

411104

BEST COPY AVAILABLE

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

EMBL-

Locality Abs 50 - Parry \* Date 6 May 1958  
Personnel Welander, Ince, K\* Weather Fair  
Palumbo, Lonnak Water conditions NORMAL!  
Duckworth - Severson

Radiation level(s) Cetus (0615-8)

Operations:

\* Transferred from Rehoboth to YTB at 1230 in fairly rough water. Remained aboard the tug until 1400 hrs. Then transferred to ARS. Remained on deck and taken to Lagoon for transfer to beach and Parry Island. In the morning made breakfast in the kitchen. The dinner was 1920. Welander served for first time. Served a sizeable dish of vegetable soup. Remained aboard.

Delivered to the ship on May 7th at 1000 hrs. Took three security, biological, etc. etc. Finally landed in barracks 460, room 5. Received for 4 of the work on 1957 Fish - Emission report in afternoon at the lab.

RG UNIVERSITY ARCHIVES  
UNIV OF WASH LIBRARIES

Location APFL

Box  
Access No. 1

Folder DAILY Log Sheets

MAY 6, 1958 - AUGUST 18, 1958

BEST COPY AVAILABLE

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Parry Date 7 May 1958  
Personnel Melander, Weeks, Weather Warm  
Palumbo Water conditions Smooth  
Duckworth, Severance

Radiation level(s) none taken in Lab. Enclosed sheet  
for levels around this atoll.

Operations: Laid on Trip to Henry for 8 May 12:30 PM.  
Visited Rad safe to obtain readings around  
the atoll. Sheet is enclosed. Started working  
up water samples from the Rehoboth survey.  
Having trouble w/ MF because of quantities of  
particulate matter in the original sample.  
Completed drying and weighing plankton samples  
Mr. paper from same obtained Rehoboth.  
Obtained photos of complete atoll islands. Rangefinder  
sent mail to D. L. E. Held. Made arrangements  
for shipping water samples to NYU. As usual  
the question of who is to be charged for the  
shipping was a problem. Made it emphatic that  
Prog 40 does not get charged. Also made arrange-  
ments for plywood to replace that used aboard  
the Rehoboth for Lab benches, etc. worked on  
1957 Eniwetok Fish Report. Went diving out 17:30  
in south channel - 50-60 ft - RP, DW, NW. Don has  
got the bug now & collected finger shells, fungus and  
coral. Used air force rubber boat loaned by Capt.  
Cooper who has gone out with us before. Received  
correction sheets for WPL-56 w/ thanks to all.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Parry - Henry Date 8 May 1958  
Personnel Wolander, Wacker, Palumbo Weather Warm + Clear  
Duckworth, Severance Water conditions Smooth

Radiation level(s)

Operations:

Continual water treatment - Ralph Severance is pitching in on this project to help us. Lt Duckworth is writing reports. Worked on fish paper. Obtained plywood for J-4 and took (6) 5 gal Tins of ocean water to J-4. Capt Thomas for air shipment to Dr Harley, NYOC. Charge is still questionable but will be Prog 40. esp. since we have no funds any way! Prepared for trip to Henry + squared up the junk around the lab. This place can get awful messy in a few hours.

Left 1230 for Henry by H 21 (Pisachi) Helicopter. Collected some fish, invertebrate plants, soil, algae to get an idea of radioactivity - pre-shot - in this area. We spent possible contamination from 2 under water shots.

We would like word from Held and Benham concerning tissues to be sampled, or dissected + the animals prepared. Both from Henry as well as from Bell's. We were able to get a Coconut Crab, *Cenobita* + Sea cucumbers on this trip. We will also 3 clams from outer reef. Arr

1230. Coconut crab bit Don - think he was bit by the crab.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 9 May 1958  
Personnel Wolander, Weeks, Palumbo Weather WAXY, Fair  
4 NMRL personnel Water conditions Rough  
Seehdow for two new animals.

Radiation level(s)

Operations:

Day spent processing samples from Henry and packaging  
fish scales from Janet. We do not have restriction  
into treatment of invertebrate samples and so are  
taking bulk samples wet weights of the tissues or  
organs taken in other series. Samples will be dried  
and shipped to R.R. Seattle for dry weights & plating.  
We will also have a set number for plates  
and will assign some. This holds for all samples  
and will be the Bell collector void in far to march  
today. We'll hear from you soon, we will  
look to continue in the manner and you will  
have to assign numbers to these samples.  
The water treatment of the Rehoboth samples is still  
way we probably want to finish these samples before  
we need to return to the rolling house boat. Visitors today  
included Henry Schlect and Lt. Cmdr. W. Chapin and  
Capt. W. Chambers from NMRL. They will also board  
the Rehoboth and attend a gathering today, but the  
late boat we left on the beach unattended and got  
away. Had to recover by swimming, but short logs  
were taken in rough conditions to catch it. Boat was  
recovered by the boat upon request at 6:30 pm and  
left at 7:00 pm.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

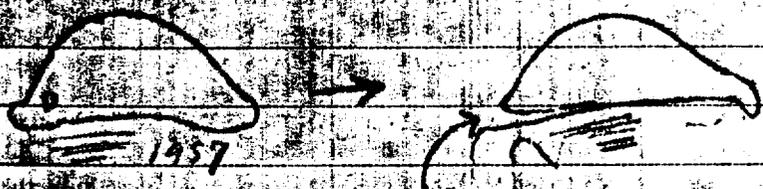
Locality Elmer Belle Date 10 MAY 1958  
Personnel Welander, Weeks Weather overcast 87.5°  
Palumbo + 4NMRL Water conditions Rough

Radiation level(s) at Belle w/ cov. 700 f at 3ft: 0.3-0.7 m/hr

Operations:

Morning chores included weighing, packaging, water treatment and preparation for Belle collection. The 12th and 13th samples are now packaged & will be sent off Monday if possible for Seattle; directions for processing will be included or sent separately.

Left at 12:35 in H-21 w/ Weeks, Welander, Palumbo and Seaman aboard. Arrived Belle 12:55. The major change in the contour of the ~~at~~ island 1545 follows



Partly washed out near area D

The magnolia planted in 1954 is doing very well. It is 36" tall with several branches w/ green healthy leaves and contains a bird's prop roots. The other plant is dead. Collected *Scaevola*, *Mess* and *Portulaca*; Plants #1208 and 1210 have disappeared completely. Stakes found lying on ground rotted at base. Covered two clumps of *Scaevola* w/ PE in area C on beach fringe. Collected 4 *Cenchrus* in old shell hole. It was loaded w/ them. Took random soil sample in Area C. D and plot in Area D. Plants in Area D are 65" (collected) and #1319 is healthy + 36" tall.

M  
6

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality \_\_\_\_\_ Date 10 / May Continued  
Personnel \_\_\_\_\_ Weather \_\_\_\_\_  
\_\_\_\_\_ Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Collected fish in area F to F1, the poison drifting into the pool. Took many goatfish. Collected Surgeons along with other varieties. Saw many sharks around Belle, one about 6' long in pool with us may have been Caralsharkus merisorah. Hadlers to say none of us ventured far out from shore.

Invertebrates were ~~to~~ not in great abundance. Collected 2 small clams, spider snail, and ~~about~~ <sup>few</sup> ~~in~~ <sup>the</sup> Cowries. Area as far as coral is concerned does not seem much improved over last year.

Algae collected in poison area and in area to the east between Clara and Belle. Saw lots of Coelium, Sphyridia, Turbinaria, but little Halimeda, Comaropa, or Lyngbya.

All planes were cancelled because of an impending storm, so a Dick was sent from Alice to pick us up. It got hung up on beach sand - area G-1 and it took us all over an hour to get it off. Boarded it and jerked up by LCU. Outward all. Left Belle at 1730. aboard LCU and 1745 and in to Elmer at 2120. Stowed away all samples before returning to the barracks

March 23  
1953

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 11 May 1958  
Personnel Welanders, Weeks, Palumbo Weather Rain - Sun  
Loungh Water conditions Pough

Radiation level(s)

Operations:

Processed samples from Bella and completed packaging Heavy Samples. Frank Loungh arrived from the Rehab both about 12:30, pale and tired. Reported picking up fallout in plankton and water samples. Continued processing samples after bull-sessing and lunch. Don is becoming familiar with our methods and is really helping out in the dissections and processing and is also doing Yeoman work on the collecting trips. After dinner down to the lab to pick up chemicals etc for shipboard work. A really long day it will be nice to get back to the easy going shipboard duty - This is Palumbo's opinion <sup>to L.</sup> AMEN <sup>and</sup>. These boys apparently get tired from sea sickness not -

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer - Rehoboth Date 12 May 1958  
Personnel Welander - Weeks Weather Fair  
Lowman - Palumbo Water conditions Normal

Radiation level(s) Fir - B 0550 (Bekin)  
Butter - nut (0615) F

Operations:  
Packaged part of Belle collection.  
Lowman - Palumbo later to Rehoboth  
to prepare solutions for chemistry.  
Returned at 1230 to Parry Island.  
Had meeting w/ Hydro + Capt Hackett  
see Rehoboth Log for details -  
obtained pump for shipboard duty  
Assembled all samples in box for  
shipment (counts omitted - will send  
later -)  
Bought 9 lures for \$4.83 -  
Welander - for Rehoboth fishing.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date May 13, 1958  
Personnel Palumbo, Weeks, Lowman Weather Stormy in morning fair afternoon  
Welanders Water conditions Rough Temp. 86°

Radiation level(s) ? Koa - (0.630) F

Operations:

Koa today at 6:30. Frank + Ralph went on boat Rehobeth to run Rain columns of Cactus Plantation. Weeks + Welanders cleaned up lab sent off packages of samples to Seattle and package of Rouge photos for Held.

