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6 PAGE(S)

404463

Dr. Kenneth Scott
Crocker Radiation Laboratory
University of California
Berkeley, California

October 10th, 1946
REPOSITORY: OS AARONS APT LAB
COLLECTION: _____
BOX No: 7B 5787
FOLDER: OPERATION CROSSROADS

Dear Ken:

Enclosed are the results we obtained on the last shipment of paint samples. Results are in actual disintegrations per minute. Both beta and alpha results have been corrected for geometry and counter efficiency.

These samples were analyzed as follows:

The surface area of the various paint fragments were measured with a planimeter in order to give us a relation between total counts and surface area. The samples were then ground and weighed in order to establish disintegrations per gram. The samples were then digested with 4 N HCl and the solution filtered. A solution was then made up to volume, a small aliquot plated directly for beta counting and another aliquot extracted for alpha activity by the supferron procedure. These samples containing a large amount of iron were analyzed for alpha activity by carrying the plutonium directly with the lanthanum fluoride precipitation.

These analyses were done with somewhat greater care than the first group of samples you sent me. I am enclosing four copies of the results. You can give a copy to Capt. Walsh and send one to Commander Harris if you think it advisable to do so.

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Sincerely yours,

Classification changed to _____
by Authority of the U. S. Atomic Energy Commission, by _____
Walter A. Hayes 11/15/61
J. H. Becker

Wright Latham

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Classification changed to _____
by authority of the U. S. Atomic Energy Commission,

Per R. W. Krolen 11/17/61
(Person making change in classification)
By M. J. Taylor 12/1/61
(Signature of person making the change, and date)

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See outside envelope
to Area Engineer
Box 559
Berkeley, Calif.
Attn - Security Officer

PAINT SAMPLES RECEIVED FROM BIKINI SEPTEMBER 26TH, 1946

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CPT

Sample Code No.

Description

1
2
3

THIS DOCUMENT CONTAINS INFORMATION OF
NO. 5 OF 5 COPIES, SERIES A
6 PAGE(S)

USS-Nevada - 15th September
Bright red from bulk head of deck house
FRN 80

Grey Samples from #8 barbette

Ball Red sample from Stack

REPOSITORY

LOS ALAMOS NAT LAB

COLLECTION

BOX No

TR 5787

FOLDER

Operation Crossroads

USS Hughes ED 14th September
Paint Samples from stack trunk.

L.S.T. 133 14th September. Paint
Samples from bulk head of super-
structure Port FRN 80.

USS-Drachon - 14th September - APA 66

Paint samples main deck FRN 80 S.T.B.
Side

Fabric from YEM. Sitting on forecastle
deck.

USS-Salt Lake City - 15th September.
Paint Samples 01 deck FRN 80

L.S.T. 601 - 14th September. Paint
Samples from top of superstructure
01 deck.

USS-Brule - APA 66 - 14th September

Paint Samples 01 deck. Port FRN 70

Fabric from top on forecastle.

L.S.T. #38 - 14 September. Paint
Samples from main deck FRN - 80.

USS-Blind - 15th September. ED 604.
Paint samples from stack trunk

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Sample Code No.

Description

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NO. 2 OF 3 COPIES SERIES 7

#10
#11
#12
A
B
#13
A
B
#14
A
B
#15
#16
#17
#18

L.S.T. 545 - 13th September.
Paint sample main deck, part FKH 20.

L.S.T. 220 - 13th September.
Paint samples main deck FKH 10 Midship

U.S.S. Pennsylvania - 13th September
Paint Samples #3 Barbette

Fabric from rudder of FCF-5 located
on gun tail.

U.S.S. Independence - 13th September.
C.V.L.-42.
Paint samples from bridge

Fabric from EHV, rudder side facing
blast.

Barrow APA-61 - 14th September.
Paint Samples from bulk head of after
deck house 513 FR 135.
Fabric from FCF midships.

Paint samples from Cascoade APA - Q 5
Main Deck 5th. 50 Frame - 12th September
Reg. No. 255-051.

Paint Samples from USS Grittonden
APA-77 - Main Deck Port Frm. 150.
Reg. No. 255-029, 12th September

Paint Sample from Carteret - APA-78
on Main Deck. Port Frame 150 - 12th
September. Reg. No. 255-028.

Paint Sample from USS Noyrant 50-408
Sample taken from outside Bulkhead of
after deckhouse. 5th. Frm. 150.
Reg. No. 255-025

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(Weather Deck)

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Sample Code No.

Description

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- 980 Paint Samples from USS New York. Portside of the #6 turret. Reg. No. 255-027 - 12th September.
 - 980 Frins Eugene. Paint Sample from top of Ready Box C1 deck Stb. Frm. 100. Reg. No. 255-028. 12th September
 - 981 USS Dawson - Paint Samples Main Deck Port Frame 90. Reg. No. 255-030 - 12th September.
 - 982 Sample Coral Flaking off shipjack - 10th September. Reg. No. 255-032
 - 983 Paint Samples from USS Ralph Talbot DD-300 - 7th September, 1946. Taken from stock trunk (part). Reg. No. 255-024.
 - 984 Paint Sample from USS Falcon APA-61 Taken on stb. side Frm. 100. Reg. No. 255-023.

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Sample Code No.	Beta disintegrations/min		Alpha disintegrations/min	
	For gram	For cm ²	For gram	For cm ²
1 A	187,800	6,880	187	8.1
1 B	164,800	13,880	178	14.1
1 C	172,700	8,800	161.4	8.8
2	61,800	5,240	73.2	4.7
3	596,800	8,720	548	8.9
4 A	108,200	5,000	32.4	1.9
4 B	170,800	4,540	171	5.8
5	61,200	4,880	15.2	5.0
6	224,800	88,680	115	31.5
7 A	528,800	84,680	391	23.9
7 B	154,800	9,780	124	8.9
8	1,737,800	124,000	2540	183
9	854,800	65,680	68.2	3.8
10	47,200	8,480	12.8	2.5
11	116,800	13,880	1.4	0.2
12 A	17,200	2,820	0.2	0.1
12 B	244,700	9,670	88.9	1.3
13 A	240,800	17,470	120	8.7
13 B	172,800	8,900	8.9	0.5
14 A	89,100	2,115	1.5	0.1
14 B	197,800	5,880	77.0	4.2
15	24,720	2,025	4.8	0.5
16	441,800	28,720	7.9	0.7
17	2,670	1,057	2.7	0.7
18	4,220	423	1.9	0.1
19	1,880	149	0.5	0.9

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RESULTS OF BETA AND ALPHA ANALYSIS CONT.

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Sample Code No.	Beta disintegrations/min		Alpha disintegrations/min	
	Per gram	Per cm ²	Per gram	Per cm ²
20	200,000	87,200	15.2	25.9
21	600,000	30,200	82.5	29.4
22	304,000		701	
23	77,200	16,100	10.8	2.2
24	118,000	14,700	43.1	5.4

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