Miscellaneous Information Regarding Operation and Inventory of 618-11 Burial Ground

C. R. Webb

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Prepared for the U.S. Department of Energy
Office of Environmental Restoration and
Waste Management

**Westinghouse
Hanford Company**

P.O. Box 1970
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Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

Approved for Public Release

MASTER

148

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References Available to Intended Audience Transmit to DOE-HQ/Office of Scientific and Technical Information ☐ Internal ☐ Sponsor ☒ External Author/Requestor (Printed/Signature) Date C. R. Webb <i>C.R. Webb</i> 5-25-93	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP</th> </tr> <tr> <td colspan="2"> Stamp is required before release. Release is contingent upon resolution of mandatory comments. </td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td style="width:50%;">Date Cancelled</td> <td style="width:50%;">Date Disapproved</td> </tr> </table>	INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP		Stamp is required before release. Release is contingent upon resolution of mandatory comments.				Date Cancelled	Date Disapproved
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Date Cancelled	Date Disapproved								
Intended Audience Responsible Manager (Printed/Signature) Date G. C. Henckel <i>G.C. Henckel</i> 5/25/93									

October 14, 1964

Specimen

G. E. Backman
Senior Engineer
Environmental Studies and Evaluation

WASTE DISPOSAL AND DECONTAMINATION
MONTHLY REPORT - SEPTEMBER 1964

A. 300-Wye Burial Ground

1. No unusual incidents occurred during the month.

→ 2. The large dry waste disposal tanks at the 300-Wye Burial Ground are now in use. To date we have had no problem in getting the waste boxes to travel to the bottom of the tanks.

3. There was some Beryllium waste from the 306 building deposited in the regular Beta-Gamma burial trench at the 300-Wye Burial Ground during the month. Permission was granted by the Safety Engineer for this operation.

→ 4. The 300-N Burial Ground has been terminated. All permanent markers are in position. The fence has not been removed as yet. However, Mr. McKinnon has promised to have it removed and placed in excess as soon as possible.

B. 307 Retention Basins

1. None of the basins exceeded the Class II activity levels during the month.

2. All components of the retention waste monitoring systems which have failed are being returned to the vendor. We will be unable to return the alpha detectors until construction personnel can disconnect them from the system. Since the pipefitters have ended their strike, we are hopeful we can return the alpha detectors sometime next month.

G. E. Beckman

-2-

October 14, 1964

D. 340 Operation

1. The following table summarizes the Waste Disposal Operation:

<u>Item</u>	<u>July</u>	<u>Aug</u>
Concrete waste barrels disposed to 300-Wye Burial Ground.	0	10
Concrete waste barrels disposed to 200-W Burial Ground.	9	0
Loadluggers of dry waste disposed to 300-Wye Burial Ground from 300 Area sites other than the 325 building.	33	47
Loadluggers of dry waste disposed to 300-Wye Burial Ground from the 325 building.	7	7
Loadluggers of dry waste disposed to 200-W Burial Ground from 300 Area sites.	7	6
<u>Containers of high level dry waste disposed to 300-Wye Burial Ground waste tanks.</u>	<u>96</u>	<u>75</u>
Crib Waste Volume, gal.	300,000	245,000
Total Beta Conc., uc/gal.	1400.0	1400.0
Total Beta, Curies	420.0	343.0
Total Alpha Conc., uc/gal.	2.74	1.55
Total Alpha, mc	822.0	379.8
Pu Concentration, ug/gal.	11.7	4.7
Amt. Pu. g.	3.51	1.15
U. Concentration, ug/gal.	7200.0	8.3×10^5
Amt. U. g.	2160.0	2.03×10^5

Supervisor
Waste Disposal and Decontamination

R. L. Pierce:lw

cc: RLP

*Waste Review Summary
Information from Monthly Reports*

Month	Volume to Trench (1)	No. of Containers to Trench	Month	Volume to Trench	No. of Containers to Trench
5-64	2300	86	1-67	2200	37
6	2500 (2)	89	2-	2900	60
7	4000	96	3-	2700	75
8	5400 (3)	75	4.	2300	85 (7)
9	5100 (4)	83	5	2400	99
10	9100 (5)	82	6	2100	103
11	2700	60	7	2600	59
12	1600	76	8	1900	51
1-65	2400	94 (7)	9	2400	98
2	2900 (6)	85 (7)			
3	3600	94 (7)			
4	2600	110			
5	2500	101			
6	2900	119			
7	3300	122			
8	2200	71			
9	2200	61			
10	3200	126			
11	3300	99			
12	2700	97			
1-66	3000	102			
2	3400	99			
3	2700	75			
4	1400	45			
5	1700	71			
6	1900	68			
7	1200	62			
8	1100	60			
9	1400	63			
10	1800	41			
11	2000	65			
12	2000	43			

Notes:

- (1) Volume based on an estimate of 100 ft^3 per load bucket.
- (2) Includes 10 barrels of concreted waste.
- (3) Includes 10 barrels of concreted waste.
- (4) Includes 6 barrels of concreted waste.
- (5) Non-radioactive benzene waste to trench.
- (6) Thorium waste to trench. 3

Wage Bureau Summary

Date	Bill- Concrete	Vol. to Trench (ft ³)	Containers to Tanks	Unusual Conditions
9-67		2400	98	-
8-67		1900	51	-
7-67		2600	59	-
6-67		2100	103	-
5-67		2400	99	Contam. spread. 25000/100 g 75,000 g/m ² heptachlor BB 70,000 g/m ² skin contamin. Map. 0.2 g/m ² of 50 m ² /hr
4-67		2300	85	4/17 & 4/14 \$1200 clean-up
3-67		2700	75	
2-67		2900	60	
1-67		2200	37	
12-66		2000	43	
11-66		2000	65	
10-66		1800	41	
9-66		1400	63	
8-66		1100	60	
7-66		1200	62	
6-66		1900	68	
5-66		1700	71	
4-66		1400	45	
3-66		2700	75	
2-66		3400	99	
1-66		3000	102	
12-65		2700	97	
11-65		3300	99	
10-65		3200	126	
9-65		2200	61	
8-65	22	2200	71	
7-65	33	3300	122	Completed DEE Trenches + New Trench
6-65	29	2900	119	
5-65	25	2500	101	
4-65	26	2600	110	
3-65	36	3600	94	6000 g/m ² perennat & 10,000 g/m ²
2-65	29	2900	85	Truck contamination
1-65	24	2400	94	Contamination spread
12-64	16	1600	76	Thorough walk to trench
11-64	27	2700	60	Contam. spread
10-64	91	9100	82	12" x 36" Can from 325-A to 'A' Tank
9-64	6	5100	83	Be to trench
8-64	10	5400	75	Large tanks in use
7-64	-	4000	96	Installation of 2 more tanks complete.

6-64

10

2500

89

5-64

2300

86

Wyo. B. E.

A-Tank

Date	Origin Bldg. #	Type of Container	# Containers	Remarks
1-12-65	325-A	1x3 can	2	
1-14-65	325-A	1x3 cans	2	Localized cont. spread R.M. (B eggs) positive nasal
1-18-65	325-A	1x3 cans	2	
1-20-65	325-A	"	3	
1-27-65	325-A	"	2	
1-28-65	325-A	"	4	
2-2-65	325-A	"	2	
2-4-65	325-A	"	3	
2-8-65	325-A	"	3	
2-15-65	325-A	"	3	
2-16-65	325-A	"	4	
2-17-65	325-A	"	3	
2-19-65	325-A	"	2	
2-24-65	325-A	"	1	
2-25-65	325-A	"	1	
3-2-65	325-A	"	1	
4-13-65	325-A	"	2	
4-14-65	325-A	"	1	
4-15-65	325-A	"	3	
4-16-65	325-A	"	1	
4-20-65	325-A	"	1	
4-26-65	325-A	"	1	
4-30-65	325-A	"	1	
7-22-65	325-A	"	1	
7-26-65	325-A	"	3	
7-29-65	325-A	"	3	
7-30-65	325-A	"	3	
8-2-65	325-A	"	1	
8-18-65	325-A	"	3	
8-24-65	325-A	"	4	
8-30-65	325-A	"	4	
8-31-65	325-A	"	1	
9-14-65	325-A	"	3	
9-15-65	325-A	"	2	
9-21-65	325-A	"	4	
9-22-65	325-A	"	1	
9-23-65	325-A	"	2	
9-23-65	325-A	"	2	
9-28-65	325-A	"	1	
1-13-66	327		1	

Ready for backfilling of cat
3500 m³ - 13-66
in chute
Backfilled
April 1966

1-13-66 - 327 - Gallin E.
10

5 am P.m.

65/100

R. E. Burt

Bring.

Shipping Records

WHC-MR-0416

Both

BURIAL SITE - 300 North (Wye)

See notes below

REPORTING PERIOD - January 1, 1962 to June 30, 1962

Radioactivity Level	Package	On-Site Waste Unit	Cu. Ft.	
10 - 1000 c/ft. ³	50 Gallon Drum Filled With Concrete	21 to North 68 to Wye (89)	662	152 510
Under 10 c/ft. ³	Cardboard Cartons	1962 to Wye 486 to North	2448	11,016 2187
<i>618-10</i> *10 - 1000 c/ft. ³	Stainless Steel Cans "Milk Pails"	198	50	253 Per can
*Over 1000 c/ft. ³	Stainless Steel Cans	75	5	0.647
Under 10 c/ft. ³	Lead Cave in Wooden Crate	1	12	Per can
Under 10 c/ft. ³	Steel Cave Liner - Plastic	1	72	

9478

*Only Wye trenches open (Pipe storage later)
Sept 63

Estimated Acreage Used During Reporting Period: 6 Acres

Jan & Feb North / MARCH, APRIL, MAY, JUNE - Wye

Wye activation 3-9-62
deactivation 10-2-62

18 Suggers (3-9 to 6-30) to Wye*

(18 boxes per sagger) 109 saggies x 18 boxes/sagger = 1962 units x 4.5 cu ft/unit = 8,829

Saggies to North?

2448
- 1962
486 units

11,016
8,829
2187 cu ft.

18 barrels to Yaw 510 cu ft
21 barrels to North 152 cu ft

BURIAL SITE - 300 Wye *only*REPORTING PERIOD - July 1, 1962 to December 31, 1962
(Deactivated on October 2, 1962)*July, Aug. & Sept*

<u>Radioactivity Level</u>	<u>On-Site Waste</u>		
	<u>Package</u>	<u>Unit</u>	<u>Cu. Ft.</u>
10-1000 c/ft ³	50 Gallon Drums Filled With Concrete	40	292
Under 10 c/ft ³	Cardboard Cartons	1642	7881

Estimated Acreage Used During Reporting Period:

15,000 sq. ft.*Trench open - no more work yet*

BURIAL SITE - 300 Wye *only*REPORTING PERIOD - July 1, 1963 to December 31, 1963*Reopened Sept 63**Sept. Oct. NOV - Dec*

Radioactivity Level	Package	On-Site Waste	
		Unit	Cu. Ft.
Under 10 c/ft ³	Cardboard Cartons	1660	7470
10 - 1000 c/ft ³	50 Gallon Drums	20	150
* 10 - 1000 c/ft ³	Stainless Steel Cans "Milk Pails"	151	33 <i>.252</i>
* Over 1000 c/ft ³	Stainless Steel Cans "Gatling Guns"	80	6 <i>.075</i>

Estimated Acreage Used During Reporting Period:

4500 sq. ft.

