	-	-	-	-	-	-	-	-	-	-	-	-
Yakima Horn	-	-	-	-	< 5	-	-	-	-	-	-	-

The overall average alpha activity for the river water samples from the above tabulated locations was less than 2 dis/min/liter, the limit of sensitivity for this type of analysis.

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TABLE 1-B

Radioactive Contamination In The Columbia and Yakima Rivers

Beta and Gamma Activity

Units of 10⁻⁶ μ c per liter

-1946-

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Above 100-B	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5
181-B	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
181-D	31	39	17	<5	<5	<5	<5	<5	8	60	5	6
181-F	32	39	81	13	6	<5	13	7	15	23	31	41
Hanford S. Bank	78	80	40	54	9	22	15	31	52	53	94	99
Middle								20	25	42	100	78
N. Bank								<5	41	21	17	49
500 Area	73	41	14	14	7	<5	20	8	17	55	30	20
Richland	41	27	20	17	11	6	8	7	21	79	28	22
Pasco												
Yakima Horn	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

The overall average alpha activity for the river water samples from the above tabulated locations was less than 2 dis/min/liter, the limit of sensitivity for this type of analysis.

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Radioactive Contamination In The Columbia and Yakima Rivers

TABLE 1-C

Beta and Gamma Activity

Units of 10⁻⁵ μ c per liter

-1947-

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Above 100-B	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5
181-B	<5	<5	<5	-	-	-	-	-	-	-	-	-
181-D	10	<5	<5	<5	5	<5	<5	<5	<5	<5	<5	<5
181-F	25	10	<5	10	<5	<5	<5	40	45	15	10	15
Hanford S. Bank	81	111	23	73	27	19	15	36	75	88	48	61
Middle	52	60	38	39	9	<5	5	11	34	52	19	45
N. Bank	74	139	42	14	<5	<5	25	6	24	11	6	32
300 Area	50	45	25	30	20	5	<5	5	10	10	10	15
Richland	20	10	20	25	10	25	5	<5	15	15	10	16
Pasco	-	-	-	-	-	-	-	-	-	10	5	5
Yakima Horn	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Alpha Activity - Columbia & Yakima River

dis/min/liter

-1947-

181-D												
300 Area												
Richland												
Hanford												

NOTE: All the values for the alpha activity at the above listed locations were <2 dis/min/liter except as tabulated in lower section of tabulation.

* The overall average alpha activity for the river water samples from the above tabulated locations was less than 2 dis/min/liter, the limit of sensitivity for this type of analysis.

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Table 1-D

Radioactive Contamination In The Columbia and Yakima Rivers

Beta and Gamma Activity

Units of 10⁻³ mc per liter

-1948

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE
Above 100-B	< 5	< 5	< 5	< 5		
181-B	- - -	< 5	< 5	< 5		
181-D	< 5	< 5	< 5	< 5		
181-F	40	10	35	20		
Barford S. Bank	75	92	520	95		
Middle	37	23	41	55		
N. Bank	10	15	25	11		
300 Area	10	15	20	75		
Pickland	< 5	15	20	20		
Yakima River	< 5	< 5	< 5	< 5		

The overall average alpha activity for the river water samples from the above tabulated locations was less than 2 dis/min/liter, the limit of sensitivity for this type of analysis.

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Radiation Levels Observed in Air - Detachable Chambers

(Mrep per 24 hours)

"C" Chambers

-1945-

WEEK ENDING DATE	100-B Area	100-D Area	100-F Area	200-E Area	200-W Area	Outlying Areas
September 14, 1945	0.0000	0.0000	0.0000	1.0	0.4	0.0000
21, 1945	0.0000	0.0000	0.0000	1.7	0.3	0.0000
28, 1945	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
October 3, 1945	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10, 1945	0.5	0.5	0.5	0.5	1.2	0.0000
17, 1945	0.5	0.5	0.6	1.0	0.5	0.0000
24, 1945	0.4	0.5	0.5	1.1	0.5	0.0000
31, 1945	0.4	0.5	0.5	1.0	0.4	0.0000
November 7, 1945	0.5	0.5	0.5	0.8	0.5	0.0000
14, 1945	<0.3	0.5	<0.3	0.8	0.8	0.0000
21, 1945	0.5	0.5	0.3	0.7	0.5	0.0000
28, 1945	0.4	0.4	0.4	0.7	0.5	0.0000
December 5, 1945	0.3	0.4	0.3	0.8	0.5	0.0000
12, 1945						
19, 1945	0.4	0.4	0.4	1.3	0.6	0.0000
26, 1945	0.4	0.4	0.4	0.8	0.6	0.0000