Samples as follows:

From Henry Island. Collected May 8<sup>th</sup> 1958

Fish: Specimens numbers 1 to 15.

Invertebrates: # 1-6 (Ctenobites) Specimens # 7-11 (Tridacna crowd)

Spec. # 12-14 (Holothura atra)

Land Plants - 3 columns (Shorea), Vand anns, + Scaevola ?

Algae: Lagoon algae - 6 packages

Collection believed important as area will be contaminated by 2 underwater bursts.

Belle Collection May 10, 1958

Fish: Specimen numbers 16 to 133.

Invertebrates: Ctenobites # 15 to 18, Tridacna very small # 19

Land plants - Scaevola, Messerschmidia, Portulaca from Area D. H

Algae - 4 packages

In the case of the fish these can stand as is for the present or if help is available, routine ashing & (in case of invertebrates ashing) will be a great help.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality \_\_\_\_\_ Date May 13, Continued  
Personnel \_\_\_\_\_ Weather \_\_\_\_\_  
Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Worked on patching the several rubber boats at the lab. found it to be a difficult, complicated process & still not sure of success. The patching material as well as the boats are rather old. If patches of any kind (Pressure or clamp patches) are available in Seattle we could use some.

Directions for plant-algae samples.

- 1) Dry ash one half of sample - save remainder for wet ash
- 2) Place portion of ash on plate numbered according to series following Rongelap numbers.
3. weigh ashed plate etc
4. Calculate back to wet weight (RP will do late)

Note: For small samples dry ash entire sample - for Henry samples Ed may want wet ashed portion.

Directions for Soils

1. Mix sample + place 100mg dry soil on plate.
2. Dry ash plates + 5/1000 etc
3. Count
4. Take ash weights (?)

RP  
dw

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date May 27, 1958  
Personnel Lawman, Palumbo Weather Normal 94°F  
Weeks & Welsch Water conditions Normal

Radiation level(s) Mayolia (0600) E

Operations:

Counting samples, prepared resin columns,  
sorted equipment - placed chemical equipment  
on shelves for convenience of chemist.

Prepare fish samples as follows:

1. Dry ash all of sample

2. Repack sample, with label, in plastic  
bags and store for future work.

(If time does not permit dry ashing the samples  
could be stored as received in leather.

3. Plate or card numbers can be given to these  
samples when they are ashed and counted.

RB

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

ELMER

Locality Lawnan, Palumbo Date May 28, 1958  
Personnel Wecks & Melander Weather Normal Temp 85° at 0930  
Water conditions Normal

Radiation level(s)

Operations:

Continued counting samples and  
processing resin fractions. Spent some time  
obtaining  $\text{HNO}_3$  - apparently not in great supply  
here. We were finally able to get 6 lb  
bottle thru the help of several of our friends.  
Lawnan got it from Walt Gibbins.

RIES

RP

13

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date May 29, 1951  
Personnel Lawman, Palumbo Weather Normal 95°  
Weeks, Welanden Water conditions normal.

Radiation level(s)

Operations:

Continued  $\beta$ - $\gamma$  counting and  $\gamma$  spectrometry.  
Also resin columns. Lab. work all  
day.

Got word of a victim of a stone fish  
at Fred about ~~the~~ 1900. Found out later  
what was to be moved to Elmer so we are  
awaiting news. H + N sent a photo grapher  
for color and black & white pictures.  
The summer event at Bikini is still a threat  
with making counts well into the night

ENT. 10. 1951

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date May 30, 1958  
Personnel Louren, Palumbo Weather Normal 87°  
Wick & Wolander Water conditions Normal

Radiation level(s) Tobacco puffed off to the north - Janet? 1400.

Operations:

Continued counting  $\beta$ ,  $\gamma$ ,  $\gamma$ -spectrometry,  
stream columns, as fast as they will go.

Had many visitors curious about stone fish  
who had heard about the accident at Ford.  
Apparently, the patient was in swimming &  
got a sting on his foot. 2 or 3 swimmers  
arrived on the scene & saw the stone fish which  
they caught while the victim was high-tailing it  
to the hospital. Fortunately, only one of the 13 species  
entered the foot & so far the patient suffered edema  
of the ankle and knee, fever of a mild nature  
and a headache.

We have the stonefish in our freezer and  
you has the task of showing it to the visitors  
with the appropriate lecture.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date May 31, 1958  
Personnel Palumbo, Lowman Weather Normal to stormy, rain  
Wecks & Melander Water conditions Rough

Radiation level(s) Specimen? event at Bikini ~ 1515

Operations:

Continued counting  $\beta$ ,  $\gamma$ ,  $\gamma$  spectrometry,  
HFHCl separation of aerosols found in previous  
samples, etc.

Obtained boxes for CMR area & may  
move counting equipment to bunker if fallout  
appears.

Take shop fixed up 2 of the rubber boats  
so hope the patches hold.

Prepared W-1, 5, 3 NaCO<sub>3</sub> samples for total  
counts.

First samples counted total  $\gamma$ ,  $\beta$  and  
dry weight taken.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 1, 1958 Sunday  
Personnel Lawman, Palumbo Weather Normal 86.5°F  
Weeks, Welander Water conditions Normal

Radiation level(s) Just about doubled at 0030 <sup>(31,000 cpm)</sup> but went down to 19,000 cpm at 0900.

Operations: Continued counting,  $\beta$ ,  $\gamma$ ,  $\beta$  spectrometry, continued HF-HCL amino separation.

An airborne  $\beta$  ray source up by 0030 down  
at 0900 by 1000.  $\beta$  ray source was  
5.0.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality *Elmer*

Date

*June 2, 1958*

Personnel

*Louise, Plumb, Wacker & Weland*

Weather

*Normal 88° F*

Water conditions

Radiation level(s)

Operations:

*Continued counting  $\alpha$ ,  $\gamma$ ,  $\beta$  spectrometry, and  
begin compiling table of samples, localities,  
etc.*

NIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 3, 1958  
Personnel Louren, Palumbo, Weather Normal 89°F  
Woolas & Wolander Water conditions Normal

Radiation level(s) Rose & rose at 0630

Activities:  
Continued counting  $\gamma$  & ~~beta~~  $\gamma$  spectra. Making  
checking tables.  
Writing on Materials & Methods for Water  
at TWX to Louren regarding future  
in dates.  
We have 3 jacks, 3 sharks, 4 lionfish, 1 puffer,  
1 squid, 1 stonefish, 3 butterflyfish,  
3 blennies, 10-15 surgeonfish, 5 gobies,  
miscellaneous fish in our aquaria besides miscellaneous  
water hardly worth mentioning?

Constructed lead shield for gamma  
consisting of 80 bricks each 25<sup>lb</sup>  
14" x 14" x 4". Background on 2 Mev dropped  
from 15,000 c/m to 2,000 c/m.

Started outline and writing on Materials  
and Methods. This is slow work since we  
have so much to describe.

UNIVERSITY OF WASHINGTON  
LIBRARIES

FOR  
NEW  
APP.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality EMER Date June 4, 1958  
Personnel Kleets, Klelander Weather Rain and Sun  
Lowman, Perumbo Water conditions Rough to normal

radiation level(s)

Morning spent making beta and gamma counts, repairing or replacing tubes and resistors in spectrometer and weighing plankton sampler to calculate dry weight of micro and macroplankton. Also cleaned all pre-warhoop pre Cactus fallout dish and plankton sampler since we can no longer do anything with them.

At 1730 went to "Ham" shack & called in on "Patch" to Seattle. All aboard personnel had with the waves which helped moral. Every day at 1730 connection is made with a "Ham" and usually reception is loud & clear. I would like Lauren's phone (Home phone) numbers in case, as soon as possible. We can not have classified material, but there may be other matters which could be of interest.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 5, 1958  
Personnel Lowman, Palumbo Weather Normal 58°F  
Weber & Welandet Water conditions Normal

Radio level(s) Beta bkgd 165 + 127 c/m for #1 & #2 counters  
γ - " 1050 c/m

turned γ spectra, some resin calcium separation,  
and report (materials & methods) and making  
correcting tables.

We suggest that a copy of each report pertaining  
to work here be sent for reference purposes.