*Pipe storage units
open Sept 63*

BURIAL SITE - 300 WyeREPORTING PERIOD - January 1, 1964 to June 30, 1964

Radioactivity Level	On Site Waste Package	Unit	Cu. Ft.
Under 10 Ci/ft ³	Cardboard Cartons	3750	16,875
Under 10 Ci/ft ³	50 Gallon Drums	25	188
10 - 1000 Ci/ft ³	Waste Pails <i>with Pails</i>	425 <i>in</i>	78 <i>.183</i>
Over 1000 Ci/ft ³	Waste Pails <i>2.1111111111111111</i>	150 <i>.033</i>	5 <i>10333</i>

Estimated Area Used During Reporting Period:

16,000 sq.ft.

other reference *10 separate Bands*
in June 1964

*
 Ref. RHO-CD-673

200 Area

WYfield

Next page →

Says

July 21, Sept 4, & Nov 25
 1964*

218-w 4A "Dry Wells" accepted
 Hanford LAB Waste - mostly
 327 Bldg

* 325 Bldg gets Cask truck

* * Sept 1964 - Ref to using
new large Cessone

BURIAL SITE - 300-WYE

Reporting Period - July 1, 1964 to December 31, 1964

Radioactivity Level	On Site Waste		
	Package	Unit	Cu. Ft.
Under 10 Ci/ft ³	Cardboard Cartons	4,875	21,937
Under 10 Ci/ft ³	50 Gallon Drums	16	120
10 - 1,000 Ci/ft ³	Waste Pails "Milk Pails"	384	61 .159
10 - 1,000 Ci/ft ³	Waste Pails (5 gal.) (325-A)	23	15
Over 1,000 Ci/ft ³	Waste Pails "Gatling Gun"	56	2 .0357

Estimated Area Used During Reporting Period: 22,000 sq. ft.

200 Area to Bldg
August

+ 6 in September
+ 16

RHO-CD-673 says shipments to 200 Area
of Hanford LAB WASTE went to 215-W4H
in July, Sept & Nov 1964

BURIAL SITE - 300-MIE

Reporting Period - January 1, 1965 to June 30, 1965

<u>Radioactivity Level</u>	<u>On Site Waste</u>		
	<u>Package</u>	<u>Unit</u>	<u>Cu. Ft.</u>
Under 10 Ci/ft ³	Cardboard Cartons	4,225	19,012
Under 10 Ci/ft ³	55 Gallon Drums	400	3,000
Under 10 Ci/ft ³	Wooden Crates	10	400
10-1,000 Ci/ft ³	Waste Pails "Milk Pails"	420	56
10-1,000 Ci/ft ³	Waste Pails (5 gal.)	6	4
10-1,000 Ci/ft ³	Waste Cans (3 cu. ft.)	48	115 ³
Over 1,000 Ci/ft ³	Waste Pails "Gatling Gun"	135	5.5

1133

10407

Estimated Area Used During Reporting Period: 20,000 sq. ft.

BURIAL SITE - 300-173

Reporting Period - July 1, 1965, to December 31, 1965

<u>Radioactivity</u> <u>Level</u>	<u>On Site Waste</u> <u>Package</u>	<u>Unit</u>	<u>Cu. Ft.</u>
Under 10 CI/ft ³	Cardboard Cartons	3,953	17,783
Under 10 CI/ft ³	Wooden Crates	8	384
10-1,000 CI/ft ³	Waste Pails "Trash Pails"	369	50
10-1,000 CI/ft ³	Waste Cans (2 cu. ft.)	47	56
10-1,000 CI/ft ³	GS Filters	6	43
Over 1,000 CI/ft ³	Waste Pails "Outling Gas"	146	6

.136

.0411

Estimated Area Used During Reporting Period: 15,000 sq. ft.

✓ No more waste of any kind
200 pails of waste to be
sent to 2nd shift plant

BURIAL SITE - 300-WYE

Reporting Period - January 1, 1966, to June 30, 1966

Radioactivity Level	On Site Waste		
	Package	Unit	Cu. Ft.
Under 10 Ci/ft ³	Cardboard Cartons	3,132	14,094
10-1,000 Ci/ft ³	Waste Pails "Milk Pails"	313	42
10-1,000 Ci/ft ³	5--Gallon Pails	4	3
10-1,000 Ci/ft ³	Waste Cans (1 cu. ft.)	19	19
Over 1,000 Ci/ft ³	Waste Pails "Gatling Gun"	123	5

134
0407

Estimated Area Used During Reporting Period: 15,000 sq. ft.

* After 1966 (not full report dated 8-2-66,
manifests of nonradioactive Barrels
to 200 Area where??

1966* see WYA

BURNAL SITE - 300-Wyo

Reporting Period - July 1, 1966 to December 31, 1966

<u>Radiactivity Level</u>	<u>On Site Waste</u>	
	<u>Package</u>	<u>Unit</u> <u>Cu. Ft.</u>
Under 10 Ci/ft ³	Cardboard Cartons	2,113 9,509
10 - 1,000 Ci/ft ³	Waste Pails "Milk Pails"	230 31
10 - 1,000 Ci/ft ³	5-Gallon Pails	8 3
10 - 1,000 Ci/ft ³	Waste Cans (1 cu. ft)	17 17

Estimated Area Used During Reporting Period: 10,000 sq. ft.

DURIAL SITE - 300 WYE

Reporting Period - January 1, 1967 to June 30, 1967

<u>Radiactivity Level</u>	<u>On Site Waste</u>		
	<u>Package</u>	<u>Unit</u>	<u>Cu. Ft.</u>
Under 10 Ci/ft ³	Cardboard Cartons	2,800	12,600
10-1,000 Ci/ft ³	Waste Pails "Milk Pails"	438	60
10-1,000 Ci/ft ³	5-Gallon Pails	6	4
10-1,000 Ci/ft ³	Waste Cans (1 cu. ft.)	5	5

.137

Estimated area used during reporting period: 12,000 sq. ft.

BURIAL SITE - 300-WYE

Reporting Period - July 1, 1967 to December 31, 1967

Radioactivity Level	On Site Waste		
	Package	Unit	Cu. Ft.
Under 10 Ci/ft ³	Cardboard Cartons	3311	14,900
10-1,000 Ci/ft ³	Waste Pails "Milk Pails"	370	49
10-1,000 Ci/ft ³	5-gallon Pails	40	27
10-1,000 Ci/ft ³	Waste Cans (1 cu. ft.)	39	38

Estimated Area Used During Reporting Period: 15,000 sq. ft.

Closed 12/31/67

157,000 - Total Cu. ft.

for all pages

SURVEYS THAT REFERENCE PLUTONIUM WASTE BURIAL

3-29-62	Survey of equipment wrapped in plastic that had been removed from a grossly contaminated PU hood (from 325, doesn't say where it is going)
8-3-62	Load and dump 4 PU WASTE BARRELS to WYE 100 mr/hr
8-15-62	Disposal of 2 gloveboxes grossly contaminate with PU no dose rate (20,000 c/m) from 325 - doesn't say where it is going)
3-6-63	PU bottles from 308 Bld. in cement leaving 325 BLDG to burial (doesnt say where it is going) < 6 mr/hr
7-3-63	Cement Barrels from 325 to 300 North BG 35 mr/hr
8-19-63	PU solution in glass bottle and PU solution in plastic bottle from 325 to burial (doesn't say where) 2500 c/m
11-3-65	Boxed PU waste in load lugger fro 325 A to WYE

SURVEYS THAT REFERENCE 200 AREA BURIALS

3-13-62	5 cans of PU waste to 202-S(REDOX) on RSR
8-10-62	Survey of 4.59 grams (or 458 g -hard to read) in carton for shipment to 200 West Burial on RSR <6 mr/hr
1-10-63	Cardboard ice cream carton containing 300 grams of solid PU waste from 325 to 234-5. 10 mr/hr
1-16-63	5 five gal. cans of PU solution from 325 to 202-S (5 mr/hr)
7-11-63	2 garbage cans containing PU solution in poly bottles sealed in plastic. 30 mr/hr from 325 to PUREX
9-8-67	Load PU waste in lugger and liquid waste on flatbed dump for transfer to 200 area burial (from 325) 5-15 mr/hr on boxes max. 50 mr/hr on barrels.

618-11 BURIAL GROUND

HISTORY OF USE

- SERVICE DATES 3/62 - 12/67
- RADIONUCLIDE CONTENT
 - TOTAL BETA/GAMMA = ~2000 Ci
 - TOTAL PER = 1 to 10 KG
- DISPOSAL FORM
 - LOW LEVEL DRY WASTE IN THREE TRENCHES
 - MODERATE TO HIGH LEVEL DRY WASTE IN 50 VERTICAL PIPE UNITS AND 4 CAISSONS
- CUSTODY TRANSFERRED TO ARHCO IN JANUARY 1972
- FENCE INSTALLED IN SEPTEMBER 1974 (PREVIOUS TO FENCING, MARKED BY POSTS AND CHAINS)
- RADIATION MONITORING RECALLS INCIDENT OF PERSONNEL FOUND WANDERING ON BURIAL GROUND WHICH OCCURRED PRIOR TO FENCING
- ALL RECORDS OF RADIATION MONITORING SURVEYS (1973 - 1981) INDICATE NO RADIATION LEVELS ABOVE BACKGROUND, AND NO SURFACE CONTAMINATION EXCEPT A SINGLE TUMBLEWEED WITH 400 CPM
- MOST RECENT SURVEY REVEALED SITE PERIMETER RADIATION LEVELS OF 200 CPM WITH GM AND 3 μ R/HR WITH MICRO-ROENTGEN METER

RECENT RADIATION SURVEYS
618-11

SEPTEMBER 1979	-	SURVEYED TRENCHES < 100 CPM BETA/GAMMA < 500 CPM ALPHA
MARCH 1980	-	SURVEYED BURIAL GROUND SURFACE NO READINGS ABOVE BACKGROUND HOUSEKEEPING WAS GOOD.
JUNE 1981	-	SURVEYED BURIAL GROUND ONE TUMBLEWEED, CONTAMINATED TO 400 CPM BETA/GAMMA FOUND IN SOUTHEAST CORNER. ALL OTHER AREAS WERE LESS THAN BACKGROUND.
BACKGROUND	-	100 to 250 CPM BETA/GAMMA

Sub 2: 1/1/1953 - 1/1/1965

327 POSTIRRADIATION TESTING LABORATORY

- 1953-1965 - General Electric Company
- 1965-1970 - Battelle-PNL
- 1970-1987 - Westinghouse Hanford Company
- 1987-Present - Battelle-PNL

327 BUILDING HISTORY

The Radiometallurgy (Postirradiation Testing) Building was completed in June, 1953 with four Hot cells, at an initial cost of \$850,000. Its primary mission was to provide a safe system to obtain data which would lead to minimizing ruptures of production fuel elements. This limited mission was soon outgrown and listed below in chronological order are the succeeding mission(s) for the facility.

1953-1970 Provide surveillance and rupture/failure analysis for fuel elements and materials for the Hanford Production Reactors.

1958 Evolution from aluminum to zirc clad metal fuels, zirc II environment with NaK, Ni plating of cladding, etc.

1958-1968 Provide surveillance and rupture/failure analysis for fuel elements and materials for the Plutonium Recycle Test Reactor.

1959-1965 Examination $\text{PuO}_2\text{-UO}_2$ fuels and the introduction of higher enrichment fuels, use of stainless steel cladding, etc..

1960 Facility was expanded to eleven Hot cells to provide additional examination capabilities.

327 BUILDING HISTORY (CONT'D)

1960-1988	Provide surveillance and rupture/failure analysis for fuel elements and materials for N-Reactor. Pressure tube safety enhancement project.
1961	Plutonium impregnated graphite, GEH series prototypic fuel pins, etc..
1962	PRTR pressure tube burst testing, examination of prototypic fuel materials e.g. magnesium oxide and PuO_2 , etc..
1963	Waste tanks sludge examination, SNC cermet fuel examination, etc..
1964	Burst Test Facility added for pressure tube evaluation.
1964	Aluminum/aluminum lithium examination, waste glass concentrate examination, British fuel and material examination, etc..
1965	First series of ruptured N-Reactor fuel element examinations, thorium oxide examinations, etc..
1965-1972	Examination of fuels and materials for NASA.
1967	Heat source examinations e.g. cesium chloride, promethium oxide, strontium.