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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Radiation Levels Observed in Air - Detachables Chambers
(Mrep per 24 hours)

"C" Chambers
-1945-

WEEK ENDING DATE	100-B Area	100-D Area	100-F Area	200-E Area	200-W Area	Outlying Area
January 2, 1946	0.7	0.5	0.5	0.6	0.9	- - - -
9, 1946						
16, 1946						
23, 1946	0.5	0.5	0.5	1.0	0.6	- - - -
30, 1946	0.3	0.4	0.4	0.9	0.5	- - - -
February 6, 1946	0.4	0.5	0.5	0.8	0.6	- - - -
13, 1946						
20, 1946						
27, 1946	0.3	0.4	0.4	0.7	0.4	- - - -
March 6, 1946	0.3	0.3	0.3	0.7	0.5	- - - -
13, 1946	0.3	0.3	0.3	0.6	0.3	- - - -
20, 1946	0.3	0.3	0.4	0.7	0.4	- - - -
27, 1946	0.3	0.4	0.3	0.7	0.4	- - - -
April 3, 1946	0.3	0.3	0.3	0.6	0.5	- - - -
10, 1946	0.3	0.4	0.4	0.7	0.4	- - - -
17, 1946	0.3	0.3	0.3	0.7	0.4	- - - -
24, 1946	0.3	0.3	0.3	0.7	0.4	- - - -
May 1, 1946	0.3	0.4	0.4	0.7	0.5	- - - -
8, 1946	0.3	0.3	0.4	0.7	0.5	- - - -
15, 1946	0.3	0.4	0.4	0.7	0.4	- - - -
22, 1946	0.3	0.3	0.4	0.8	0.6	- - - -
29, 1946	<0.3	0.3	0.4	0.7	0.4	- - - -

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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Radiation Levels Observed in Air - Detachable Chambers

(mrep per 24 hours)

"C" Chambers

-1946-

WEEK ENDING DATE	100-B Area	100-D Area	100-F Area	200-S Area	200-W Area	Outlying Area
June 5, 1946	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	- - - -
12, 1946	< 0.3	0.3	0.3	0.9	0.4	- - - -
19, 1946	< 0.3	0.4	0.3	0.9	0.4	- - - -
26, 1946	0.3	0.3	0.3	1.9	1.7	- - - -
July 3, 1946	< 0.3	0.4	0.4	0.8	- - - -	- - - -
10, 1946	< 0.3	< 0.3	< 0.3	- - - -	0.4	- - - -
17, 1946	0.3	0.4	0.4	0.9	< 0.3	- - - -
24, 1946	0.4	0.4	0.4	1.1	0.5	- - - -
31, 1946	0.4	0.4	0.4	0.9	0.9	- - - -
August 7, 1946	0.3	0.3	0.4	0.9	0.5	- - - -
14, 1946	< 0.3	< 0.3	0.3	1.1	0.4	- - - -
21, 1946	< 0.3	0.3	< 0.3	0.6	0.6	- - - -
31, 1946	0.3	0.3	0.3	0.9	0.3	- - - -
1st Half, September	0.3	0.4	0.4	1.2	0.4	- - - -
2nd Half, September	0.3	0.4	0.4	1.3	0.4	- - - -
1st Half, October	0.3	0.4	0.4	0.8	0.4	- - - -
2nd Half, October	0.4	0.4	0.4	0.9	0.4	0.5
1st Half, November	0.4	0.4	0.4	0.8	0.5	0.5
2nd Half, November	0.4	0.5	0.4	0.5	0.7	0.4
1st Half, December	0.4	0.5	0.5	1.0	0.5	0.6
2nd Half, December	0.3	0.4	0.5	0.7	0.5	- - - -

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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TABLE 2-D

Radiation Levels Observed in Air - Detachment Chambers
 (Mrep per 24 hours)
 "C" Chambers
 -1947-