It can be stored in our practically empty

files. We have had requests for our  
files from several people lately and at  
the time we ask them to write to the Lab

and we took out only those we thought  
were most, but our list was not long enough.

We need especially the Troll and the Walter  
files for reference to materials and methods

even though we won't get them in time,  
but they and the others should be stored

we.  
Made reservations for Frank and Ralph to  
come June 16th and Art July 1st. Don's fate  
still unknown.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality: EIMER

Date: 6/6/58

Personnel: Lowman, Wlelander,  
Weeks, Palumbo

Weather: Fair

Water conditions: NORMAL

Level(s)

Continued with gamma counting,  $\beta$  decays  
and tabulation of data. Visited by Dr. WWT,  
Cane and Dr. H. Hicks, UCRL chemists and  
later Jere Knight of LASL, one time  
radiochemist and now interested in nuclear  
structure. We discussed radiochemical  
techniques, relative yields of various nuclides  
and the possibility of obtaining this latter  
information to better evaluate our data.  
UCRL chemists use ion exchange methods almost  
exclusively along with standard methods as a  
primary step. They obtain all their Dowex Resins  
from Bio-Rad, University Ave. Berkeley, California.  
The organic impurities are removed before shipping.

22

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 7, 1958  
Personnel Lawson, Palumbo Weather Normal 87°  
Welch & Welande Water conditions Normal

Location level(s)

continued  $\gamma$  counting,  $\beta$  decays and tabulation  
data. We are copying original data and  
keeping this material so that a copy  
be left here until the logs & originals  
are safely in Seattle.

and came from JTF 7 that Lawson would be  
a few days.

work running an ion-exchange column  
in earth.

COPIES  
LIBRARIES

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Faculty: Elmer Date: June 8, 1958  
Personnel: Lawson, Palumbo Weather: Normal 86°  
Wells & Welanders Water conditions: Normal

Location: (s)

continued  $\gamma$  spectra,  $\beta$  decays, tabulating and  
data.

George Anton asked us to meet with him in  
the lab saying he had news or rumors of  
a program that may concern us. #5  
He related that in talking with a Col. Jeffrey  
was concerned about the disestablishment  
of the area. This topic has been talked  
by George Anton quite frequently of late and  
the Col. grabbed the ball & has  
Lt. Col. Siber on the subject. ~~Anton~~  
apparently, will now be investigated by

Anton suggested we write up some plans for  
a program to sample the radioactive area  
which is outside the atoll as a preliminary  
Silverstein. He indicated that the Silverstein  
may be too late for political reasons and that  
an answer may be needed in a hurry.  
I pointed out to Anton that Lauren  
would soon be on Elmer & that we  
must presume to set up a program  
with his help as well as the O.K. from  
and D.B.M.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Elmer

Date June 9, 1958

Wielander - Wecker

Weather Humid Temp 89°

LOWMAN - PALUMBO

Water conditions NORMAL

Level(s) Umbrella at 1115

Replaced 2" well-type crystal with 2" flat  
crystal in spectrometer. Much of the background  
has been eliminated. Ran samples collected  
at Pillschell of fallout on funnels and cloud  
water and 2 Mex. as well as water from  
the area collected by Rad Safe (Bill Tammany)  
by Col. Giblin, Col. Lechasse, and George Anton  
of past shot survey. J-3, JTF is interested with  
to opening the restricted area. Lechasse was  
in the fish contamination concerning the  
of.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Faculty: Elmer Date: June 10, 1958  
Principal: Lowman, Palumbo Weather: Normal - 88°  
Wicks & Welander Water conditions: "

Altitude level(s)

Obtained  $\gamma$  spectra,  $\beta$  decays, tabulation of  
and checking. Resin columns on the  
elute material and on the solution from  
water sample from Umbrella Target area.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Elmer  
Lawman, Pabunbo  
Weeks & Welander

Date June 11, 1958  
Weather Normal 89°  
Water conditions "

Maple at Bikini: <sup>(0530)</sup> Shook Barracks at 0548

of spectra,  $\beta$  decays, tabulation of  
checking.

Elmer went to Elmer this evening to  
catch an early plant for  
they will try to obtain as many samples  
in the short time they have there.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Party Edwards  
Louison, Wilander  
Walker + Palumbo

Date June 12, 1958  
Weather 5 stormy - Rain 79°  
Water conditions Normal to rough

Package cancelled - Would be travellers returned  
at 10:00 AM. Plane trouble caused return after 6:00

- Package for mailing - Following included in one large
- 2 pks of flags from drague
  - 2 pks of chill shock salt from Rhobothic evaporators
  - 1 Pkg Rhobothic Plankton sampler
  - 1 H<sub>2</sub>O
  - 1 Trawl samples
  - 1 Algae samples
  - 1 Extra plankton and MFPapers
  - 1 Pre Wahoo samples
  - 1 Co<sub>2</sub> W-1 to W-3 lumped
  - 1 Dolphin Tissues
  - 1 Squid
  - 1 Microplankton P.6 to P.21
  - 2 coconuts from Henry (#6, #7) same as previous shipment
  - 2 pks of Mike's cards
  - 1 Pkg miscellaneous samples.
  - 3 boxes for Silver stain survey + cleared  
at Lab in preparation for Doc's visit on  
tomorrow morning.
  - 1 pkg fish specimens 135 - Jack from Party

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 13, 1958  
Personnel Lawman, Palumbo Weather Normal  
Welles & Wilander Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Continued Tinspector, completed Tables  
~~Begin~~ Continued packing for Silverstein's trip  
Worked on Umbrella water sampler.

Found out from 7.1 that Lawman would be  
accompanied by Dean Bird, Jim Cantrell, Bill Champ  
Jim Joyner, & Ron Eisler.

Laid on a trip by M-Boat to Vera. with  
Henry Schlacks

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 14, 1958  
Personnel Louman, Palumbo Weather Normal  
Welks & Wilander Water conditions Normal

Radiation level(s)

Observations:

~~Left~~ Left for Vera 0800 by M-boat with Duke  
collected some samples at Vera.

Paired a coral head off southern end of  
Point in about 25' of water. Collected fish with  
some success. Collected helmet shells off Point  
& returned about 1300

Worked on Umbrella bottom sample.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 15, 1958 (Sunday)  
Personnel Lawman, Palumbo Weather Normal  
Weeks, Weland Water conditions Normal  
Radiation level(s) Aspen (0530) B Walnut (0630) E

Operations:

Sorted, labeled and folded Wahoo charts of which we have 23 ~~total~~ originals - about 2 copies each plus the transparencies for duplication.

Frank & Ralph will carry one full set to Seattle & we will send the other copies by air mail.

Finished packing all samples for air shipment or mail to Seattle. Shipping 1 box of water samples, 1 extra plankton tube via J-4. Mailing samples of Wahoo series of plankton, water fractions, fish plates etc via 7.1 mail office - 1 box only.

Added to box for air mailing the following (See list for June 12<sup>th</sup>):

Pkg for mailing {  
1 PKG - 1 cigar box vials w/ fractions of organisms  
1 PKG - 1 Listeroid tubes w/ fractions  
1 PKG R - fractions  
1 PKG R - fractions + others  
1 PKG miscellaneous (vials w/ whole plankton)

2 Rats dissected - Janet April 1958. Tissues lumped and weighed and put in oven to dry.

wet weights of samples:  
Bone - 3.695 gms  
Muscle - 44.327  
Liver - 12.872  
Ovary - 3.699

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 16, 1958  
Personnel Louman, Palumbo Weather Normal - 91°F  
Weeks & Welander Water conditions Normal to stormy.  
Rain.

Radiation level(s) Aspen at Bikini & Walnut at Eniwetok yesterday

Remarks: Louman & Palumbo left for Stokeland  
0930

Shipped off water samples & preserved specimens  
from Wahoo event, by air <sup>freight</sup> to Seattle.

Shipped off dried specimens from Wahoo event  
Parcel post - air to Seattle.

Painted rest of the shipping boxes.

Water has been shut off most of the day -  
interfering with lab. work.

Continued to count T spectra of  
Wahoo & Umbrella specimens.

Don also worked on timer & printer.

Painted and repaired more shipping  
containers for the Silverstream trip.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Faculty Elmer Date June 17, 1958  
Personnel Weeks & Welanders Weather Normal - 87.5°F  
Water conditions Normal

Location level(s)

Conditions:

Had repairs made on windows on westward side lab. Also doors changed so as to form a wind screen. Makes it tougher for the flies and we enjoy the weather more than the lab.

The large drying oven was moved from the counting room into the main room.

Worked for about an hour on the  $\gamma$  spect. It is working now. The trouble was found with the micro switch within the timer. Replaced the micro switch within the scaler. Also repaired timing register in the scaler. We are now making arrangements for a tube checker which we will use to check all tubes in  $\gamma$  spect. Tomorrow we will have a  $\gamma$  spect. that is a new one.