189-F

Two truck loads of uranium-thorium contaminated equipment and shop machinery were loaded out of the 189-F building and shipped off site without incident. The job entailed approximately 10 hours of radiation monitoring work.

1100 area

Experience has been good in the 1100 area. Work has been routine without radiation incident.

300 area Burial Ground

Posts and chains were straightened and new radiation zone signs were installed on the perimeter fence of the 300 area #7 burial ground.

"Y" Burial Ground

On the north side of the "Y" Burial Ground is a plot of ground approximately 20' x 4' in size which was buried last summer ago with particulate matter during a burial in the "Y" Burial Ground. The contamination was subsequently covered by scraping the affected ground into windrows. On 8/24/1972 a backhoe was used to cut across each windrow at a frequency of every 50 feet to a depth of six inches below natural ground level. The rows were made of dirt removed and of the walls of each cut. No beta gamma or alpha radioactivity was detected above the natural background of 100 cpm.

Because of the larger number of people walking in the immediate vicinity of the "Y" Burial

Rockwell International

Rockwell Hanford Operations
Energy Systems Group

FROM ERDA-1538

TABLE II.1-E-2

TABLE OF STORAGE AND DISPOSAL SITES ANCILLARY TO THE 300 AREA

Site or Building No.	Size Acres	Description	Service	Depth To Water Table (ft)
300 North	6.1	Located about 4 miles northwest of 300 Area. Terminated. Broad spectrum of low-to high-level solid radioactive waste, primarily fission products and plutonium. Cartoned low-level waste was buried in trenches; medium to high-level waste in caissons or buried pipe facilities.	1953-63	65
300 North	<1	A stainless steel tank with an open bottom, about 150 ft southeast of the 300 North burial ground, into which was dumped uranium contaminated liquid waste from the 321 Building.	1948-56	65
300 Hye	8.6	Located about 7-1/3 miles north of the 300 Area. Retired--filled and marked. Broad spectrum of low-to high-level solid radioactive waste, primarily fission products and plutonium. Cartoned low-level waste was buried in trenches; medium to high-level waste in caissons or buried pipe facilities.	1962-67	45

618-11 Lawsuit by WPPSS employees
1982-83.?

62-67

2,000 Ci LLLU - 3 tunnels

M to HLLU 50 Pipe units
+ 4 Caissons

72 - to Arheco

74 - forced.

up to 10 kg Pu - records lost in 65
EIS - 2 kg

618-5 only 1 foot clear soil over unknown
U contaminated material - 1983
Burning, +

618-7 pit 20x140 U in solvent barrels
321 bldg.

buried because of fire + explosion hazard

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

10008

RADIATION SURVEY

ROOM NO.	S. W. P. NUMBER	DATE	TIME OF SURVEY
305	50P	3-13-62	1300 PM

Survey 5 - CANS OF PU Waste Going
To 202-S 200-W AREA on STANDARD R.S.R.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	SWP INTERMITTENT		SWP CONTINUOUS			
					MIN.	DIST.	MIN.	DIST.	C/m AT 1"	
11 cans 13/4 in on CANS CP								4	2"	WO
										WC
										WO
										WC
Smears	CP		<500							WO <100
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC

2 CANS Marked

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

4 mR/hr @ 2"

Nil

SIGNED

Robert H. H.

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

10157

RADIATION SURVEY

325

J. O. P.

DATE

3-29-62

TIME OF SURVEY

0800

Weg-L-Bug for burial.

SPECIAL MIN.	INST. USED	AREA SQ. IN.	MAX. d/m	μRm PU	SWP INTERMITTENT MIN.		SWP CONTINUOUS MIN.		
					mrad/hr	DIST.	mr/hr	DIST.	C/m AT 1"
<p>from the survey plastic.</p>	EP						10	2"	WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC

equip. removed from grossly contaminated
area.

PU

RADIATION MEASUREMENT OBTAINED:

DATE

SIGNED

C. J. Mowland

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

10355

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. 309, 313	S. W. P. NUMBER SOP	DATE 4-21-62	TIME OF SURVEY 0800	AM PM ☒
DESCRIPTION 700, 303					

To Monitor For Analytical Personnel To
Run Analysis on Criticality Solution
From 234-5 Bldg.

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ m PU	mrad/hr	DIST.	mr/hr	DIST.	C/m AT 1"	
	Max μ m on Bottle of Solution	CP				3 Rad S.	700	2"		WO	
										WC	
										WO	
										WC	
										WO	
	Max μ m To Body	CP				25	2'	—		WC	
										WO	
	Max μ m To Hands	CP				300	6"	—		WC	
										WO	
	Hood ledges, Gloves, Misc. Equip.									WC	
										WO	
										WC	
										WO	
										WC	
	Spot check on Floors	Papery			<500					WO	
										WC	
										WO	
										WC	

REMARKS:

Est. Figures Given was About 34 beams
of PU for location.

MAXIMUM RADIATION MEASUREMENT OBTAINED:

3 Rad/hr @ 5' incl. 700 mrad @ 2"

MAXIMUM DOSE RATE

300 mrad/hr @ 6" To Hands.

SIGNED

R. Britton

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

010956

RADIATION SURVEY

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

AM

530

R.S.R.

7-6-62

10 30

PM

To Monitor hauling 2 Barrell
Hauls To 300 Wye B.G. For Disposal.

ITEM OR LOCATION	SPECIAL MIN.	INST. USED	AREA SQ. IN.	MAX. 3/4"	SWP INTERMITTENT MIN.	mrad /hr	DIST.	SWP CONTINUOUS MIN.	mrad/hr	DIST.	C/m AT 1"
Minion Head		CP				50	5'				WO
											WC
											WO
											WC
											WO
											WC
1 Truck		Gm									WO < 100
											WC
											WO
											WC
2 Personnel		Gm									WO < 100
											WC
											WO
											WC
											WO
											WC
											WO
											WC

Per R.S.R.

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

50 mrad/hr @ S.

N.I.

SIGNED

R. Britton

UNCLASSIFIED

SURVEY NO.

071095

RADIATION SURVEY

BUILDING NO. 225	ROOM NO. 410	S. W. P. NUMBER SOP	DATE 7/23/62	TIME OF SURVEY 0830	AM PM
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DESCRIPTION

Filter Change in Pu Hoods

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	uom Pu	mrad /hr	DIST.	mr/hr	DIST.	C/m AT 1"	
	Max. found on Hoods	Pp/7		1000						WO	
										WC	
										WO	
										WC	
										WO	
										WC	
	Sunny Floor & Personnel at completion of shift	Pp/7		<500						WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

1000 dpm

SIGNED

M. J. Leab

UNCLASSIFIED

SURVEY NO.

011224

RADIATION SURVEY

200F
 SURVEYING NO. 335 ROOM NO. Wye Building S.W.P. NUMBER S.C.P. DATE 8-3-62 TIME OF SURVEY 1.310

Monitor to load and dump
 4 Pu waste barrels

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. CFM	SWP INTERMITTENT MIN.	SWP CONTINUOUS MIN.	C/m AT 1"
Monitor on barrels	cp				100 2"	WO
Monitor body down	cp				20 2'	WC
Personal survey	gm		<500			WO <100
						WC
						WO
						WC
one pair of gloves	gm		<500			WO 600
						WC
particle release	gm					WO <100
						WC
						WO
						WC
						WO
						WC

gloves discarded - contaminated
 returned to the room 321 Bldg.
 Personnel said that he spends most
 of his time at the 321 Bldg.

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

100 m/hr

20 m/hr

SIGNED

J.D. Cardmore

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

011264

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. 530	S.W.P. NUMBER 507	DATE 8-9-68	TIME OF SURVEY 1300	PM
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TO Monitor For Doses To Load Waste Boxes
IN Load Logger and haul to 300 Wye
Burial Ground.

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
WT (LB.)	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. 1/2"	1/2" PU	mrad /hr	DIST.	W/hr	DIST.	C/M AT 1"	
	MAP 1/2 TO HANDS									WO	
										WC	
	TO HANDLE BOXES.	EP				32 RAD	1'	400	1'	WO	
										WC	
										WO	
										WC	
	Av. 1/2 TO Body	EP				6	F.	—		WO	
										WC	
	Loading Boxes.									WO	
										WC	
										WO	
										WC	
	Av. 1/2 IN Cab of Truck	EP				2	F.	—		WO	
										WC	
										WO	
										WC	
	1 Personnel	cm								WO 2100	
										WC	
	1 TRUCK	cm								WO <100	
										WC	

REMARKS:

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

SIGNED

UNCLASSIFIED

SURVEY NO.

011260

RADIATION SURVEY

WORKING NO. 25	ROOM NO. 313	S. W. P. NUMBER RJR	DATE 8-8-66	TIME OF SURVEY 2:15	AM PM
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Survey of 5 Metal Cans Containing Pa
liquid waste in Plastic bottles, double bagg-
ed and packed in absorbent material

TIME	MIN.	SPECIAL	MIN.	SWP INTERMITTENT	MIN.	SWP CONTINUOUS	MIN.	
ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	Mrad /hr	DIST.	T/hr	DIST.	C/D AT 1"
4m three Side of Cans	CP					10	4"	WO
								WC
Interst of Cans	HGM PMP		2500					WO 1.50
								WC
								WO
								WC
								WO
								WC
								WO
								WC
								WO
								WC
								WO
								WC
								WO
								WC

REMARKS:

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

10 MR/HR

SIGNED

Schroeder

WHC-MR-0416
UNCLASSIFIED

SURVEY NO.
011286

RADIATION SURVEY

ROOM NO. 529	S.W.P. NUMBER S.C.P.	DATE 5-10-62	TIME OF SURVEY 10:30
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Survey 4.59 grams of pure waste is
white carton for shipment to 200 West
at via ~~RECEIVED~~ R.S.R.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	mrad /hr	DIST.	SWP INTERMITTENT		SWP CONTINUOUS	
						MIN.	MIN.	MIN.	MIN.
Measurement of carton	C.P.							< 6	2"
Measurement of carton	gm		< 5.0					WO	< 100
								WC	
								WO	
								WC	
								WO	
								WC	
								WO	
								WC	
								WO	
								WC	
								WO	
								WC	
								WO	
								WC	
								WO	
								WC	

REMARKS:
A.S.R.
Carton bagged and returned to ~~storage~~

MAXIMUM RADIATION MEASUREMENT OBTAINED:
MAXIMUM DOSE RATE: < 6 Mrads/hr
SIGNED: J.D. [Signature]

RADIATION SURVEY

INDEX NO. 325	ROOM NO. —	S. W. P. NUMBER Special	DATE 6-15-62	TIME OF SURVEY 10:30	AM PM
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Survey Material For Disposal
Because of Pu AND Beta-Gamma Contamination

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	µgm PU	mrad /hr	DIST.	mr/hr	DIST.	C/m AT 1"
Stainless Steel Sink	Lm		6,000						WO 10,000
									WC
Duct Work (2)	Lm		2,000						WO 1,000
									WC
Glove Boxes (2)	Lm		Gross						WO 20,000
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC

REMARKS:

Copy with P.D.R.

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE 20,000 C/m - Gross Pu in Glove Boxes
Nil

SIGNED

R. B. Burton

UNCLASSIFIED

SURVEY NO.