MONTHLY AVERAGE	100-B Area	100-D Area	100-F Area	200-W Area	200-E Area	300 Area
January	0.5	0.6	0.5	0.5	0.7	0.5
February	0.4	0.5	0.4	0.4	0.7	0.4
March	0.4	0.4	0.4	0.4	0.5	0.4
April	0.4	0.3	0.3	0.4	0.6	0.4
May	0.3	0.3	0.3	0.4	0.6	0.4
June	< 0.3	0.3	0.3	0.3	0.7	0.4
July	< 0.3	0.3	0.3	0.4	0.6	0.4
August	< 0.3	0.3	0.3	0.4	0.3	0.3
September	0.3	0.4	0.3	0.3	0.3	0.4
October	0.3	0.4	0.4	0.4	0.4	0.3
November	0.3	0.3	0.3	0.4	0.5	0.4
December	0.3	0.4	0.4	0.5	0.7	0.4

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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TABLE 2-E

Radiation Levels Observed in Air - Detachable Chambers

(Mrep per 24 hours)

"C" Chambers

-1948-

MONTHLY AVERAGE	100-B Area	100-D Area	100-F Area	200-W Area	200-E Area	300 Area
January	0.4	0.4	0.4	0.4	0.6	0.4
February	0.3	0.4	0.4	0.3	0.4	0.3
March	0.3	0.4	0.4	0.3	0.4	0.3
April	0.3	0.3	0.3	0.3	0.9	0.4
May						
June						
July						
August						
September						
October						
November						
December						

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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Radiation Levels Observed in Air - Detachable Chambers

TABLE 3-A

"M" and "S" Chambers
(mrep per 24 hours)

-1945-

WEEK ENDING DATE	July 13	July 20	July 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept.
100 Area & Environs												
Rt. 1 Mi. 8	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Rt. 2N 100-D	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
- Rt. 2N 100-F	-	-	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.5	0.5	0.7
Rt. 11A MI.1	-	-	-	-	-	-	-	-	-	0.7	0.5	0.7
Rt. 1 4N	-	-	-	-	-	-	-	-	-	0.7	1.4	2.2
Within 5 Mi. 200-E										0.7	0.7	-
Rt. 4S MI. 6	2.6	3.4	2.9	7.9	5.0	5.5	5.5	6.5	10.0	9.4	8.9	9.8
Rt. 11A MI. 6	-	-	1.2	0.7	0.7	0.7	0.7	0.7	1.0	0.7	0.7	2.9
Meteorology	-	5.3	7.7	6.3	3.8	2.9	2.9	2.9	5.3	3.1	4.3	11.6
Within 10 Mi. 200-E												
Rt. 10 MI. 1	-	0.6	1.0	1.0	1.0	1.4	1.9	1.2	1.9	1.9	2.9	1.9
Rt. 10 MI. 3	-	1.9	1.0	1.2	0.7	1.2	1.7	1.0	1.7	1.7	2.2	2.2
Rt. 2S MI. 4	-	-	0.7	1.0	0.7	1.4	1.0	1.2	1.2	1.9	1.9	2.6
Others												
Rt. 4S MI. 14	-	-	-	-	-	-	-	-	-	-	-	-
Rt. 4S MI. 10	-	1.0	1.0	1.9	1.7	1.9	1.9	1.4	1.7	1.7	2.9	2.9
300 Area	0.48	0.48	0.5	0.5	0.7	0.7	1.0	0.7	1.2	0.7	1.2	1.7

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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TABLE 3-B

Radiation Levels Observed in Air - Detachable Chambers

"M" and "S" Chambers
(Mrep per 24 hours)