The show hall is really in a bad way. It seems they have a tremendous number of pies now - that Palumbo has departed. We will do our best to remedy this situation.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 18, 1958  
Personnel Weeks & Welander Weather Hot - no clouds  
Water conditions Normal

Radiation level(s) Linden at 1500. off Runit -

Operations:

Laid on trip for plankton + fish tomorrow.  
Called J-3 phone 6-2225 + set up the M-Boat.  
Called Mess Hall 6-2736 for lunches.

Don has spectrometer running again smoothly.  
Painted more boxes. Worked fish from Runit.  
Set up gear for the trip tomorrow.

Frank and/or Ralph - you may need more screen  
1/2 inch, for the Silverstein trip if you use  
different screen for each station or haul.

Samples take all day to count so  
we move slowly until tomorrow's plankton  
comes in.

No word on the incoming personnel!

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 19, 1958  
Personnel Weeks & Wlascuder Weather Normal  
Water conditions Normal

Radiation level(s)

Operations:

Plankton - Fishing trip around Yvonne.  
Because of yesterday's shot at Yvonne we obtained  
an entry blank & filled same at Red-Sale with  
the help of Henry Schlack's. Left by M-boat at  
0800 with Red Carol, Fred DePlume as assistant  
P-37 (Plankton haul 37) off Glenn near Wide  
range at 0925 to 0945 with  $\frac{1}{2}$  meter net +  
100 yd line with M-boat drifting. Placed in  
graduate cylinders with some alcohol and the plankton  
all rose & compacted at top of cylinder, so  
measured volume of 20 ml ~~the~~ at the surface.  
Placed all plankton & liquid from graduate in  
150 ml P.E. Bottle.

P-38 off LeRoy about 1 mile 1048-1105  
would fall out pattern from 2 inches immediately north  
of LeRoy, the surface water ran to 14 mps/hr.  
The pattern appeared to be about 100 yards  
across from 2 mps/hr to 14 mps/hr to 2 mps/hr.  
~~P-39~~ off Belle 1230 to 1300 - lost graduate  
cylinder & plankton over board.

P-39 - 2nd try - 1305 - 1320 off Belle

P-40 - off Yvonne (Ran into 1 inch Fall out  
pattern - Surface water up to 34 mps/hr) 1445-1805  
Fall out pattern here roughly a quarter of a mile  
across.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 19, 1958 Continued  
Personnel Wicks & Welanders Weather Normal  
Water conditions Normal

Radiation level(s)

Operations:

Arrived Elmer about 1630. Found most of us ~~the~~ contaminated with salt spray to about 40 mcp/hr on hands & feet. Plankton net ran 5000 m<sup>3</sup>/hr at cod end.

Took showers at decontamination station. Washed clothes there also. Placed plankton net in large concrete aquaria.

Due to a revised start ~~date~~ date <sup>SMT</sup> ~~of~~ <sup>of</sup> ~~the~~ <sup>the</sup> ~~trip~~ <sup>trip</sup> (unclass.) will now go on the 25 August. This start will delay the Silverstein trip until about 1 Sept.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 20 June 1958

Personnel WELANDER & WEEKS Weather NORMAL

Water conditions NORMAL

Radiation level(s)

Operations:

FILTERED & DRIED PLANKTON SAMPLES FROM  
19 June TRIP. (WEIGHTS ALSO) CONTINUED COUNTING  
OF U-1 & U-2 SAMPLES LEFT BY COMMANDER.  
VERY LOW ACTIVITY IN THESE SAMPLES. PERIODIC  
CHECK WITH STANDARDS SHOW THAT  
SPECT. IS FUNCTIONING PERFECT. NO DRIFTING  
AND EVERYTHING ELSE WORKING A-1.  
AT 1500 HOURS WELANDER, SCHLENK, (CAGL?)  
& WEEKS TOOK OFF IN H-19 FOR BELLE.  
SCHLENK TOOK M/Y READINGS - WEEKS & WELANDER  
HUNTED FOR PALUMBO'S SCAEVOLA THAT  
WAS PROTECTED WITH PLY-CRABS. BOTH BAGS  
WERE OPEN AT END SEAM FROM OVER PRESSURE.  
ONE BAG BADLY MELTED, THE OTHER IN FAIR  
CONDITION. M/Y READING AT BUSH WAS 450 M/Y.  
WE ALSO OBTAINED TWO EXPOSED SCAEVOLA  
BRANCHES FROM NEARBY BUSH. THE EXPOSED  
BRANCHES ARE BEING DRIED TOGETHER. THE  
TWO PROTECTED BRANCHES ARE BEING PREPARED  
SEPARATELY. BELLE WAS BURNED QUITE BADLY.  
AT VEGETATION WILL PROBABLY RETURN. JANET  
IN REAL SAD SHAPE - no vegetation

AW

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 21 JUNE 1958  
Personnel WE LAUNDER, CENTRIL, Weather NORMAL  
CHAMPION & WEEKS Water conditions NORMAL

Radiation level(s)

Operations:

Bell and Jim arrived this morning at 1000 hours. They are working with Art and I in the 460. She got them squared away at the pass office and all are set for lots of work.

Cal Gibson (7.3) called this morning concerning a problem at Johnston Is. and Is. located just to the NE of Johnston Is. is a bird sanctuary with a population of about 10,000 birds. She two shots accumulated in that area will definitely have harmful effects. Cal Gibson wanted to know if we had any idea as to how to protect them. They cannot use smoke because of optical equipment at Johnston Is. Off hand we could not think of any solution.

She are continue to I cant and process samples from previous field trips.

She reserved a room for Near Band at Don Donaldson at Bldg 128 she anticipate annual next Thursday, 26 June.

aw

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date 22 June 58  
Personnel Carlisle, Chapman Weather Cloudy  
Weeks, Welander Water conditions normal

Radiation level(s)

Operations:

Finished up processing fish from coral head south of <sup>Yonke</sup> ~~Yonke~~. Also counted plankton from some local  $5/10$  million and  $2/10$  million samples of this plankton were the largest amounts which we could count. Any more would be too much. This stuff is pretty "hot". Presently running spectrum on this same plankton as well as on some NRDL stuff.

Bill, Don and Art did some spearfishing this afternoon. Being Sunday, we didn't do too much.

S.C.

MET AL KLEMENT, who is <sup>working</sup> George Anton's  
place here.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date 23 June 58  
Personnel Waklander, Champion Weather normal  
Weeks, Cantrell Water conditions normal

Radiation level(s)

Operations:

This morning, all four went to Henry by  
Lipper leaving Elmer 0800 and returning 1130.  
We poisoned on the outer reef and collected  
in fuel reefer cans full of various fish.  
We also collected 3 coconut crabs - 2 large  
and one small, along with several hermit  
crabs, 1 ghost crab, and 1 crab we couldn't  
identify. The ghost crab and the unidentified  
one were dried whole so that Ed could  
identify it. Ed is a common species, I think,  
but we are not familiar with crabs.  
We collected coconuts, sand and sail, and various  
other land plants were collected (pandanus,  
Scaevola, Scaevola). Five sea  
anemones were also collected and subsequently  
preserved and dried.

Packaged the rat tissues from Janet, the fish  
tissues from Young (#136 thru 186).

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 24 June 58

Personnel WELANDER - RANTJEL - Weather STORMY

CHAMPION - WEEKS Water conditions ROUGH

Radiation level(s)

Operations:

CONTINUED COUNTING OF PLKT SAMPLES.

PLKT. STILL RUNNING PERFECTLY - MAX.

PLKT IS ABOUT 1/4 OF CHANNEL.

AT 0830 HOURS WELANDER, RANTJEL - CHAMPION

LEFT BY M-BOAT FOR DEEP CHANNEL. THEY

RETRIEVED 30 ML OF PLKT (30 MIN HAUL). ~~THEY~~

ALSO CONTINUED TO PROCESS SAMPLES

RECOVERED AT HENRY.

COL GIBSON CALLED 96 A.M ABOUT THE

BIRD SITUATION AT JOHNSTON. THEY ARE GOING

TO TRY A HEAVY WATER SPRAY METHOD OVER

THE ISLAND. THIS ~~IS~~ <sup>WILL BE</sup> SET UP SOMETIME BETWEEN

10:00 AND 12:00. THEY REQUESTED <sup>ONE</sup> ~~TWO~~

OF OUR PEOPLE TO OBSERVE THE TEST AT THAT

TIME.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 25, 1958  
Personnel Weeks, Central, Weather Normal 87°  
Champion & Wclander Water conditions Normal

Radiation level(s)

Operations:

Painted 6 more boxes for shipping; ran 4 spectra  
P-41 material (Plastic hawl from Deep Entrance);  
packaged plant material from H ensy; cleaned up  
the aquarium area.