011299

RADIATION SURVEY

WING NO. 325	ROOM NO. 530	SWAMP NUMBER SCP	DATE 8-13-62	TIME OF SURVEY 1300	AM PM
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Monitor & dump four barrels of contaminated waste to burial ground (300 WYE)

TIME	MIN.	SPECIAL	MIN.	SWP INTERMITTENT				SWP CONTINUOUS			
				MIN.				MIN.			
ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. 1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	C/M AT 1"
Barrels (112) 3/4 CP								200	2"		WO
Personnel (112) 1/2 CP								50	18"		WC
" Average								10	18"		WC
Summary of personnel TGM											WO < 200
Summary of personnel SPP											WC
Summary of vehicles TGM											WO < 200
Summary of vehicles SPP											WC
Summary of dumpsites TGM											WO < 200
Summary of dumpsites SPP											WC
											WO
											WC
											WO
											WC
											WO
											WC

REMARKS:

Personnel informed 1200 hours of work

MAXIMUM RADIATION MEASUREMENT OBTAINED:

200 Mr/hr

MAXIMUM DOSE RATE

50 Mr/hr

SIGNED

1000

UNCLASSIFIED

SURVEY NO.

12375

RADIATION SURVEY

BUILDING NO. 325	ROOM NO.	S. W. P. NUMBER	DATE 1-10-63	TIME OF SURVEY 1400	AM PM
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DESCRIPTION

SURVEY FOR RSR CARD BOARD CARTON

CONTAINING PU SOLID WASTE 300 GRAMS. FROM

D.A. WALLACE 325 BLDG TO N. S. WING 234-5

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	W PU	mrad /hr	DIST.	W/hr	DIST.	C/m AT 1"	
	CARTON	CP						10	2"	WO	
	"	GIM POP		<500						WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

MATERIAL SEALED IN ICE CREAM CARTONS THEN

PACKED IN CARDBOARD BOX AND TAPPED SHUT

MAXIMUM RADIATION MEASUREMENT OBTAINED:

10 MR/HR

MAXIMUM DOSE RATE

10 MR/HR

SIGNED

C.D. Pringle

40

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

12424

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. 307	S. W. P. NUMBER RSR	DATE 1-16-43	TIME OF SURVEY 1315	AM PM
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DESCRIPTION

SURVEY OF 5-FIVE GAL CANS OF PU SOLUTION
FROM 325 BLDG TO P. H. PARKER 2025 BLDG.

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ gm pu	mrad /hr	DIST.	mr/hr	DIST.	C/m AT 1"	
	CANS	CP						5	2"	WO	WC
	SMEARS	GM POP.		<500						WO <100	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC
										WO	WC

REMARKS:

NO DETECTIBLE CONTAMINATION

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

5 MR/HR

5 MR/HR

SIGNED

G. E. Pringle

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

131293

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. 303	S. W. P. NUMBER R.S.R.	DATE 7/11/63	TIME OF SURVEY 1330	PM
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DESCRIPTION

Survey 2 Garbage Cans Going To
202-A Containing Pu Waste Solution.

CP-319, Seintean

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μm PU	mrad /hr	DIST.	mr/hr	DIST.	C/m AT 1"	
	Poly. Bottles Sealed										WO
	in Plastic	CP						30	2"		WC
	Smears	Seintean	<500								WO
											WC
											WO
											WC
	Garbage Cans	CP						<2	2"		WO
	Smears	Seintean	<500								WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC

REMARKS:

Per R.S.R.

MAXIMUM RADIATION MEASUREMENT OBTAINED:

30 mr/hr @ 2"

MAXIMUM DOSE RATE

Nil

SIGNED

R. C. Butcher

UNCLASSIFIED

SURVEY NO.

19042

RADIATION SURVEY

BUILDING NO.	ROOM NO.	S.W.P. NUMBER	DATE	TIME OF SURVEY					
325	527	S.O.P.	3/6/03	AM PM					
DESCRIPTION									
MONITOR PLACING CEMENT OVER Pu BOTTLES FROM 308 BIDG TO TRANSFER TO BURIAL									
ROUTINE MIN.		SPECIAL MIN.		SWP INTERMITTENT MIN. SWP CONTINUOUS MIN.					
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	mrad /hr	DIST.	r/hr	DIST.	C/M AT "I"
R/W		Paper CP		<500	<6	5			WO
D/R		}		<500	<6	5			WC
SURVEY PERSONNEL		}		<500					WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
REMARKS:									
MAXIMUM RADIATION MEASUREMENT OBTAINED: <i>none Detected</i>									
MAXIMUM DOSE RATE									SIGNED <i>Lundgren</i>
UNCLASSIFIED									

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. "Wye" BG	S. W. P. NUMBER S.O.F.	DATE 3-1-63	TIME OF SURVEY 13:00	AM PM
DESCRIPTION Monitor & escort PM 147 waste Barrels to Wye BG & cover					
ROUTINE MIN.		SPECIAL MIN.		SWP INTERMITTENT MIN.	
				SWP CONTINUOUS MIN.	
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/r	mrad/hr DIST. r/hr DIST. C/P AT 1"
	P/m on waste Barrels	CP			150 2" WO
					WC
					WO
					WC
	P/c to handle				WO
	Barrels	CP		(Hands)	150 2" WC
					WO
					WC
	Personal surveys	PIW HGM			WO <100
					WC
					WO
					WC
	Survey of truck				WO
	bed	MW HGM			WC <100
					WO
					WC

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

150 mrad/hr

Same

SIGNED

S.M. Baskin

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

05310

RADIATION SURVEY

BUILDING NO.	ROOM NO.	S. W. P. NUMBER	DATE	TIME OF SURVEY
327	F cell	S.O.P.	4-10-63	1415

DESCRIPTION

Radiation measurement of milk pail - top of
F cell. Shift -

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ m PU	mrad /hr	DIST.	m/hr	DIST.	C/m AT 1"	
	Milk on milk pail	HR 7 p33				80 Rad/hr				WO	
	Milk dose rate	413 cp				300	4'			WC	
	Average dose rate	cp				100	4'			WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

Pail too hot to remove from cells.

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

80 Rad/hr

300 mrad/hr

SIGNED

J. D. Cushman

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

130535

RADIATION SURVEY

BUILDING NO.	ROOM NO.	S. W. P. NUMBER	DATE	TIME OF SURVEY	AM PM					
V-Burial Grounds	S.O.P.		4-25-63	0815						
DESCRIPTION Monitor removal of three burial boxes from 325 A going to by burial grounds.										
ROUTINE MIN. SPECIAL MIN. SWP INTERMITTENT MIN. SWP CONTINUOUS MIN.										
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. μ /m	SWP PU	mrad /hr	DIST.	mr/hr	DIST.	C/m AT 1"
	Box on base	CP						30	2"	WO
	Box for to personnel	CP						<2	F	WC
	Removal of boxes	H/M								WO
										WC
	Wheels from grounds	H/M								WO
	Wheels from grounds	H/M								WC
	Wheels from grounds	H/M								WO
	Wheels from grounds	H/M								WC
	Wheels from grounds	H/M								WO
	Wheels from grounds	H/M								WC
	Wheels from grounds	H/M								WO
	Wheels from grounds	H/M								WC
	Wheels from grounds	H/M								WO
	Wheels from grounds	H/M								WC
REMARKS:										
No spread of activity during whole job. Contents of boxes was PM '47										
Boxes covered with ~ 4' of dirt.										
MAXIMUM RADIATION MEASUREMENT OBTAINED:										
MAXIMUM DOSE RATE										
30 mrad/hr										
12 mrad/hr										
SIGNED										
Al Maki										

UNCLASSIFIED

MONITORED DURING TWO TRANSFERS OF FUEL ELEMENTS FROM "E" CELL TO "F" CELL & TRANSFER OF SLUGS FROM "F" TO "E" CELL ON RETURN TRIPS.

[illegible]

MEASUREMENT OBTAINED:

DOSE RATE

3 РАД/МН (в 4"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1

SIGNED

EDWARD C. HARRIS

4-17

ABC-66. RICHLAND, WASH

UNCLASSIFIED

SURVEY NO.	
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05512

RADIATION SURVEY

REPORTING NO. 327	ROOM NO. C-cell	S. W. P. NUMBER S.O.P.	DATE 4-26-63	TIME OF SURVEY 0915	APPROVED [Signature]
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Radiation measurements of elements for Perry

[illegible]

MARKS:

Perry informed of all measurements

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

105/hrs

DOSE RATE

200 mg/l/hr

SIGNED

S. V. Cudmore

190 (2-57) AEC-GE, RICHLAND, WASH

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

05504

RADIATION SURVEY

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

Canyon

50-P

4-25-63

0800 to 1530

Monitor milk pail run

Sims - Hill

ITEM OR LOCATION	INST. USED	MIN.	SWP INTERMITTENT			MIN.	SWP CONTINUOUS		
			MAX. d/m	$\mu\text{gm Pu}$	mrad /hr		m/hr	DIST.	C/m AT 1"
bottom of cask	HR TP	50					104/hr	1"	WO
side of cask	ep	244					350	2"	WC
low rate from cell ep							100	6'	WO
cask after decon	Tgm	117							WC
cask tray	ep				5000	2" (dial)			WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC

1- D-cell

2- B-cell

4- C-cell

3- A-cell

~~Cask~~ cask put in decon cell; to be cleaned.

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

104/hr

350 m/hr

SIGNED

J.D. Cadmore

V.A. Itamar

C. Prindle

UNCLASSIFIED

RADIATION SURVEY

FROM NO.

S. W. P. NUMBER

DATE _____

TIME OF SURVEY

AM

PM

✓✓✓✓✓

5010

41-24-63

1510

TEMPERATURE DURING UNLOADING OF CASE

WATER

[illegible]

TO BE CLEANED IN DECONCELL

RADIATION MEASUREMENT OBTAINED:

~~CODE NAME~~

15 MRAD/HR

15 MRAD/HR

SIGNED

SIGNED C. J. Prince

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

05484

RADIATION SURVEY

BUILDING NO.

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

AM
PM

DESCRIPTION

MONITORED DURING DECONTAMINATION OF OUTSIDE
OF LOADED "GATLING GUN" CASE PRIOR TO TRIP TO
BURIAL GROUNDS.

SPECIAL		SWP INTERMITTENT		SWP CONTINUOUS					
MIN.	MIN.	MIN.	MIN.	MIN.	MIN.				
ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	W/m PU	mrad /hr	DIST.	CT/hr	DIST.	C/m AT 1"
HEADS OF DISCHARGE END, CP-216	TCM-217				45	5			WO
									WC
" " TOP	TCM-217								WO 40,000
									WC
" " SIDES	TCM-217								WO 20,000
									WC
" " BACK END	TCM-217								WO 10,000
									WC
MAX. D/R ON CASE (DISCHARGE) CP-216	TCM-217				500	5			WO
									WC
SIDES OF CASE AFTER DECON.	TCM-217								WO 500
									WC
1' x 2' x 2' TO HANDS CP-216	CP-216				500	5			WO
									WC
1' x 2' x 2' TO BODY CP-216	CP-216				50	P			WO
									WC
									WO
									WC

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

500 MRAD/HR @ 5'

" " " " TO HANDS

SIGNED

J. A. Johnson

RADIATION SURVEY

WAC-PR-0416

SURVEY NO.