-1945

WEEK ENDING DATE	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7	Nov. 14	Nov. 21	Nov. 28	Dec. 5	Dec. 19	Dec. 26
100 Area & Environs												
Rt. 1 Mi. 8	1.0	0.7	0.7	1.0	0.7	1.0	1.0	1.0	0.7	1.0	1.0	1.2
Rt. 2N 100-D	1.0	0.7	1.0	1.2	0.7	1.0	1.0	1.2	0.7	0.7	4.9	0.7
Rt. 2N 100-F	1.0	0.7	1.0	1.0	1.7	1.2	1.0	0.7	0.7	0.7	1.0	1.0
Rt. 11A Mi. 1	1.7	1.7	1.2	1.4	1.2	1.4	1.7	1.4	1.9	1.0	3.8	1.4
Rt. 1 4N	1.0	0.7	0.7	1.0	0.7	1.0	1.0	1.0	0.7	1.0	1.0	1.2
Within 5 Mi. 200-E												
Rt. 4S Mi. 6	12.0	7.2	8.6	8.2	6.0	4.6	6.5	5.8	5.3	7.2	9.6	7.9
Rt. 11A Mi. 6	2.4	1.0	1.0	1.4	1.7	2.4	2.9	1.2	4.8	3.1	7.9	9.1
Meteorology	10.3	6.5	5.5	4.8	4.1	7.2	9.4	4.8	5.8	2.9	6.0	4.8
Within 10 Mi. 200-E												
Rt. 10 Mi. 1	5.8	6.5	2.9	6.0	3.4	1.9	2.2	2.2	1.4	1.9	2.4	3.8
Rt. 10 Mi. 3	2.4	2.2	7.2	4.6	2.9	1.7	1.4	1.9	2.6	2.2	2.4	4.8
Rt. 2S Mi. 4	2.4	1.9	1.9	2.2	1.9	1.9	2.4	1.4	1.0	1.0	1.4	1.7
Others												
Rt. 4S Mi. 14	2.9	2.6	1.4	1.7	1.7	1.9	1.5	1.4	1.7	1.4	1.7	3.1
Rt. 4S Mi. 10	6.7	5.5	3.4	2.9	3.1	2.2	4.8	3.4	2.9	2.4	2.4	3.6
300 Area	1.4	1.7	1.4	1.4	1.9	1.4	1.4	1.2	1.2	1.2	1.7	2.9

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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TABLE 3-C

Radiation Levels Observed In Air - Detachments Chambers

"M" and "S" Chambers

(Mrep per 24 hours)

-1946-

WEEK ENDING DATE	Jan. 2	Jan. 9	Jan. 16	Jan. 23	Jan. 30	Feb. 6	Feb. 13	Feb. 20	Feb. 27	March 6	March
100 Area & Environs											
Rt. 1 Mi. 8	0.7			0.7	0.7	0.7			0.7		0.5
Rt. 2N Mi. 10	1.0			0.7	0.5	0.5			0.5	0.5	0.5
Rt. 2N Mi. 5	0.7			1.0	0.7	0.7			0.7	0.5	0.5
Rt. 11A Mi. 1	4.3			1.2	1.0	0.7			1.0	1.0	1.0
Rt. 1 & Rt. 4N	0.7			0.7	0.5	0.5			0.7	0.5	0.5
Within 5 Mi. 200-E											
Rt. 4S Mi. 6	8.3			4.8	2.4	2.2			1.4	2.2	1.7
Rt. 11A Mi. 6	3.4			1.7	1.2	1.4			1.2	1.0	0.7
Rt. 3, Mi. 1	3.1			-	2.2	-			-	-	-
Meteorology	-			2.4	-	4.8			1.2	1.7	1.4
Within 10 Mi. 200-E											
Rt. 4S Mi. 10	5.3			2.4	1.0	1.2			1.0	1.4	1.2
Rt. 10 Mi. 1	5.1			2.1	1.0	1.2			1.0	1.0	0.7
Rt. 10 Mi. 3	3.8			1.7	1.4	2.2			1.2	1.0	1.2
Rt. 2S Mi. 4	3.1			1.7	1.0	1.2			1.0	1.0	0.7
Near 300 Area											
Rt. 4S Mi. 16	8.4			4.8	2.4	2.2			1.4	2.2	-

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours

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TABLE 3-D

Radiation Levels Observed In Air - Detachable Chambers

"M" and "S" Chambers

(Mrep per 24 hours)