Left at 1300 for Vera by <sup>H19</sup>~~the~~. Pinned in  
lagoon on reef about 4' deep. Collected clams,  
algae, sea cucumbers, serevala, etc. Altho  
coconut trees are present, only a few coconuts were  
present - too high for us to venture. No anabita  
were seen in a wide search over most of the island  
Returned at 1630

HM ED HELD

THE AERIAL MAPPING GROUP IS NO LONGER IN  
THE AREA. MAJ. MONACO HAS RETURNED TO THE STATES  
AND HIS REPLACEMENT KNOWS OF NO WAY TO  
GET THE PHOTOS YOU WANT. COME

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 26, 1958  
Personnel Wells, Cantrell, Burod, Weather Normal but with high cirrus  
Donaldson, Champion, Welandor Water conditions clouds setting scheduled  
brackish  
Normal water.

Radiation level(s) —

Operations:

Dean Henry Burod & L. R. Donaldson arrived at 1000 and after the usual red tape were settled in barracks 460, room 6.

The registers located in the super-cabin finally broke down completely. It had been running very smoothly after I fixed it. If a new register unit could be ordered I believe we could install it here. At the present time the remainder of the unit is working fine. We are experiencing very little drift.

Worked on material from Vera & packaged material from the Henry collection.

Ph: J-4 has beakers, graduates, clamps, tubing and other equipment for chemistry. They also have hot lamps, <sup>stands</sup> fine wire screen. Battle lanterns or something similar, cable clamps, ripples, etc for hot work. If you needs these items let us know before end of operation as they may be out of the Williams gas line.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date June 27, 1958  
Personnel Burd, Cantel, Champion Weather \_\_\_\_\_  
Smallman, Miller, & Milender Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Plankton and fishing trip underway at 9:30 am for Duke  
passing and points north.

Laid on off atoll trips <sup>for future dates</sup> and trip to Leroy  
for tomorrow.

Packaged more samples

Burd & Co. brought in two Jades & 2  
groupers caught near Casinet Barge.

Plankton haul made west of Japten  
& proceeded to drying.

Barge Dennis  
Office of Information  
Albuquerque Operations U.S. A.E.C.  
P.O. Box 5400

Albuquerque, N.M.  
(Write to Dennis for information on weapons, etc.)  
A number of films on nuclear effects are available at Albuquerque  
Office

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality: Elihu Date: June 28, 1958  
Personnel: Donaldson, Beard, Weeks Weather: Normal - Positive winds  
Control, Chapman + Water conditions:  
Welder  
Radiation level(s): Elder (#630) F and Redwood (#530) B

Operations:  
Up early.  
Packaged following for mailing:  
Soils - Henry D. June 23, 1958; Umbrella Target Sledge June 23, 1958  
Plants - P-37, P-38, P-39, P-40  
Invertebrates #21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33,  
35, 36, 38, 39, 40, 41.

Plants #25, 26 & 27, as well as exp. with polyfilm bag  
plants from Belle (no spec. numbers); 5 coconuts from Henry.  
Fish #136 thru 186; 187-212 (muscle & liver);  
213-223, 224, 225 (liver & muscle); 268-274;  
275-289, 290-297, 298-314, 315-324, 325-327, 350-371  
372-390, 391-400, 401-411, 412-447.

Rat tissues from Janet April 28, 1958

Birds from Henry #4.

Numbers missing include tissues not sufficiently dry for shipment  
Disposal program "P" with Matt Simmons, Ben Beard  
took part in the operations discussion and for staff  
function developed bird disposal program with the monitoring.  
Trip to Laysan at 1:45 P.M. for collection. Hundreds  
of dead birds on the island. Many mostly and mostly terns  
are present and feeding in the area. Collecting partly  
done by the Beard and picking with A.F.C. groups.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Omec Date June 27, 1958 (Sunday)  
Personnel Bird, Cantil, Champion Weather Fair  
Wicks, Melander - Donnellan Water conditions

Radiation level(s) Oak (0730) E  
Hickory (1200) B

Operations:

Up only to open up the lake and get on my feet. The  
day except some wet feet and a few brown diatoms.  
Fish (*Trachurus trachurus*) picked up in a pool at the south  
end of Parry many fish were stranded and also had some  
returned to the lake to be used as samples other captures  
also were added to the lake tank.

Dr. Mel Merritt, Sandra Cook came to the lake and  
the morning in conference on P with  
Dean Bird and L.P.D.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 30 JUNE 1958  
Personnel BURD, DONALDSON, WELANDER Weather GOOD  
WEEKS, CHAMPION, CANTRELL Water conditions Hi SURF ON REEF

Radiation level(s) \_\_\_\_\_

Operations:

BURD AND DONALDSON DEPARTED FOR WOTHO AT 0800. REST WORKED IN LAB. WELANDER MAKING PREPARATIONS TO LEAVE PACKAGED SOME SAMPLES TO SHIP WITH BARRACUDA HEAD. INCLUDES PLANTS: Nos 33, 34, 35, 36, 37, 38, 39, 40

Burd & Donaldson left Ford at 0900 in Air Force A5-16, west by way of Bikini from the air the island looks like a sand flat with interrupted sections, no green, no coral, from Bikini a boat to Rongelap to air drop & sack of mail. Arrived south from Rongelap atoll to Wottho arriving at 12.15. After lunch at the weather station Lt Ellis introduced us to the "chief" J. Enajawa, the interpreter Lt Steven and the native pastor Joseph. Hon resident engineer.

Richard Evansiger was very helpful. Fish were collected from a coral head just west of the camp. The three natives helped collect fish, we were joined by a dozen small hoop 5-7 years of age they swim like eels and looked like seals as they popped up out of the water with a great fish in their mouths. At the surface they flip the fish about, started with the tail and eat it, skin, gut, but the natives collected most of the sample except we could not find clam. Departed Wottho at 3.15 arrived at Ford 5.05 P.M. and Olmer at 5.45.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Filmer Date July 1, 1958  
Personnel Melander - Beard, Champion Weather Thunder  
Conrad, Donaldson Water conditions Average

Radiation level(s) 1 Mr

Operations:

Melander departed from Perry at 0930 on his way to Honolulu - and after a week of playing tourist - on to Seattle. Dean Beard made the rounds of the check out places and purchased places in preparation for his expected departure tomorrow.

Beard & Donaldson visited the Alote and talked to the mate, a Mr Johnson. The Alote needs a good deal of cleaning to get it ready for a laboratory ship. There are plenty of benches, with a space for 24 crew near the mid ship section that could be used. This section may be air conditioned as are the crew quarters, wardroom, and officers quarters. The well-deck of the Alote would serve well as a working area. A tarp could be fastened over the well deck to provide shade and protection from the rain.

Dean Beard and Donaldson also had a conference with Eric Nyrop and Joe Sanders on the surplus property that is available here. A list of the equipment was given to Dean Beard for evaluation by those at the University competent to determine the University's interest.

Beard & Donaldson were invited to a dinner party at 114 with A.F.C. and H. N. "whale"

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Perry Island Date July 2, 1958  
Personnel Bend - Champion Weather \_\_\_\_\_  
Conrad, Wicks & Donaldson Water conditions \_\_\_\_\_

Radiation level(s) Siquia - E (0.630)

Operations:

Dean Henry a Bend departed from Clome at 0930 for Fred and his trip home. DR DONALDSON MADE FLIGHT WITH TU-6 PEOPLE AROUND THE ATOLL. CONTINUED TO PROCESS & COUNT SAMPLES PREVIOUSLY COLLECTED.

Rad. Safety survey trip around the atoll was organized by my Gordon Jakes. T.P.D. was asked to go along to observe the color in the water. After passing the "Oak" crater near Alot the island cloud of fine material was observed in the water. From the crater to about one mile south of Looay a band of brilliant green color could be seen in the shallow water on the lagoon side of the reef.

This green color was assumed to be due to a gigantic bloom of algae produced by the release of minerals for plant metabolism by the Oak device. Radiation readings at 100' in the "chopper" were 30-60 mc over the reef and 500 to 600 mc over the "green streak" on the lagoon side of the reef.

A stop was made at Looay to observe the damage to the bird colony by the Oak shot. Several hundred birds were seen along both shores of the island, unable to fly and down at the water edge trying to feed. The shock on the point where we waited out the rain on June 28, was blown apart. The poisonous trees near the center of the island in the bird nesting area are broken & uprooted. The remains on the short side are buried in the trees remaining.

U. VERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 3 July 1958  
Personnel DONALDSON, WEEKS, Weather GOOD  
CHAMPION, CAINTAL Water conditions "Normal"

Radiation level(s) Bkg. up slightly from Bikini - 1.5 m. (code B)  
cd. (0.530) B

Operations:  
DR. DONALDSON & WEEKS DEPARTED FRED FOR  
A COLLECTION TRIP TO KUSAE IN CENTRAL & CHAMPION  
CONTINUED PROCESSING COLLECTIONS. RECEIVED REPORT FROM  
FALL-OUT PREDICTION GROUP THAT FALL-OUT MIGHT INCREASE.  
COVERED INSTRUMENTS & SHUT DOWN AIR CONDITIONING UNIT.  
THE UNIT WILL NOT START AGAIN (SWITCH SEEMS TO BE  
BURNED).