05569

NO. 57	ROOM NO. "A", "C", "D", & "F" CELL	S. W. P. NUMBER	DATE 5-1-63	TIME OF SURVEY 8:00 AM PM
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*INTERFERED DURING TRANSFER OF "MILK
PAILS (WHITE) FROM "A", "C", "D", & "F" CELLS TO BURIAL
GROUNDS.*

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	SWP INTERMITTENT		SWP CONTINUOUS		C/m AT 1"
				MIN.	MIN.	MIN.	MIN.	
TOP OF TIL- CORN PAIL CP-233					5 RAD	10"		WO
TOP OF TIL- BOTTOM OF CORN PAIL CP-233					25 RAD	5"		WO
TOP OF TIL- SIDES OF CORN PAIL CP-233					350	5"		WO
TOP OF TIL- HANDS	"				1 RAD	5"		WO
TOP OF TIL- BODY	"				300	F		WO
TOP OF TIL- BODY	"				100	F		WO
GROUNDS OF CORN PAIL DEPOSITS: 10M26			< 500					WO 4000
								WC
								WO
								WC
								WO
								WC
								WO
								WC

- 3 PAILS FROM "F" CELL
- 3 " " "C" CELL
- 2 " " "D" CELL
- 1 " " "A" CELL

RADIATION MEASUREMENT OBTAINED:
DOSE RATE **25 RAD/HR @ 5**
300 RAD/HR TO BODY

SIGNED *John Harmon*
Chuck Pringle

UNCLASSIFIED

ROOM NO. CANYON	S. W. P. NUMBER SOP	DATE 5-2-63	TIME OF SURVEY 1130	AM PM
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MONITOR MARKING OF NAK SAMPLE IN E-CELL
BY R. E. JOHNSON

ITEM OR LOCATION	SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
	MIN.		MIN.				MIN.			
		INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	mrad /h:	DIST.	mr/hr	DIST.	C/m AT 1"
MAX. DIR THRU CELL		357 CP				100	2"			WO
										WC
DIR 1/2 THRU CELL		"				50	6"			WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC

CELL IS ROPEED OFF AT 6 MRAD/HR SELF
READING DOSIMETER USED INSIDE ROPES

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

100 MRAD/HR
100 MRAD/HR

SIGNED

C. E. Pringle

UNCLASSIFIED

"F" cell

8-10-63 10

WHC-MR-0416

LOAD GATLING GUN CASK WITH 11 WASTE
CANS, CLEAN CASK. LOAD ONTO SEMI-TRUCK

SWP BURST -

ITEM OR LOCATION	MIN.	SPECIAL	MIN.	SWP INTERMITTENT				SWP CONTINUOUS			
				MAX. d/m	INST. USED	AREA SQ. IN.	mrad /hr	DIST.	ft/hr	DIST.	C/m AT 1"
DOSE ON LOAD CASK		CP-334							35	5	WO
SEM OPEN PART											WC
CONNECTING SHUT		CP-334					5000	4"			WO
CASK											WC
											WO
											WC
DOSE TO HANDS		CP-334					2 RAD	6"			WO
											WC
DOSE TO BODY		CP-334					500	F			WO
											WC
DOSE ON CASK		CP-334					5				WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

5 RAD/HR @ 4"
2 RAD/HR @ 6" to hand

SIGNED

[Signature]

UNCLASSIFIED

REC'D, RICHLAND, WASH

RADIATION SURVEY

WHC-MR-0416

ROOM NO. <i>A' CELL</i>	S. W. P. NUMBER	DATE <i>5-3-63</i>	TIME OF SURVEY <i>10:00</i> AM
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MONITORED DURING LOADING OF "GATTLING GUN"

WITH WASTE VANS.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/π	SWP INTERMITTENT			SWP CONTINUOUS			C/m AT 1"
				MIN.	MAX.	MIN.	MIN.	MAX.	MIN.	
<i>UP to BODY</i>	<i>GP-233</i>				<i>2</i>	<i>400</i>	<i>F</i>			WO
<i>UP to HANDS</i>	<i>GP-233</i>					<i>5 RAD</i>	<i>6" from part</i>			WC
<i>ON SHUTE AFTER</i>	<i>GP-233</i>					<i>2 RAD</i>	<i>5</i>			WO
<i>LOADING CASE & REMOVAL</i>	<i>GP-233</i>									WC
<i>CELL</i>										WO
<i>ARMED (HEAD) PART & (HEAD)</i>	<i>SCIN 57</i>									WO <i>100,000</i>
<i>ARMED SCIN 57</i>	<i>TEMP. 9</i>		<i>5,000</i>							WC
<i>AFTER DEVAL</i>	<i>TEMP. 9</i>		<i>< 500</i>							WO <i>< 100</i>
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC

3. WRAPPED IN PLASTIC & TRANSFERRED TO DECON. CELL FOR CLEANING.

ESTIMATION MEASUREMENT OBTAINED:

DOSE RATE *5 RAD/HR @ 6"*
" " " " to Body

SIGNED *J. A. Harrison*

UNCLASSIFIED

SURVEY GATTLING GUN CASK LOADED WITH

ASTE FOR SHIPMENT TO BURIAL GROUND.

SET 1/2 FOR PERSONNEL INSTALLING BOTTOM PIPE

ITEM OR LOCATION	INST. USED	SPECIAL MIN.	MIN.	MAX. d/m	μgm PU	mrad /hr	DIST.	SWP INTERMITTENT MIN.		SWP CONTINUOUS MIN.		C/m AT 1"
								m/hr	DIST.	m/hr	DIST.	
NAC RIM ON BORE	179 CP					4 RAD	2"					WO
												WC
ATE AIR TO PERSONNEL	"					30	15"					WO
												WC
MEANS IN OUTSIDE	57 SCINT. TGM											WO < 1000
												WC
CASK	177 CP					3	2"					WO
												WC
AIR THRU SIDE OF CASK	177 CP											WO
												WC
												WO
												WC
												WO
												WC
												WO
												WC
												WO
												WC

CASK LOADED ON TRUCK AND TAKEN TO BURIAL GROUND.

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

4 RAD/HR

4 RAD/HR

SIGNED

C.D. Brink

UNCLASSIFIED

ROOM NO. "A" CELL	S. W. P. NUMBER BOP	DATE 5-7-63	TIME OF SURVEY 1:05 PM
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MONITORED DURING TRANSFER OF ELEMENTS
FROM PORT CASK INTO "A" CELL.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm Pu	mrad /hr	DIST.	SWP INTERMITTENT		SWP CONTINUOUS		C/m AT 1"
							MIN.		MIN.		
DOSE THRU CASK	CP-233				270				60		280 2"
DOSE TO BODY & HANDS	"										40 F
DOSE 6' FROM END OF CASK	"										10 6'
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC

RADIATION MEASUREMENT OBTAINED:

DOSE RATE 280 mr/hr @ 2"

40 mr/hr to Body

SIGNED *[Signature]*

UNCLASSIFIED

RADIATION SURVEY

WAC-MR-0416

05665

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

Canyon

S.C.P.

5-8-63

0800 to 1530

Quarter milk pail run

MIN.		SPECIAL		MIN.		SWP INTERMITTENT				MIN.		SWP CONTINUOUS				MIN.	
ITEM OR LOCATION		INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	mrads/hr	DIST.	mr/hr	DIST.			C/m AT 1"					
on milkpail each		HR	50			120 H/hr	1"					WO					
		TP										WC					
dec in cub		CP	139			20	F					WO					
												WC					
after decar		Hgm	55									WO < 1000					
												WC					
dec rate		CP				500	3'					WO					
												WC					
												WO					
												WC					
												WO					
												WC					
												WO					
												WC					
												WO					
												WC					
												WO					
												WC					
												WO					
												WC					
												WO					
												WC					

9 pails dumped

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

120 H/hr

500 mrad/hr

SIGNED

J. D. Cudmore

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

05935

RADIATION SURVEY

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

canyon

S.O.P.

5-29-63

1630 to 2300

APD
BWP

Monitor for Mitchell to remove dummy slug and
 wire gas holder from A cell (via milk pail) and
 terminate in X-Ray lab hood.

SPECIAL MIN. SWP INTERMITTENT MIN. SWP CONTINUOUS MIN.

ITEM OR LOCATION

INST.
USEDMAX.
d/m μ gm
pu

mrad /hr

DIST.

m/hr

DIST.

C/m
AT 1"

water filled

milk pail

dummy slug

gas holder

cp

423

cp

4R

TP

50

(dist)

↓

200

4"

1000 2"

200 3"

1000 Rad/hr @ 1"

WO

WC

WO

WC

WO

WC

WO

WC

WO

WC

dummy slug of float gm + 6

WO

WC

WO

WC

after decon.

cp

5

2"

WO

WC

after decon

cp

400

2"

WO

WC

after decon

cp

2

2"

WO

WC

after decon

cp

2

2"

slug of bath

gm

< 1000 g/m

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

100 Rad/hr

1 Rad/hr

SIGNED

J.D. Cudmore

UNCLASSIFIED

ROOM NO. S. W. P. NUMBER DATE TIME OF SURVEY AM PM
 CANYON 50P 6-7-63 1430

MEASURE DOSE RATE OF NAK SAMPLES UNDER
 WATER IN BASIN

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. D/T	mrad /hr	DIST.	mr/hr	DIST.	C/M AT 1"
WATER R/M AT 27" WATER	GP			4.5 RAD	27"			WO
WATER D/R TO PERSONNEL	17			1 RAD	15"			WC
WATER D/R " "	"			2.0	18"			WO
								WC
								WO
								WC
								WO
								WC
								WO
								WC
								WO
								WC
								WO
								WC

MEASURE MENTS TAKEN TO DETERMINE DECAY

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

1 RAD/HR

4.5 RAD/HR

SIGNED

C. D. Pringle

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

05246

RADIATION SURVEY

S. W. P. NUMBER

50P

DATE

6-28-63

TIME OF SURVEY

8:00

AM

PM

INTERFERED DURING REMOVAL OF "MINK" PHIL'S (WASTE)
FROM CELL PRIOR TO TRANSFER TO BURIAL

SPECIAL MIN.	INST. USED	AREA SQ. IN.	MAX. d/m	μ gm PU	SWP INTERMITTENT MIN.		SWP CONTINUOUS MIN.		C/m AT 1"
					4 hours				
LOCATION									
	CP				5 RAD	10"			WO
	CP				8		2.5R	2"	WC
	CP						25	2"	WO
	CP				600	F			WC
	CP				5 RAD	6"			WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC

CP 163

CELL

NUMBER OF PALS

1

3

3

2

RADIATION MEASUREMENT OBTAINED:

5 RAD/HR @ 10"

DOSE RATE

5 RAD/HR @ 6" to HANDS

SIGNED

J. E. Harmon

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

06045

RADIATION SURVEY

ROOM NO. GENERAL	S. W. P. NUMBER JOP	DATE 6-12-63	TIME OF SURVEY 8:00	AM PM
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MONITORED DURING REMOVAL OF "MILK PAILS"

FROM CELLS, VIA CASK, FOR TRANSPORTING TO BURIAL

ROUNDS

ITEM OR LOCATION	SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
	MIN.		MIN.		4 1/2 Hours	MIN.				MIN.
		INST. USED	AREA SQ. IN.	MAX. d/m	µgm PU	mrad/hr	DIST.	mr/hr	DIST.	C/m AT 1"
MAX DOSE AT OPEN PORTS C.P. 5						5 RAD	18"			WO
										WC
MAX DOSE TO HANDS						3 RAD	18"			WO
										WC
MAX DOSE TO BODY						1 RAD	4'			WO
										WC
MAX DOSE THROUGH CASK						5		5 R	6"	WO 40,000
										WC
MAX 3 FEET FROM CASKS										WO 1,000
										WC
" " " " AFTER DECON										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC

CELL :

NUMBER OF PAIRS

C' CELL 3 PAIRS

"E" CELL 2 PAIRS

"F" CELL 1 PAIR

"H" CELL 4 PAIRS

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

5 RAD/HR @ 18"

1 RAD/HR TO BODY

SIGNED

J. D. Hanson

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

06230

RADIATION SURVEY

REPORT NO. <i>General</i>	S. W. P. NUMBER <i>SOP</i>	DATE <i>6-27-63</i>	TIME OF SURVEY <i>900</i>	<i>AM</i>
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*Worked during loading of "MILK PAILS" (WASTE)
into CRASH FOR TRANSFER TO BURIAL*