-1946-

WEEK ENDING DATE	March 20	March 27	April 3	April 10	April 17	April 24	May 1	May 8	May 15	May 22	May
100 Area & Environs											
Rt. 1 M1. 8	0.5	0.5	0.5	0.5		0.7	0.5	0.5	0.5	0.5	0.5
Rt. 2N M1. 10	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Rt. 2N M1. 5	0.5	0.5	0.5	0.5		0.5	0.7	0.7	0.5	0.5	0.5
Rt. 11A M1. 1	0.5	0.5	0.5	0.5		1.0	0.5	0.5	0.5	0.7	10.2
Rt. 1 & Rt. 4N	0.5	0.5	0.5	0.5		0.5	0.7	0.5	0.5	0.5	0.5
Within 5 M1. 200-E											
Rt. 4S M1. 6	0.7	0.7	0.7	---		1.7	1.9	1.7	1.0	1.4	1.4
Rt. 11A M1. 6	0.5	0.5	0.5	0.7		1.4	1.4	1.2	1.0	1.0	1.0
Rt. 3, M1. 1	---	---	2.9	2.4		2.2	2.6	1.9	2.4	1.9	1.4
Meteorology	1.0	1.9	---	2.4		1.7	1.9	1.7	2.4	2.9	4.8
Within 10 M1. 200-E											
Rt. 4S M1. 10	0.5	0.7	0.5	0.7		1.7	1.0	0.7	0.5	1.0	1.0
Rt. 10 M1. 1	0.7	0.7	0.7	1.0		1.2	1.0	1.0	0.5	1.0	1.2
Rt. 10 M1. 3	1.0	0.7	0.7	1.0		1.2	1.0	1.0	0.5	1.0	1.0
Rt. 2S M1. 4	0.5	0.5	0.5	0.7		1.0	1.0	0.5	0.5	1.0	3.1
Near 300 Area											
Rt. 4S M1. 16	---	---	---	---		---	---	---	---	---	---
Rt. 4S M1. 22	0.5	0.5	0.5	0.5		1.2	1.0	1.0	0.7	1.4	1.0

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours

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TABLE 3-E

Radiation Levels Observed In Air - Detachable Chambers

"L" and "S" Chambers

(Mrep per 24 hours)

-1946-

WEEK ENDING DATE	June 5	June 12	June 19	June 26	July 3	July 10	July 17	July 24	July 31	Aug. 7	Aug. 14
100 area & Environs											
Rt. 1 Mi. 8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Rt. 2N Mi. 10	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Rt. 2N Mi. 5	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Rt. 11A Mi. 1	7.0	1.0	1.2	1.0	1.4	1.4	1.9	1.0	1.7	1.0	1.0
Rt. 1 & Rt. 4N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Within 5 Mi. 200-E											
Rt. 4S Mi. 6	4.3	1.7	1.9	1.7	1.7	2.6	2.2	2.2	2.6	2.2	2.9
Rt. 11A Mi. 6	1.0	1.0	1.2	1.0	1.0	1.2	1.4	1.0	1.4	1.0	1.0
Rt. 3, Mi. 1	1.4	1.4	1.4	1.4	1.2	2.4	2.9	2.2	1.9	1.9	1.4
Meteorology	3.8	0.7	0.7	1.4	1.0	1.2	2.2	1.2	1.2	1.0	1.0
Within 10 Mi. 200-E											
Rt. 4S Mi. 10	1.0	1.0	1.9	0.7	12.0	12.9	2.6	0.7	1.0	1.4	1.2
Rt. 10 Mi. 1	1.7	1.0	1.0	0.7	0.7	1.2	0.7	1.0	1.2	1.0	1.0
Rt. 10 Mi. 3	1.4	1.0	1.0	0.7	1.0	1.0	0.5	1.2	1.2	1.0	1.0
Rt. 2S, Mi. 4	1.9	0.7	1.0	0.7	0.7	1.0	0.7	1.2	1.7	1.4	1.2
Near 300 Area											
Rt. 4S Mi. 16	---	---	---	---	---	---	---	---	---	---	---
Rt. 4S Mi. 22	0.7	1.4	1.0	0.7	1.4	1.2	0.7	1.4	1.4	1.2	1.2

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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Radiation Levels Observed in Air - Detachable Chambers

USA and USN Chambers

(Mrep per 24 hours)