Trip to Kusae in the Air Force SA-16 was  
a wonderful experience. We departed Fred at 0700  
and arrived at Kusae at 0945. Traveled with capt.  
John Kittering and Chuck George. Mr. Hedges of Pines  
was also a passenger. Had lunch at the airport bar  
and collected a vast amount of food material  
with the aid of two fishermen we collected fish  
on a reef in the harbor. The fishermen used  
their own diver's root a few roots pounded  
on a rock and worked in the water worked  
wonders. The fish kill was almost instantaneous  
much better than we get with dry root.  
A beautiful red and green colored surgeon fish  
made up the bulk of the sample. We should  
have these fish for the collection as I don't  
think we have them - at least not many.  
Spent about 30<sup>00</sup> on samples and "lost"  
if it can be considered as expenses.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 4, 1958 (Friday)  
Personnel Control: Champion, Weather Clear  
Watts, & Smallbone Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Processing of the samples collected at Elmer proceeded, over was cleaned out and samples prepared for shipment.

Visited the deep water part to look at the catch, a large number of fish were captured. A number of the forms seemed to be new so we will fix up a container and put the line over in the outdoor tank and preserve any unusual specimens for the collection.

for

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Flores - Leray Date July 5, 1958  
Personnel Control, Champion Weather showers  
Donaldson & Huber Water conditions \_\_\_\_\_

Radiation level(s) 1.0 mR/hr

Operations:

Don Huber checking out in preparation for going home  
Donaldson in conference with Wyncoop, Lander and  
others on the Rongelap survey and the use of the  
alots. Mr Wyncoop will press for the use of the  
alots with out charge to our program for the  
August trip. The best date for the Rongelap  
Biology Program will be  $\pm$  Aug 18 to Aug 30.

Word was received from Al on the Selavation trip  
the ship is due at Eniwetok Sept 1 and crew  
commence on the survey as soon as equipment  
is ready.

Commissioner Graham and Mr Neelien A.F.C. visited  
the laboratory during the morning. The Japanese situation  
formed much of the conversation I suggested that better  
relations would result if the useful aspects of  
the testing program to applied finology were stressed.  
The Commissioner was very much interested in the proposal.

At 1:30 Ed Byrnes, Control, Champion and Donaldson  
went to the Oak crater to photograph the "green  
streak". The color was not as intense to day as on  
July 2. Photos were taken of the reef the plant  
had been damaged on Leray. The great number of  
such fields observed on July 2 have either recovered  
or died. A count of 247 dead plants was observed  
one sand spit. Plankton and a clam shell were  
obtained.

UNIVERSITY OF WASHINGTON

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Clouse Date July 1, 1952 (Sunday)  
Personnel Carlton Champion Weather Shower  
W. A. & Donaldson Water conditions \_\_\_\_\_

Radiation level(s) Dogwood (0.633) E 110-25 mcp

Operations:  
Processed a clam collected at Clouse in  
up the ... ..  
in ... .. (containing)  
collected at Clouse.



UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer

Date July 8, 1953

Personnel Central Chapman

Weather Fair

Immersions

Water conditions Smooth - little wind

Exposure level(s) 1 to 2 R.S.T. maximum

Remarks:

Upstream from Elmer, plants were left Elmer in 8-10  
meters. Some were made at same time, some  
later. Some were made "a few" while sample  
was being taken to L.P.B.  
Some were made of small specimens  
of Elmer. Some were made of Elmer  
with Entomium.  
Some were made of Elmer return to Elmer  
with Entomium with sample  
of Elmer. Some were made of Elmer  
with Entomium to send a note to  
Elmer. Some were made of Elmer with permission to  
Elmer. Some were made of Elmer along the  
Elmer. Some were made of Elmer Friday and  
Saturday.



UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Clouse Date July 9, 1958  
Personnel Conrad, Champion - Weather Showers  
Donaldson Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Package material for shipment to R. B. Perkins  
up end of the fish log of materials included in  
Plants: 33-80 inclusive  
Soil: sample from Vero  
Birds: 5-6  
Invertebrates: 34, 37, 42-47  
Fish: 448-452, 453, 454, 455, 456-466, 467-  
491, 492-517, 518-521, 522-533, 534-557  
552, 553, one unknown sample (looks in old  
log book).

note: Parts of samples 28, 37 and 47 are not dry  
yet and will be sent with the next shipment.

Conference with Joe Sanders on the Pongalap trip  
set the dates at Aug 12 to 24 inclusive. Sanders  
and Cal Luchs agree that this operation can be a task  
group function. Sanders suggests that subsequent  
Pongalap trips be worked out as a D.B.M. request  
for support to 7.5 (Alb. Oper Office) and that it  
be handled as a line item.

Write to Ed giving dates of Aug 12-24 and  
requesting the order to be sent for Aug 10-8  
departure from Seattle. The request for the  
Aloto is for 12 men. Includes Ron and Tom  
in the party for they will be back in time to  
go to the Silverstein. Last boat now scheduled for Aug 25-28

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality \_\_\_\_\_ Date July 12, 1958  
Personnel Catal, Champion and \_\_\_\_\_ Weather Showers  
\_\_\_\_\_ Water conditions \_\_\_\_\_  
\_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Counting pulpation samples collected on circuit tour of July 8th.  
Washed a number of dirty beakers from the last collection  
series. The drying of masses of plants, fruits, etc. in  
glass dishes in a poor procedure and loss to much  
with material sticking to the dish. Better to lower the  
oven temperature and take more time so that  
material dries and is used.  
Packaged the tissue traps. Went on to  
road for a few hours. Departure which  
means a long driving time.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 11, 1958  
Personnel Conril, Donaldson Weather Stormy, rain  
Champion Water conditions choppy

Radiation level(s) Background

Operations:

Donaldson & Champion on their way to Tarawa. At the lab, counting was continued, completing Total  $\gamma$  counts on plankton collected on July 8 and starting  $\gamma$  spectrum on the same. Also finished counting ( $\gamma$  spectrum) of water collected off heroy on July 5. A few hours ~~was~~ spent in clean dishes and trapping rats. Two more down but we ran out of bananas. G. Bernier also gave us the pictures taken of LRB personnel (when Dr. Burd was here).

Left Fwd for Tarawa at 5:50 am. Lt. Ches. George accompanied the flight as "extra" navigator. Plane stopped at Majuro for 1 hour as L.P.D. would ahead and arranged a conference with Mr. Maynard Nease, Dist Administrator, Marshall Islands, Majuro, M.I. (Trust Territory of the Pacific Islands) (Majuro, please send them copies of our reports) Mr. J.B. Mackenzie, & Mr. C. Morris also attended. Nease requested that Mr. Mackenzie and a new woman yet to be secured go to Rongerik with the Cunningham tomorrow. I replied - if they are at Rongerik for the departure of the ship prior to Aug 12. we will take them along. Arrived at Tarawa at 1:30 P.m. and loaded into a "Dukker" for the trip to the weather station. Capt. Bill [unclear] is in charge of the station [unclear].

(M. L. Bernacchi)

Resident-Commissioner

Tanaro,

French Frigate Shoals.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Olney & Tanager Date July 12, 1958  
Personnel Cartel - Olney Weather Rain at Percy - beautiful at Tanager  
Champion & Smullen Water conditions Rain

Radiation level(s)

Operations:

Cartel ~~arrived at Tanager~~ P45-LP was completed and P45  
filtering started.  
July 12<sup>am</sup> Smullen conferred with M. L. Bonacchi, Resident Commissioner  
Tanager, Elliot and Ellis Salada. Mrs & Mrs Bonacchi were  
most helpful and offered to help in any way possible.  
Plans schedule was stepped up for a 9:00 am departure for  
so a wild search to get the collections in the time remaining.  
Fruit was collected by perusing around a scrub. In fact  
left from 1944 ~~was~~ <sup>found</sup> ~~great~~ black spotted groups  
were caught in addition to a number of smaller  
fish. Crabs, algae, coconuts, squid, papaya, bread  
fruit etc were obtained. Stopped by darkness.  
July 13<sup>am</sup> Up at 5:30 am a bit to get and the start back  
down the Atoll to the air strip. Capt Bond, Champion  
and Smullen ~~went~~ <sup>went</sup> ahead of the main party in  
a Dake to go to Buleia for B itis Island. Mrs  
Bonacchi had fresh coconuts, bread fruit coconuts etc  
ready for us. After a cup of coffee the wild  
ride down the sand spits, over islands, to the  
air strip. Departed at 9:15 am and arrived back  
at Fred at 2:30 pm.