SPECIAL MIN.	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	SWP INTERMITTENT 4 1/2 HOURS MIN.		SWP CONTINUOUS		
					mrad /hr	DIST.	m/hr	DIST.	C/m AT 1"
<i>Top of open parts.</i>	<i>CP</i>				<i>5RAD</i>	<i>10"</i>			WO
									WC
<i>Top of CRASH</i>	<i>CP</i>						<i>5R</i>	<i>2"</i>	WO
									WC
<i>Base of CRASH</i>	<i>CP</i>						<i>4/5</i>	<i>2"</i>	WO
									WC
<i>Top of SCUB</i>	<i>CP</i>				<i>4</i>		<i>4/50</i>	<i>F</i>	WO
									WC
<i>Top of HANDS</i>	<i>CP</i>						<i>5R</i>	<i>2"</i>	WO
									WC
<i>Top of SLIDING DOOR</i>	<i>CP</i>				<i>300</i>	<i>5</i>			WO
									WC
<i>Top of CRASH BOTTOMS PRIOR TO DECON.</i>	<i>TGM</i>								WO <i>60,000</i>
									WC
<i>Top of CRASH AFTER DECON</i>	<i>TGM</i>								WO <i><100</i>
									WC
									WO
									WC
									WO
									WC

CP 1/15

CP 1/34

MILK PAILS REMOVED FROM "H" CELL

RADIATION MEASUREMENT OBTAINED:

5 RAD/HR @ 10"
5 R/HR TO HANDS

SIGNED

John F. [Signature]

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

06136

RADIATION SURVEY

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

PM

H CELL

TOP

6-20-63

4:15

MONITORED DURING UNLOADING OF (5) FIVE FUEL ELEMENTS

(ORIG. FROM 105-KE) FROM 14 TON CASK INTO "H" CELL

"DECRUDING" EXPERIMENT.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μRm PU	mrad /hr	DIST.	SWP INTERMITTENT		SWP CONTINUOUS		C/m AT 1"
							MIN.	MIN.	MIN.	MIN.	
1. IN JUNE - OVER MILK PAIR	CP-189				35R	6"					WO
2. IN JUNE - OPEN FULL RPE HOLE	TP-5										WC
3. IN JUNE - OVER OPEN PLUG PORT.											WO
4. IN JUNE - OVER OPEN PLUG PORT.											WC
5. IN JUNE - OVER OPEN PLUG PORT.											WO
6. IN JUNE - OVER OPEN PLUG PORT.											WC
7. IN JUNE - OVER OPEN PLUG PORT.											WO
8. IN JUNE - OVER OPEN PLUG PORT.											WC
9. IN JUNE - OVER OPEN PLUG PORT.											WO
10. IN JUNE - OVER OPEN PLUG PORT.											WC
11. IN JUNE - OVER OPEN PLUG PORT.											WO
12. IN JUNE - OVER OPEN PLUG PORT.											WC
13. IN JUNE - OVER OPEN PLUG PORT.											WO
14. IN JUNE - OVER OPEN PLUG PORT.											WC
15. IN JUNE - OVER OPEN PLUG PORT.											WO
16. IN JUNE - OVER OPEN PLUG PORT.											WC
17. IN JUNE - OVER OPEN PLUG PORT.											WO
18. IN JUNE - OVER OPEN PLUG PORT.											WC
19. IN JUNE - OVER OPEN PLUG PORT.											WO
20. IN JUNE - OVER OPEN PLUG PORT.											WC

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

35 R/hr @ 6"

5 RAD/hr to HANDS.

SIGNED

J. L. Harmon

UNCLASSIFIED

FORM 170 (2-57)

AEC-CE, RICHLAND WASH

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

06127

RADIATION SURVEY

STATION NO. 527	ROOM NO. JANITRY	S. W. P. NUMBER SCD	DATE 6-20-63	TIME OF SURVEY 1100	AM PM
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ENTER FOR REMOVAL IRRADIATED SAMPLE
FROM CELL AND TAKING TO HOOD FOR EXAMINATION
AND RETURN TO ~~THE~~ CASK

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	SWP INTERMITTENT		SWP CONTINUOUS			
					MIN.	DIST.	mr/hr	DIST.	C/m AT 1"	MIN.
2/4 ON SAMPLE	CP 383						5 RAD	6"		WO
W/ TO MOVE SAMPLE										WC
FROM CELL TO HOOD	"						400	15"		WO
W/ TO OPEN SAMPLE										WC
HOOD										WO
							800	12"		WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC
										WO
										WC

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

5 RAD/HR

SIGNED

C. E. Prince

UNCLASSIFIED

121217

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. —	S. W. P. NUMBER ECP	DATE 7-3-63	TIME OF SURVEY 1315	AM PM
DESCRIPTION					

MOVING LOADING OF Cement
BARRELS FOR BURIAL @
300 V.

NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ m PU	mrad /hr	DIST.	mr/hr	DIST.	C/m AT 1"	
	RIV BARRELS	CP		MAX				35 2'			WO
	CURVED PERSONNEL										WC
	D/R TO BODY	CP						15 1'			WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC

REMARKS:

CP- 491

M.M. - 175

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

35 m/hr

15 m/hr

SIGNED

Anderson
Gule

UNCLASSIFIED

06386

RADIATION SURVEY

ROOM NO. "F" CELL	S. W. P. NUMBER IOP	DATE 7-11-63	TIME OF SURVEY 13 13 PM
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MONITORED DURING LOADING OF "GATTLING GUN"
AIR WITH WASTE FROM "F" CELL.

MIN.		SPECIAL		MIN.		SWP INTERMITTENT				MIN.		SWP CONTINUOUS				MIN.			
ITEM OR LOCATION		INST. USED		AREA SQ. IN.		MAX. d/m		μm Pu		mrad /hr		DIST.		mr/hr		DIST.		C/M AT 1"	
2.54 INCH GUN HOOD PART. CP										3RAD		5						WO	
																		WC	
FOR TNU CASE PUSH CP										2RAD		5						WO	
																		WC	
																		WO	
																		WC	
4. TO HANDS		CP								1RAD		6"						WO	
																		WC	
4.5. TO BODY		CP								100		F						WO	
																		WC	
																		WO	
																		WC	
																		WO	
																		WC	
																		WO	
																		WC	

1. RADIATION MEASUREMENT OBTAINED:

2. DOSE RATE

3 RAD/hr @ SURFACE

1 RAD/hr @ 6" TO HANDS

SIGNED

J. G. Harmon

UNCLASSIFIED

RADIATION SURVEY

WHC-MR-0416

06470

ROOM NO.	S. W. P. NUMBER	DATE	TIME OF SURVEY
Canyon	S.O.P.	7-17-63	0800-1600

Monitor to haul milk pail casks

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm Pu	SWP INTERMITTENT		SWP CONTINUOUS			
					MIN.	DIST.	MIN.	DIST.	MIN.	C/m AT 1"
Rept. rad. measurement post					5000	1' (C cell)				WO
Dose rate					300	2'				WC
Dose rate top of cell					<6	F				WO
Milk dose rate to clean cask					300	2" hands				WC
Bottom of cask					2000	2"				WO
										WC
Removal of cask after decar										WO < 1000
										WC
Top of A cell										WO 10,000
										WC
										WO
										WC
										WO
										WC

9-216 Hgm 261

C-cell 6 pails
A cell 4 pails
D-cell 1 pail

RADIATION MEASUREMENT OBTAINED:

DOSE RATE 5 Rads/hr
300 Mrads/hr

SIGNED

J.D. Eudmore

UNCLASSIFIED

RADIATION SURVEY

WHC-MR-0416

SURVEY NO.

06502

ROOM NO.	S. W. P. NUMBER	DATE	TIME OF SURVEY	AM PM
7	CANYON	500	7-19-63	1050

FOR THE LOADING OF ARTILLERY GUN CASE AT
CELL BY R. A. BROWN AND L. E. CRADDOCK

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	SWP INTERMITTENT		SWP CONTINUOUS			
					MIN.	DIST.	MIN.	DIST.	MIN.	C/m AT 1"
EMPTY CASE WITH										WO
PLUG REMOVED	CP 383									WC
OPEN PIRT ON CELL	"									WO
MAX P/R TO LOAD										WC
CASE	"									WO
MAX P/R TO REMOVE										WC
GUIDE PIPE FROM PORT	"									WO
WRAP CURVED FROM										WC
SLIDING BLOCK	"									WO
PIPE TO CARRY GUIDE										WC
PIPE TO DECON, CELL	"									WO
MAX P/R ON GUIDE PIPE	"									WC
MAX P/R	"									WO
WHEELS ON CELL	TEM									8000
ENTER DECON	"									<1000

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

3 RAD/HR

5 RAD/HR

SIGNED

C. D. Pringle

UNCLASSIFIED

UNCLASSIFIED

WHC-MR-0416

SURVEY NO.

06512

RADIATION SURVEY

BUILDING NO. 527	ROOM NO. CANYON	S. W. P. NUMBER 50P	DATE 7-22-63	TIME OF SURVEY 0930	AM PM
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DESCRIPTION

MONITOR FOR BROWN INSTALLING BARREL ON GATTLING

GUN CASK.

ALSO SURVEY TRUCK USED FOR HAULING GATTLING GUN CASK

TO BURIAL GROUND AND BACK

ROUTINE	SPECIAL		SWP INTERMITTENT					SWP CONTINUOUS			
	MIN.	MIN.	MIN.	MIN.	MIN.	MIN.	MIN.	MIN.	MIN.	MIN.	MIN.
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	$\mu\text{gm Pu}$	mrads/hr	DIST.	mr/hr	DIST.	C/m AT 1"	
	MAX. ON CASK WITH PLUG REMOVED	CP 383				5000	4"			WO	
										WC	
	MAX. ON CASK WITH BARREL INST.									WO	
										WC	
	ALSO	"				1000	2"			WO	
										WC	
	MAX. P/R TO BODY	"				400	8"			WO	
										WC	
	Avg P/R TO BODY	"				50	15"			WO	
										WC	
	P/R INSIDE OF PLUG	"				200	2"			WO	
										WC	
	EXCEPT SHOOT	TGM								WO < 100	
	SMEAR ON TRUCK AFTER TRIP	100								WC	
		"								WO 500	
	SMEAR OUTSIDE OF TRUCK									WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

TRUCK SHOOT WAS COVERED WITH RADIATION SIGN AND SEALED WITH MASKING TAPE.

MAXIMUM RADIATION MEASUREMENT OBTAINED:

5000 MRAD/HR

MAXIMUM DOSE RATE

SIGNED

C.E. Pring

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

06831

RADIATION SURVEY

ROOM NO. *GENERAL* S. W. P. NUMBER *SUP* DATE *8-18-63* TIME OF SURVEY *9:00* AM *PM*

MONITORED DURING LOADING OF WASTE "MILK" PAILS INTO CASKS FOR TRANSFER TO BURIAL GARDENS.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	$\mu\text{gm Pu}$	mrad/hr	DIST.	m/hr	DIST.	C/m AT 1"
<i>MAX. DOSE OVER PORTS.</i>	<i>CP</i>				<i>5 RAD</i>	<i>24"</i>			WO
									WC
<i>MAX. DOSE ON SLIDE OF CASK</i>	<i>CP</i>				<i>120</i>	<i>5</i>			WO
									WC
<i>MAX. DOSE THRU BOTTOM OF LOADED CASK.</i>	<i>CP</i>				<i>5</i>		<i>3 R</i>	<i>6"</i>	WO
									WC
<i>ENTR. SPACER OF CASKS</i>	<i>HCM</i>								WO <i>< 1,000</i>
									WC
<i>MAX. DOSE RATE TO HANDS</i>	<i>CP</i>				<i>500</i>	<i>18"</i>			WO
									WC
<i>MAX. D/R TO BODY</i>	<i>CP</i>				<i>200</i>	<i>F</i>			WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC
									WO
									WC

CP-452 HCM 101

NO. OF PAILS: FROM CELL:

5

"F"

"C"

"A"

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

5 RAD/Hr @ 24"

200 mrad/Hr to Body

SIGNED

J. C. Harmon
SA 16 R-1-LL

UNCLASSIFIED

SURVEY NO.

06691

RADIATION SURVEY

ROOM NO.