-1946-

WEEK ENDING DATE	Aug. 21	Aug. 31	1st half September	2nd half September	1st half October	2nd half October	1st half November	2nd half November	1st half December	2nd half December
100 Air & Environments										
Rt. 1 Mi. 8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.5
Rt. 2N Mi. 10	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7
Rt. 2N Mi. 5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7	1.0
Rt. 11A Mi. 1	0.7	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Rt. 1 & Rt. 4N	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7
Within 5 Mi. 200-E										
Rt. 4S Mi. 6	2.4	2.9	1.9	2.2	1.9	1.4	1.7	1.9	2.9	2.4
Rt. 11A Mi. 6	1.0	1.0	1.0	1.0	0.5	0.5	1.0	1.0	1.9	6.0
Rt. 3 Mi. 1	1.4	1.2	3.1	2.2	1.4	0.7	1.0	1.4	2.2	2.4
Meteorology	0.7	1.0	0.5	1.0	1.0	0.7	1.0	1.2	1.9	2.2
Within 10 Mi. 200-E										
Rt. 4S Mi. 10	1.0	1.2	1.2	1.2	1.2	1.0	1.4	1.4	2.4	1.4
Rt. 10 Mi. 1	1.2	1.0	1.2	1.0	1.2	0.7	0.7	1.0	1.7	1.4
Rt. 10 Mi. 3	1.0	0.7	1.0	0.7	1.0	0.5	1.2	1.2	1.7	1.4
Rt. 2S Mi. 4	1.4	1.4	1.0	1.4	1.0	1.0	1.0	1.0	1.0	1.2
Near 300 Area										
Rt. 4S Mi. 16								1.2		
Rt. 4S Mi. 22	1.2	0.7	0.7	0.7	0.7	0.5	0.7	1.2	1.2	1.4

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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HW-9871

Radiation Levels Observed In Air - Detachments Chambers

TABLE 3-0

"M" and "S" Chambers
(Mrep per 24 hours)

-194

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
100 Area & Environs												
Rt. 1 Mi. 8	0.7	0.7	0.7	0.5	0.5	0.5	0.5	<0.3	0.5	0.4	0.3	0.5
Rt. 2 Mi. 10	1.0	0.5	0.5	0.7	0.7	0.5	0.5	<0.3	<0.3	<0.3	<0.3	0.4
Rt. 2N Mi. 5	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.8	<0.3	0.9	0.5	0.6
Rt. 11A Mi. 1	1.0	1.2	1.0	1.0	0.7	0.7	0.7	0.7	0.7	1.1	0.7	1.1
Rt. 1 Mi. 5	0.7	0.7	0.7	0.7	0.7	0.7	<0.3	0.5	0.5	0.5	0.3	0.6
Within 5 Mi. 200 Areas												
Rt. 4S, Mi. 6	1.7	2.4	2.4	1.2	1.7	1.0	1.4	0.7	0.5	<0.3	0.7	1.2
Rt. 11A, Mi. 6	1.7	1.7	1.7	1.0	1.0	0.7	0.7	0.7	0.7	0.7	0.6	1.6
Rt. 3, Mi. 1	1.4	2.2	1.4	0.7	1.7	0.7	0.7	0.7	0.5	<0.3	<0.3	1.5
622 Building	1.2	1.0	1.7	1.7	1.0	1.0	0.7	1.2	0.5	1.1	0.5	1.7
Gable Mt. Summit	1.7	1.2	1.2	1.7	1.7	0.7	-	-	-	-	-	-
Within 10 Mi. 200 Areas												
Rt. 4S, Mi. 10	1.2	1.2	1.2	1.0	1.2	1.0	1.0	1.0	0.7	0.5	0.5	1.2
Rt. 10, Mi. 1	1.0	1.0	0.7	0.5	1.2	0.7	0.5	0.7	0.5	0.5	<0.3	0.8
Rt. 10, Mi. 3	1.2	1.2	1.0	0.7	1.2	1.0	1.0	0.7	0.5	0.9	0.7	0.8
Near 300 Area												
Rt. 4S, Mi. 16	1.0	1.0	0.7	0.7	0.7	0.7	0.7	1.4	0.5	1.0	0.5	0.8
Rt. 4S, Mi. 22	1.0	0.7	0.7	0.5	0.7	0.7	0.7	1.4	0.5	<0.3	0.8	0.8

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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HW-9871