Started at once in processing material collected  
upon arrival at Fred. Part of the fish collected  
at Tanager were preserved for ship transport  
to the College of Fisheries for Art's class use.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Clou Date July 13, 1958 (Sunday)  
Personnel Central Champion & Donaldson Weather Rain.  
Water conditions \_\_\_\_\_

Radiation level(s) Paper (1500 B) yesterday

Operations:  
Two water samples and 65 to go. Very strong reports yesterday afternoon.  
Found had all morning background level of rain fall.  
2 in. rain collected morning rain water samples.  
Sample being made samples of Johnston samples  
collected July 12.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY

U. NIVERSITY OF WASHINGTON  
 LABORATORY OF RADIATION BIOLOGY  
 SEATTLE, WASHINGTON

Locality Close Date July 14, 1958  
 Personnel Contail, Champion Weather Rain  
Donelson Water conditions \_\_\_\_\_

Radiation level(s) 2.8 m.r. outside 2.4 m.r. inside  
(Securite 0.1 RT at 1600)

Operations:  
 Processed the fish collected at Tacoma and continued to run spectrum on plankton samples  
 Cleaned up laboratory and wiped bench tops, polished desks in an effort to seal the working surfaces to reduce chances of contamination.

Received word from Sergeant Wolf that we had been bumped from tomorrow's scheduled flight to Kapingamarangi and Papeete. Rotation of aircraft after 180 days. T.D. stations in this area.

Requested flights to  
 Utirik - Wed. July 16 for Donelson - Contail  
 Ujaeleng. Sat. " 19 " " Champion

Kapingamarangi - Papeete Tues. - Wed. July 22, 23 - Donelson - Contail

Don - Jim says that the "Ink Tape" for the timer of the gamma spectrometer is worn out & M. has checked here and can't find a replacement. Better order a new one and send it out at once.

Packaged plankton and other material as listed

- |  |                   |                        |
|--|-------------------|------------------------|
| W-1 MFP  | P-37 preservative | P-39 preservative S.S. |
| W-1 Untreated  | P-37 PLK          | P-39 PLK               |
| W-1 CO <sub>2</sub> " 2                                | P-38 PLK          | P-40 PLK Subsample     |
| 2.5 A Q (broken - no activity)                         | P-38 preservative | P-40 Preservative S.S. |
| Algae * 80   | P-38 MFP          | P-40 MFP               |
| Umbrella Target sludge                                 | P-39-2 MFP        | P-41 LP                |
| P-37 MFP   | P-39 MFP S.S.     | P-42 - Preservative    |
| P-45 LP; P-45 filtrate, P-45 M.F.P., P-46 LP; P-46 MFP |                   |                        |

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 15, 1958  
Personnel Carl Champion Weather Showers  
- Smallwood Water conditions \_\_\_\_\_

Radiation level(s) 2.8 Mr at 0845

Operations:

Continued gamma spectrum analysis  
Champion & Carl working on bacterial culture collection  
for Dr. John Tutin. The cultures inoculated will be  
forwarded to Dr. Tutin in today's mail. A total of 29  
plants were inoculated. The list of organisms used  
is enclosed with the cultures.

Conference held with Major Hiatt, Capt. Cooney and  
L.P.D. on the atoll schedule and equipment needs.  
In addition to the work order signed by Cdr. Marshall  
N-3 for the basic support program, I requested the  
following items:

- 1 - small boat (14' - 16') with outboard motor.
  - 15 - folding cots for sleeping on deck if it is too  
hot in the quarters.
  - Covered space above the well deck for laboratory  
space and a sleeping area.
  - Extra food and water for 14 ± men.
  - 1 - temporary work bench on the well deck about  
12' x 3' to serve as a laboratory bench.
  - 1 - 4 x 4 four wheel drive for use on  
Rongelap Island by the scientific party.
- note - A derrick was not requested for it was  
felt to be unnecessary since the ship will  
be beached a derrick would be more useful.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 15, 1958  
Personnel Central, Champion Weather Shower  
- Smallwood Water conditions \_\_\_\_\_

Radiation level(s) 2.8 Mc at 0845

Operations:

Continued gamma spectrum analyses  
Champion - Central working on bacterial culture collection  
for Dr. John Tustin. The cultures inoculated will be  
forwarded to Dr. Tustin in today's mail. A total of 29  
cultures were inoculated. The list of organisms will  
be enclosed with the cultures.

Conference held with Wayne Heath, Capt. Coonan and  
L.P.D. on the details scheduled and equipment needs  
in addition to the work order signed by Ch. Peakish  
#3 for the basic support program. I requested the  
following items:

- 1 - small boat (14' - 16') with outboard motor
  - 1 - folding cot for sleeping on deck if it is to  
be in the quarters.
  - Covered space above the well deck for laboratory  
space and a sleeping area
  - Excess food and water for 14 ± men
  - 1 - temporary work fence in the well deck about  
12' x 3' to serve as a laboratory fence
  - 1 - 4 x 4 four wheel drive for use near  
Rongelap Island by the scientific party.
- note - A truck was not requested for it was  
felt to be unnecessary since the ship will  
be beached a truck would be more useful.

UNIV. CITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Clous Date July 16, 1958  
Personnel Champion, Central Weather Rain  
Donaldson Water conditions \_\_\_\_\_

Radiation level(s) 1.0 mR

Operations:  
Champion collected samples of plankton samples, cleaned  
hands, hand pieces and built the pot while Donaldson and  
Central went to beach to collect.

Donaldson and Central left Clous at 05:40 by water taxi  
for Fred in the boat. Fred left Fred at 06:30 by  
Sa-16 which was so flooded that it was a good  
thing to have an airplane plane. After leaving Eniwetok  
and plus about 200 miles east, passing south of Bikini,  
we saw the middle of the atoll. We saw the Southern portion of  
the atoll and landed at Eniwetok at 10:50. After the  
usual phone call to the Magistrate we started  
to collect. Sam collected fish, algae, Donaldson  
land plants, crabs, snails etc. (I had to stay out of the  
water for a few days because of a burned thumb.)

All our film has been used, as near as I can  
tell so I processed a roll from Les Banner and shot  
exposures 1-7 at Utterby, 7-8 over Pongich and 8-16  
while over Pongich. My first experience with Vanchrome  
& hope they turn out usable.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
UNIV. OF WA  
SERIES

Ed, your wife came & see no problem with film  
Kimmel, if we have budget funds to pay him and  
you can get him in the 12 man limit.  
Killy, the mail you sent to Ed so so good  
better than that I needed last winter, if he  
wants more have Tom mail up another batch or  
ship a sack of + 100 lbs.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 17, 1958  
Personnel Conrad, Champion Weather \_\_\_\_\_  
+ Donaldson Water conditions \_\_\_\_\_

Radiation level(s) 0.8 r/hr

Operations:

Ch - Mapped the boundary, TSA. Operation called to tell  
me that they were prepared for support for the Project Aug 12-24  
truly had reached their section T.6 T.7 and that they  
were prepared to receive the request for accommodations  
and support.

The gamma spectrometer got tired and quit. When we  
found the distribution in the scint, the timer  
started to report, but it continues to check itself  
nothing was sent at 0.8 r/hr. And as a result does  
not start the second phase of the operation.

Packed samples that were dry in the area  
from the Utah collection.

UNI. RSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Olney Date July 18, 1958  
Personnel Champion, Cantrel and Weather Rain  
Donelson Water conditions Cragged

Radiation level(s) 0800-1200 (Resonance-E-1100) 1500-3700 m survey  
Operations: meters and 1400 beta counts per minute on the # scales.

Spent morning packing samples trying to get  
the <sup>terrors</sup> for the gamma <sup>fixed</sup> - without  
luck.

Helped Ed Heath with water sample for radiation  
assay.

Received wire from Al Seymour on status of  
Bongelap trap. Heard Ed that the trip is a 71  
operation and is scheduled for Aug 12-24 inclusive.  
Also sent wire to Ed Heath with instructions  
to pass on by phone all the planning notes  
that have been included with the logs.

Spent afternoon in Conference with:

- Edr. Wall - 71
- " KF Byrnes - 7.3

Al Clement and T.R.D. on programs  
for the Silverstein. For planning the ship  
can cruise at about 4 to 5 miles a day. The trip  
to Kasaan from Eniwetok will take about 12 days.  
The survey of the Restricted area then will  
take 5-7 days with the balance for fueling  
etc. I am sure that many changes  
will be included before Sept 1. Do not  
leave the job out date - now does anyone  
with which detail - it's going that way. is

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Clare + Ujeling Date July 19, 1958  
Personnel Cartel + Champion, Weather Fair  
Donaldson. Water conditions

Radiation level(s) 0.6 mR 0915 0.1 1530

Operations:

Cartel worked at the laboratory and really should  
keep the place very thing in spec and spec  
Champion + Donaldson left by SA-11 for Ujeling at 0915  
Arrived at the native village at 1100 and after the  
usual pleases with the native chief Joang who  
speaks some English. Bill collected fish, clams,  
snails, etc and Donaldson in company with the  
native subs collected (L'Omene) plants and other  
Two small coconut crabs were found in a pit  
trench dug by the Japanese L'Omene said that  
most small crabs - coconut - are found in  
moist places among large rocks. He said make the  
large ones ~~at~~ under the hard of the coconut trees

The native people on Ujeling are busy building boats  
They had a number under construction. The making of  
coconut fiber rope was also observed a piece of rope  
about 4/8 in. thick in diameter was so strong that  
I could not break it.