S. W. P. NUMBER

DATE

TIME OF SURVEY

AM

PM

General

SIP

8-2-63

8:25

Monitored during loading milk pail

into cans into casks & place on special

truck for transfer to burial grounds.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ gm Pu	mrad /hr	DIST.	SWP INTERMITTENT		SWP CONTINUOUS		C/m AT 1"
							MIN.	MIN.	MIN.	MIN.	
See cover open parts	CP				5 rad	12"					WO
See thru bottom of cans.	CP & TP				4 rad	2"			40	1"	WC
See thru sides of can	CP								45	2"	WC
See thru closed slide	CP				4 rad	5			2	2"	WC
See air to hands	CP								2	2"	WC
See air to body	CP				500	1'			300	1'	WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC

CP 174 & TP 41

Number of pails:

From cell:

3

13

3

C

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

400/hr @ 1"

SIGNED

UNCLASSIFIED

SURVEY NO.

131579

RADIATION SURVEY

BUILDING NO. 325	ROOM NO. 305	S. W. P. NUMBER R	DATE 8/19/63	TIME OF SURVEY 1930 AM
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DESCRIPTION

Survey of P.L. Waste before Burial.

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ gm PU	mrad/hr	DIST.	m/hr	DIST.	c/m AT 1"	
1.	Max. Reading at P.L. Solution Thru glass Bottle	HH14	26							2500	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	
2.	Source at plastic containing Bottle of solution	Generator	4500							WO	
										WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

Released

MAXIMUM RADIATION MEASUREMENT OBTAINED:

2500 c/m

MAXIMUM DOSE RATE

SIGNED

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

900594

RADIATION SURVEY

BUILDING NO. 329-4	ROOM NO. Burial	S. W. P. NUMBER SOP	DATE 2-7-64	TIME OF SURVEY 1300	AM PM
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Haul dry waste lugger to y. Burial

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μ gm PU	mrad /hr	DIST.	m/hr	DIST.	C/m AT 1"	
1.	Max. reading on lugger -	CP				<1	5			WO	
										WC	
										WO	
										WC	
										WO	
										WC	
2.	Dose rate at trench -	CP				15	6'			WO	
										WC	
										WO	
										WC	
3.	Personnel & vehicle survey -	Ham								WO	<100
										WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

15 mrad/hr
15 mrad/hr

SIGNED

N. H. + Larson

UNCLASSIFIED

UNCLASSIFIED

SURVEY NO.

600703

RADIATION SURVEY

*

BUILDING NO. 3730 -	ROOM NO. Y Burial	S. W. P. NUMBER SOP	DATE 2-20-64	TIME OF SURVEY 0830	AM PM
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DESCRIPTION

Load "Hot" waste into lugger
and haul to burial pit.

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS			
MIN.		MIN.		MIN.				MIN.			
NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	mrads/hr	DIST.	TR/hr	DIST.	C/m AT 1"	
1.	Max dose rate	4PC						(CP)		WO	
	To tape box of waste					20 Rad	2'	4R	2'	WC	
2.	Dose rate in cab									WO	
	of vehicle -	CP						100	10'	WC	
3.	Dose rate at edge									WO	
	of pit -	CP						15	10'	WC	
4.	Personnel & vehicle									WO	
	surveys -	H6a								WC	
										WO	
										WC	
										WO	
										WC	
										WO	
										WC	

REMARKS:

Personnel concerned informed of all
dose rates -

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

20 Rad/hr incl 4R/hr
20 Rad/hr incl 4R/hr

SIGNED

X. H. Saxon

UNCLASSIFIED

RADIATION SURVEY

LOCATION	R.W.P. NUMBER	DATE	MO.	DAY	YEAR	TIME OF SURVEY	AM	PM	INSTRUMENT NUMBER
code # 44 Serial ground	S.P	10-21-68				1045			CP-314 76m-36

641043

Monitor for transpiration to haul comb water to use burial grounds.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	mrad/hr	DIST.	mr/hr	DIST.	NEUTRON mr/cm/hr	(INDICATE FAST OR SLOW)	DIST. AT 1 IN.	c/m
ose rate from lugger	CP					10	2"				WO
ose rate at edge of burial pit	"					2.5	1"				WO
ose rate to house	"					8	F				WO
shock + house at exit	76m										WO < 100
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC
											WO
											WC

MARKS:

XIMUM RADIATION MEASUREMENT OBTAINED	25 mr/hr
XIMUM PERSONNEL DOSE RATE	8 mr/hr

USE REVERSE SIDE FOR ADDITIONAL REMARKS	SIGNED
CONTINUOUS MONITORING PROVIDED	R. J. Miles
INTERMITTENT MONITORING PROVIDED	

NOTE ON REVERSE SIDE NAMES OF ALL PERSONNEL RECEIVING RATE = OR > 1 r/hour; ALSO, NAMES OF THOSE RECEIVING AL BODY EXPOSURE = OR > 100 mR
7800-102 (6-61)

UNCLASSIFIED

RADIATION SURVEY

PLUTONIUM RECYCLE TEST REACTOR - 309 BUILDING				INSTRUMENT NUMBER	
LOCATION	R.W.P. NUMBER	DATE	MO. DAY YEAR	TIME OF SURVEY	AM PM
DESCRIPTION	50.	7	20 6 1	1 30 C	

Operator for removal of Hay wires in bench ground.

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. μ/m	neut/hr		DIST.	mg/hr	DIST.	(INDICATE FAST OR SLOW) DIST.		c/m AT 1 IN.
				NEUTRON							
Thompson D.C. to h.c. Re	C.P.						23-	F			WO WC
D.R. end of pickup	C.P.						-	-			WO WC
End of plunger	Mg										WO WC
											WO WC
											WO WC
											WO WC
											WO WC
											WO WC
											WO WC
											WO WC
											WO WC
											WO WC

WHC-MR-0416

REMARKS:

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED

25 mg 1h.	☐ CONTINUOUS MONITORING PROVIDED ☒ INTERMITTENT MONITORING PROVIDED
MAXIMUM PERSONNEL DOSE RATE	☐ CONTINUOUS MONITORING PROVIDED ☐ INTERMITTENT MONITORING PROVIDED

MAXIMUM PERSONNEL DOSE RATE	25 mrad	SIGNED	<i>E. J. Beck</i>
EMIZE ON REVERSE SIDE NAMES OF ALL PERSONNEL RECEIVING DOSE RATE OF > 1 r/hour. ALSO NAMES OF THOSE PERSONNEL			

ITEMIZE ON REVERSE SIDE NAMES OF ALL PERSONNEL RECEIVING DOSE RATE = OR > 1 r/hour; ALSO, NAMES OF THOSE RECEIVING TOTAL BODY EXPOSURE = OR > 100 MR

TOTAL BODY EXPOSURE
BD-7800-102 (6-61)

UNCLASSIFIED

RADIATION SURVEY

Room NO. 325-A S. W. P. NUMBER 11-5-64 DATE 11-5-64 TIME OF SURVEY AM
PM

Monitor Dumping of 327 Milk Pails
and 325-A waste in 300 Wye
Burial Ground

ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm Pu	mrad /hr	DIST.	SWP INTERMITTENT		SWP CONTINUOUS		C/m AT 1"
							MIN.	MAX.	MIN.	MAX.	
1. 1 m from 325-A	LO TP 47										WO
2. waste		(flash)			20 Rad 3'	—					WC
3. 1 m from 327											WO
4. Milk Pails	CP 547				1 Rad 3'	—					WC
5. 1 m of ground around											WO
6. Milk Pail Pipe	"				20 3"	—					WC
7. 1 m of ground after											WO
8. removal of ground	HGM 300										WC 600
9. Survey of trenches											WO
10. 1/2 Personnel	"										WC 2 100

11. 1/2 to dump

12. waste TP 47 (flash - 20 Rad - 3' - 1 sec - 20 Rad - 3' - 1 sec)

13. 1/2 to dump

14. 1/2 in Pipes CP 547 200 4' —

RADIATION MEASUREMENT OBTAINED:

DOSE RATE

20 Rad / HR (flash)

200 mrad / HR

SIGNED

Schrothe

WHC-MR-0416

005521

ROLLING NO. <i>200119</i>	ROOM NO. <i>BG</i>	S. W. P. NUMBER <i>SOP</i>	DATE <i>11-10-64</i>	TIME OF SURVEY <i>1300</i>	<i>AM</i> PM
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Monitor Waste Transfer Via
Grating Gun Cask - A-cell Filter
Via Flat Bed Dump -

[illegible]

REMARKS:

* cleaned to 400 cm direct & Sirens
Personnel informed of dose-
rates and conditions @ all
times - No spread of contamination
detected -

MAXIMUM RADIATION MEASUREMENT OBTAINED:

~~MAXIMUM DOSE RATE~~

15.2 ac/bu

112/62

SIGNED

SIGNED *FHB-jso*

UNCLASSIFIED

RADIATION SURVEY

BUILDING NO. 3707-C	ROOM NO.	S. W. P. NUMBER	DATE 12-7-64	TIME OF SURVEY AM PM
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Removal from 325 (milk parlor)

ROUTINE MIN.	SPECIAL MIN.	SWP INTERMITTENT MIN.	SWP CONTINUOUS MIN.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	mrad /hr	DIST.	m/hr	DIST.	C/m AT 1"
				3. Larder during day	CP						10		WO
					426						2,000	4'	WC
				4. Drinking glasses	FGM								WO 500/3,000
					127								WC
				5. Right rear tire on	"								WO
													WC
				milk parlor truck									WO 2,000
													WC
				6. Tire cleaned	"								WO 4,100
													WC
				7. Clear 2' around barrel	"								WO 6,200
													WC
				8. Area shoveled out	"								WO 1,000
													WC
				9. Row of barrels									WO
													WC
				#1-10	CP						21		WO
					426						2,000		WC
													WO
													WC

REMARKS:

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

2 R/hr
2 R/hr

SIGNED

J. H. Keatley

RADIATION SURVEY

SURVEY NO.

605525

BUILDING NO. 2009B9	ROOM NO. —	S. W. P. NUMBER 507	DATE 1/12/65	TIME OF SURVEY 0900-1600	AM PM
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Monitor Waste Transfer From
325-A VIA - Large Cask -
Back Fill trench - Empty Luggage-

NOT REG.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	mrad /hr	DIST.	m/hr	DIST.	C/m AT 1"
	max. Radiation Measurement -									WO
	CP-536 -									WC
	dump 325-A - waste							12	10'	WO
	" " LUGGER - @ edge of Pit							20	F	WC
	Back Fill " max.							50	F	WO
	Dose to CAT driver							10	F	WC
	Vehicle Summary H-20									WO <100
	Personnel " "									WC
	max. dose rate									WO <100
	CP-536									WC
										WO
										WC

REMARKS:

No spread of contamination of
detected - West end trench
Filled - Luggage dump on east
end now due to spoil condition
325-A waste dumped in large
center pipe -
East moved to 300-west for
Back Fill -

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

12/hr

12/hr

SIGNED

[Signature]

UNCLASSIFIED

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WHC-MR-0416

SURVEY NO.