Radiation
Observed In Air - Detachab' Chambers

"M" and "S" Chambers

(Mrep per 24 hours)

1948

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
100 Area & Environs												
Rt. 1 Mi. 8	0.4	0.5	0.5	0.4								
Rt. 2 Mi. 10	<0.3	0.3	<0.3	0.5								
Rt. 2N Mi. 5	0.5	0.4	0.4	0.5								
Rt. 11A Mi. 1	0.5	0.9	0.5	0.7								
Rt. 1 & Rt. 4N	0.3	0.3	0.5	0.6								
Within 5 Mi. 200-E												
Rt. 4S Mi. 6	0.7	0.8	1.1	0.7								
Rt. 11A Mi. 6	0.7	0.4	0.5	0.5								
Rt. 3 Mi. 1	0.7	1.2	0.9	0.7								
Meteorology	0.7	0.7	0.5	0.5								
Within 10 Mi. 200-E												
Rt. 4S Mi. 10	0.7	0.7	0.7	0.5								
Rt. 10 Mi. 1	0.5	1.2	1.3	0.6								
Rt. 10 Mi. 3	1.0	0.9	1.1	0.8								
Rt. 2S Mi. 4	0.8	1.2	0.5	0.6								
Near 300 Area												
Rt. 4S Mi. 16	0.9	1.41	0.7	0.7								
Rt. 4S Mi. 22	1.3	1.09	0.7	0.8								
Hanford	0.5	0.7	0.5	0.6								
700 Area	0.6	0.9	0.6	0.5								
Benton City	0.7	0.5	0.5	0.5								

All the above values include the background measurements of the instruments which vary from 0.3 - 0.5 mrep per 24 hours.

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HW 9871

Air Filtering (Filters) Program - Cities - Areas

Units of 10⁻¹⁰ uc per liter

-1946-

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Pasco	-	-	-	96	131	67	126	69	14	7	17	13
Richland	86	12	41	106	42	-	-	-	-	-	-	-
Benton City	47	116	114	61	94	42	116	64	44	84	89	92
300 Area	33	18	12	30	18	-	-	53	2	14	35	44
200-E SE	286	51	176	550	316	555	376	490	639	158	267	161
200-E Tower 11	-	-	-	-	-	-	-	-	-	-	-	-
200-E Tower 18	295	1710	949	3010	4620	4400	2780	1850	240	168	188	230
200-W Gate	-	-	-	-	-	-	-	-	-	-	-	-
Hanford	-	-	-	-	-	-	-	-	-	-	-	-
Gable Mt.	-	-	-	-	-	-	-	-	-	-	-	136
100-D	-	-	85	140	366	93	-	15	28	94	50	114

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HW-9871

Air Cleaning (Filters) Program - Cities & Areas

Units of 10⁻¹⁰ uc per liter

-1947-

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Pasco	13	9	4	12	3	2	8	2	5	5	4	4
Richland	-	-	33	7	5	9	4	4	< 1	4	2	2
Benton City	180	74	37	33	10	11	-	10	7	11	7	7
300 Area	62	16	16	6	12	6	9	2	5	1	7	5
200-E SE	180	220	180	61	100	37	120	30	27	21	15	4
200-E Tower 11	340	290	310	550	250	100	89	39	22	20	17	12
200-E Tower 18	250	120	160	150	200	35	72	61	77	49	44	32
200-W Gate	-	-	-	-	-	-	70	55	63	30	42	42
Hanford	-	-	-	-	-	-	-	-	3	4	2	3
Gable Mt.	260	43	55	87	36	27	21	10	1	5	4	4
100-D	240	56	51	40	68	16	15	11	46	50	20	12

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HW 9871

Air Sampling (Filters) Program - Cities

Units of 10⁻¹⁰ uc per liter

-1948-

LOCATION	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Pasco	2	3	4	1								
Richland	1	2	6	1								
Benton City	3	4	2	4								
500 Area	3	3	4	8								
200-E, SE	5	13	12	9								
200-W Tower 4	7	11	17	5								
200-W Gate	20			5								
Hanford	3	4	3	2								
Gable Mountain	7	49	7	7								
100-D	7	4	4	2								
200-E Tower 18	23	26	18	17								
200-W-E Gate	16	12	12									

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