605536

RADIATION SURVEY

BUILDING NO. 500 WIRE	ROOM NO. B6	S. W. P. NUMBER JOP	DATE 1-14-65	TIME OF SURVEY 0700-1100	AM PM
--------------------------	----------------	------------------------	-----------------	-----------------------------	----------

Monitor Waste Transfer From
325-A-6-

ROUTINE MIN.	SPECIAL MIN.	SWP INTERMITTENT MIN.				SWP CONTINUOUS 3hr		C/M AT 1"				
		ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm PU	mrads/hr		DIST.	mr/hr	DIST.	
		MAX. RADIATION	XCD	295	Measurement							
		MAX. DOSE RATE	"		Flash to dump			500	4'			WO
		MAX. SURFAC	H-									WC
		"	206		325-A- DROP PIPE			500	4'			WO
		"	"		325-B- " "							WC
		"	"		burial pipe inside							WO
		"	"		truck bed top							WC
		Vehicle release Surrogate			327- LUGGER							WO
		+ Surrogate milk			PAL truck							WC
		Personnel *										WO
												WC
												WO
												WC

REMARKS:

* item #1 - See attached skin decou-record
truck drivers free of contamination
~ 20,000 ym on clean man's SWP's -
Contamination spread from 325-A
waste burial - in 36" hole - drop
pipe to hole was bagged with
water spray on - no wind

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

500 mr/hr

500 mr/hr

SIGNED

7/1/65
J. B. [Signature]

1000-130 (2-57) REC-GE RICHARD, WASH

UNCLASSIFIED

RADIATION SURVEY

BUILDING NO. WVE BUREAU GEND ROOM NO. SDP S. W. P. NUMBER 2-8-65 DATE 0830 TIME OF SURVEY AM

DESCRIPTION Monitor For Personnel To
Haul And Dump Contaminated Waste
From 325-A, 325-B And 2 head
wagons -

ROUTINE		SPECIAL		SWP INTERMITTENT				SWP CONTINUOUS				MIN.	
MIN.		MIN.		MIN.				300 X 1				MIN.	
NOT REQ.	ITEM OR LOCATION	INST. USED	AREA SQ. IN.	MAX. d/m	μgm Pu	mrad /hr	DIST.	μr/hr	DIST.	C/m AT 1"			
	Thy Radiation									WO			
	Detected	CP-145						300	3'	WC			
	Thy Dose Rate									WO			
	to Dump	CP-145						300	3'	WC			
	Personnel									WO			
	Snakes	H4-288								WC			
	Truck + Culture									WO			
	Snakes	H4-288								WC			
										WO			
										WC			
										WO			
										WC			

REMARKS:

No Spread or Contamination
Detected - Personnel Informed
of Conditions At All Times -
Winds Steady 32 MPH Gusting
to ~ 45 MPH. Supervision Informed
of Poor Dumping Conditions

MAXIMUM RADIATION MEASUREMENT OBTAINED:

MAXIMUM DOSE RATE

300 μr/hr

300 μr/hr

SIGNED

AB, 8005

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Rockwell International

Atomics International Division
Rockwell Hanford Operations

COPIES TO

TELEPHONE CONFERENCE

K. W. Owens	M. J. Lauterbach	Time 10:50 AM	Date April 30, 1980
G. D. Forehand	M. M. McCarthy	☐ Incoming	☒ Outgoing
J. A. Thies	R. B. Hall	With R. B. Hall	942-3907
C. W. Manry	H. E. McGuire	Representing HEDL	
M. W. Gibson	File/LB	With W. G. Jasen	
		Representing Rockwell Hanford Operations	

Commitment Made

☐ Yes☒ No

Purpose Of Telecon

To obtain information concerning plutonium inventories in the 618-11 (formerly known as the 318-11 or "Y" burial ground) waste site.

Text Of Telecon

Mr. Hall stated that there were trace amounts of plutonium in the 618-11 burial trenches (for example from buried HEPA filters). However, the 618-11 caissons received solid waste from the destructive metallurgical testing of reactor fuels. Mr. Hall remembers adding up inventories on record sheets (waste management work sheets) for this site that totaled 4-5 kilograms of plutonium. He feels that twice this quantity, 10 kgs. of Pu, is a reasonable quantity to assume for the 618-11 site inventory. However, he noted that the record sheets on this site have "disappeared", possibly lost during the 1965 General Electric to Battelle transfer. In this respect no documented records are available to verify the 10 kgs. of Pu number.

5/6/80

Bill
That's what I said
and that's what I believe
Bob Hall

July 1, 1966

R. B. Hall

RJ Sloat

SJ Beard

GE Backman

Mr. M. Ostby
 Waste Disposal and Decontamination Monthly
 Report, June 1966
Waste Disposal Operation

The following summarizes the Waste Disposal Operation:

Item	April	May
Concrete Waste Barrels disposed to 200-W Burial Ground	0	9
→ Cubic feet of dry waste disposed to the 300-Wye open trench from 300 area sites other than the 325 building.	1,200	1,500
→ Cubic feet of dry waste disposed to the 300-Wye open trench from 325 building.	200	200
Cubic feet of dry waste disposed to the 200-W Burial Ground by BNW.		
308 Building	402.5	547.5
325 Building	--	--
231-Z Building	689.5	221.5
108-F Building	466.25	341.25
222-U Building	49.5	66.0
292-T Building	9.0	9.0
221-T Building	--	67.5
→ Containers of high level dry waste disposed to 300-Wye waste tanks and tubes.	45	71
<u>340 Crib Waste</u>	*(216-Z-7)	
Crib Waste Volume, Gals	220,000	175,000
Total Beta Concentration uc/gal.	887	450
Total Beta Curies	195	78
Total Alpha Concentration uc/gal.	.3	.62
Total Alpha, MC	66	108
Pu Concentration, ug/gal.	2.5	NA
Amount Pu, g.	.55	NA
U. Concentration mg/gal.	NA	NA
Amount U, Kg.	NA	NA

DATE August 2, 1966
 TO R. B. Hall
 FROM L. M. Ostby
 SUBJECT WASTE DISPOSAL MONTHLY REPORT

B. M. McMurray
 R. J. Sloat
 S. J. Beard

Waste Disposal Operation

The following summarizes the Waste Disposal Operation:

Item	May	June
Concrete waste barrels disposed to 200-W Burial Ground	9	0
(6/8-11) Cubic feet of dry waste disposed to the 300-Wye open trench from 300 Area sites other than the 325 Building	1500	1600
Cubic feet of dry waste disposed to the 300-Wye open trench from the 325 Building	200	300
Cubic feet of dry waste disposed to the 200-W Burial Ground by BNW		
308 Building	547.5	526.5
325 Building	--	65.25
231-Z Building	221.5	355.25
108-F Building	314.25	387
222-U Building	66.0	72
292-T Building	9.0	45
221-T Building	67.5	40.5
Containers of high level dry waste disposed to 300-Wye waste tanks and tubes	71	68
<u>340 Crib Waste</u>		
Crib Waste Volume, Gals.	*175,000 - 220,000	285,000
Total Beta Concentration uc/gal.	450 - 1,400	1,380
Total Beta Curies	78 - 308	393
Total Alpha Concentration uc/gal.	.62 - .57	.61
Total Alpha, MC	108 - 125	173
Pu Concentration, ug/gal.	NA	.005
Amount Pu, g.	NA	.001
U Concentration mg/gal.	NA	NA
Amount U, Kg.	NA	NA

* Split to Cribs 216-Z-7 and 216-T-34 as reported in June.

FOR APPROVAL OF	
NAME	APPROVED

w/o drawings---

(bcc: LA Carter
 (PFX Duniger
 (KK Leeser
 (HE Ralph
 (Central Files-7400
 (EE Voiland File
 (EE Voiland LB

February 2, 1970

Mr. Frank S. Zvonar
 Supervisory Auditor
 U. S. General Accounting Office
 Federal Building
 Richmond, Washington 99352

Dear Mr. Zvonar:

Waste Burial Ground Data
Pacific Northwest Laboratory Sites

The following enclosures are provided in response to your informal request of January 20, 1970, for information pertinent to solid waste burial sites under the control of Battelle-Northwest. If further information is required, please contact Mr. Robert R. Hall or myself.

- (1) Table - Waste Burial Ground Data, Pacific Northwest Laboratory Sites
- (2) Drawing H-3-9982 - 300 North Burial Ground
- (3) Drawing H-3-9951 - 300 Wye Burial Ground

Sincerely yours,

ORIGINAL SIGNED BY
E. E. VOILAND

E. E. Voiland
 BNW Representative
 WASTE MANAGEMENT ADVISORY BOARD
 REC-RL

EV:mc
 Enclosures

cc: J. J. Cadwell, Safety and Standards, BNW - w/o drawings
 R. B. Hall, " " " - w/o drawings

1-30-70

Waste Burial Ground DataPacific Northwest Laboratory Sites

Site Designation	300 North	300-Wye	100-F
Area (acres)	6.1	8.6	1.7
Status:			
Activation date	1953	1963	1955
Deactivation date	1963(1)	1967(1)	Active
Waste volume:			
Buried	200,000 ⁽²⁾	120,000 ⁽³⁾	75,000-100,000 ⁽⁴⁾
Waste type	α, β, γ Emitters	α, β, γ Emitters	β, γ Emitters, only
Beta-Gamma Activity Buried (grams) (Curies)	< 1,000 ⁽⁵⁾	< 1,000 ⁽⁵⁾	< 10 ⁽⁶⁾
Plutonium Buried (grams)	< 100	< 100	None
Plutonium Disposal Containment	Cardboard Cartons	Cardboard Cartons	Not Applicable
Storage Term ⁽⁷⁾	Long	Long	Long

(For Footnotes see next page)

PNL Waste Burial Ground Data

Footnotes:

- (1) Deactivation according to Hanford Standards.
- (2) Data on the quantity of waste buried were not available from records readily available since the burial site was operated when General Electric Company was prime contractor. A knowledge of laboratory programs and burial site utilization suggests that 200,000 cubic feet is a reasonable estimate.
- (3) Based on "load-lugger" count.
- (4) Estimated on a basis of 5,000 to 6,000 cubic feet per year.
- (5) In volume, the largest part of the buried wastes consists of slightly contaminated (or possibly contaminated) rubber gloves, wipes, apparatus, etc., from bench scale experimentation with uranium or tracer level radionuclides. The bulk of the buried radioactivity, however, is concentrated in a relatively small volume. It arises from process demonstrations with extensive quantities of radionuclides and is buried in "caissons" located in specific areas of the burial sites. Very little -- if any -- plutonium was buried in cartons in the trenches. Recognized plutonium wastes were either contained in concrete, confined to the "caissons", or shipped to 200-West burial sites. It should be noted that these burial grounds have also been used for disposal of beryllium.
- (6) Primarily tracer level radionuclides from biological research.
- (7) These sites are intended for indefinite long-term storage (under periodic surveillance) until such time as a procedure for ultimate disposal has been established. Such long-term planning is currently being undertaken for Hanford wastes by the Waste Management Advisory Board, AEC-RL.

300-WYE Burial Ground

Status: Inactive; operations terminated December 1967.

Reference Drawing: H-3-9951

Location: About $1\frac{1}{2}$ miles northeast of the Richland-Hanford Highway (Route 4 South, Drawing No. M-6000) from a point $7\frac{1}{3}$ miles northwest of 300 Area. The site is in Sec. 5, T11N, R28E Willamette Meridian.

Description: The site consists of a 375' x 1000' rectangle oriented east-west. Total area is 8.6 acres.

Burial facilities include three backfilled trenches 900' x 50' occupying all of the site except a 100' x 1000' strip on the north side. In the eastern half of this northern portion are located 50 vertical pipe storage units made by welding five 55-gallon drum sections together. Just west of the pipe installations are four caisson storage facilities consisting of 8' diameter x 10' high 8-gauge corrugated metal pipe, buried 15' below grade and connected to the surface by offset 36" pipe. All pipe and caisson disposal facilities have been backfilled, capped off with concrete and covered with dirt.

The burial ground perimeter is marked with Identification Markers 2-68-1 through 2-68-28.

Burial Site Contents: The site is a repository for a broad spectrum of low-to-high-level dry radioactive wastes, primarily fission products and plutonium. Cartoned low level wastes were buried in the trenches and medium-to-high-level beta-gamma wastes in the pipe facilities and caissons.

Quantities probably amount to thousands of curies of beta-gamma wastes and 10's to 100's of grams of plutonium.

Remarks: This site was retired in December 1967 in favor of burying all wastes in the 200 Area burial grounds. At closure of the burial ground, one trench had not been completely used.

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END

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9/17/93**