Left Ujeling at 1730 for return and arrived at  
1530 on L-28 brought us back in time for  
processing the plants and putting away the equipment.

Wagner Hiett still trying to find some  
to assess the spectrometers.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 20, 1958 (Sunday)  
Personnel Cantel, Champion Weather Fair  
Donelson Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Cantel went shopping over on Elmer, Champion played  
paddleball. Donelson spent morning organizing a talk for  
the local medical unit of the Task Force, H. & M. etc.  
The local medical unit under the general leadership  
of Dr. Michael has weekly seminars. I talked about  
our program and interest in developing more of the  
practical side of radiation biology rather than a monitoring  
function. After the seminar a couple of hours were spent  
in informal discussion of the role of radiation  
biology in the A.E.C. and world affairs with  
Col R. M. LeChasseur, USAF and Staff Surgeon J. T. F.  
Dr. LeChasseur represents General A. R. Lueticke, USAF  
Comdr JTF-7. In biology and health matters, he  
made a strong pitch for a direct line position for our  
organization in the test program. Since General Lueticke  
is to be the next general manager for A.E.C. the  
Col's recommendations may get us up a step or  
two on the ladder.

A visit to the Ateto and talks with Capt  
Fosse, 1st Mate Johnson and Chief Engineer Willis  
covered most of the areas of interest. Ed - fix  
and put the rubber raft, paddles on board. They  
plan to put an extra rubber - walk in size for  
freezing samples etc. I think this is going to  
work out in a fine fashion & if we can just get DBM  
out on the fall and work out the financing for rubber

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Clase Date July 21, 1958 Monday  
Personnel Champion, Central Weather Showers  
Donaldson Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Ed's letter around today was good to get info on expenses,  
budget - activities.

Checked around the island today and obtained all the items  
on Ralph's list of requested things as of July 9. except

2 hot lamp stands

7 lbs. Conc. H<sub>2</sub>O<sub>2</sub>

7 lbs. Conc. HCl

1 lb. H<sub>2</sub>O<sub>2</sub> (Superoxal)

After sleeping, sleeping, almost studying the items I returned  
to F.M.B. and found that the entire list was already here  
- you sent it out with Jim and Bill. Items above should  
be purchased and shipped at once as they are not available  
on the island.

Shift package of Tarawa samples to L.P.B. today

Plants 81-87, 88-90

Insect boxes 72-81

Fish 554-558, 559-563, 564-565, 569

Soil: Tarawa Corresponding logs are enclosed with  
samples.

R.D. talked to Jim Hayden about Victor's request for  
shop. wire radio apparatus use - Jim said it is a H<sub>2</sub>O<sub>2</sub>  
function and they have denied the request as an extra privilege.

Tasked to Al Klement on fall out patterns for planning  
substation paths.

Tasked to Wayne Brett about Alot's financing  
as explained in Ed's note.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer - Pape Date July 22, 1958  
Personnel Champion - Central - Weather The worst possible - rain  
Donaldson Water conditions Rough

Radiation level(s) jumpin 1625 B

Operations:

Donaldson & Central went to Fred at 2:00 on July 21 to stay overnight for the second scheduled trip to Pape & Kape. It rained and the wind howled all night - we were up at 0300 had breakfast waited till 0400 - rain clearing 0500 flight postponed till daylight, 0600 flight cancelled. Arrived back in Elmer at 1030.

Most of the night Elmer & George worked on possible tracks for the situation & the fall out data - foot- to the point of which more assistance was furnished by Al Stewart, BSM representative. Copies of the proposed tracks are enclosed. These are for planning only and should not be considered as final.

Some cleaned the tanks on the porch and the platform. The storm had so polluted the water that many pounds of sand - mud had plugged the lines and filled the tanks with much.

To

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Oliver Date July 23, 1953 Wed  
Personnel Langford, Cantal, Doolittle Weather Fair  
Water conditions \_\_\_\_\_

Radiation level(s) Oliver 0930

Operations:

Dr. G. Tuttle, assistant manager and acting manager R.B. and assistant manager E.M.D. taking inventory and surveying on the roof of the laboratory. I suggested:

1. The areas out for a part of the building to reduce the wind tunnel in
2. Repair roof damage from loss of the sheets of the spring device
3. Repair the doors to the roof a signifier to reduce wind
4. Clean out the drain lines from the outside tanks
5. Get 7 smaller records from 1.5 in. 1 reading unit as far for a centering the that could not be accounted for. Can any of you help?

Mr. Kibb of Tech-Te continued to work on the gamma spectrometer unit. He brought a new switch on the scale that had been replaced with a foreign replacement. It was sticking and should be replaced. The switch was removed and will be hand carried back to the R.B. for making a replacement. He also replaced 1 meter of weak tubes.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Pearl Island & Kapingomangi Date July 24 1956  
Personnel Chapman Weather \_\_\_\_\_  
Central & Paulsen to Kapingi Water conditions \_\_\_\_\_

Radiation level(s) 1, 2 mR

Operations:  
Central and Paulsen went over to Ford last evening and stayed for our early take-off. Had breakfast at 0330, about 0415, departure at 0450 in Sea-16 South flight to Kapingomangi and we arrived about 1000. Kapingomangi is an atoll that resembles one of the southern atolls like Tarawa, Majuro, etc. Very isolated island and island is covered with coconut palms for the production of food and copra. The principal man, Wilson, who also is the trained medic, met the plane and went with us to the major village on another island about 5 miles distant from the weather station. The take-over in an open field was interrupted by an accident when the airman was running the boat put it down a coral bed and broke a pin.

The chief lieutenant, in a very polite manner and with a good plan, we had permission to photo graph some of the village ruins. The 2000 people in the atoll seem to be very happy but and much more energetic than the northern Marshall Islands. We collected coconuts, fish, crabs, etc., and then we got returning to the plane and the end of the return trip to Papeete. Arrived at Papeete about 1900 over time - less than for local time.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer & Pampo Date July 25, 1958  
Personnel Champion Weather Fair  
Cantel & Donaldson Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Champion at Elmer & Pampo & east finishing up  
mountain and ready to depart on plane. Spring  
painted with lines of the vegetation and deep freeze  
Collecting at Pampo always a bit just because  
of so many side interests, was organized by  
some knowledge that advised the notes was instructed  
to my job and not prepared, a yellowish and  
slightly red and a number of the fish from  
the Washington. They had a wide variety of  
fish for example according to Hedges the fish were  
all eaten and considered safe at the wills  
and the same species could at times be considered  
unsafe to eat.

Mr. & Mrs. Ed. Lawrence helped us collect the  
rest of the water forms and the Agri. Station  
again furnished the plant samples needed. A very  
destructive hurricane passed over Pampo but I saw  
the evidence of the destructive force of the wind  
was in evidence.

Mr. & Mrs. Hedges are leaving Pampo this week to  
head some before collecting in Florida on their  
next assignment. I wonder is now in charge  
Coca farming in the Trust Territory and  
will maintain a propagation plot at the Agri  
Station but it also spend much time on promoting  
and ...

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 26, 1958 (Sat)  
Personnel Donaldson Cantil Weather no wind  
Champion Water conditions calm

Radiation level(s)

Operations:

Donaldson scheduled to depart Elmer to  
Fad on way home at 0930, but MATS  
had no planes to take personnel out.  
Doc is re-scheduled for tomorrow morning.  
A great portion of the day was spent  
cleaning up the lab. Some painters grazed  
the floor and joists and consequently  
covered the lab with a fine coat of white  
paint which required a great deal of  
scrubbing to get off.  
The <sup>later part of the</sup> afternoon was spent recting from  
Ponape trip. Both Donaldson and Cantil  
were exhausted. And the heat here  
made it almost unbearable.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date July 27, 1958 (Sun.)  
Personnel Donaldson, Cantril, Weather hot, mild wind from use.  
Champion Water conditions calm

Radiation level(s) normal - Pine 0830 E

Operations:

Dr. Donaldson departed Elmer for Fred at 0930 on way home.

The lab was dirty again by 0900 with dust and sand but no effort was made to clean it as contamination may follow in next 24 hours and then the whole lab will get a scrub down again.

It was learned that the U.N. test was officially canceled (Pinon) and Wayne Hiatt said Donaldson had been informed before he took off. Hiatt also said there maybe a chance both Silverstein and Alota trips could be or would be moved ~~up~~ up. Al Klement said he would inquire for us in the morning.

Don: The spectrometer "ink top" is OK but the machine as a whole is on the blink.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Ehiae Date July 28, 1958 (Mon)  
Personnel Conr. I, Champion Weather hot - no wind at all  
Water conditions calm - glassy

Radiation level(s) normal

Operations:

The whole morning was spent scrubbing down the laboratory in preparation to starting <sup>the</sup> processing of Ponape and Kapingamanga samples.

William in T-4 supply requested we soon round up all checked out items we would need in next month or so and turn them in as he is leaving in two weeks or so.

Al Klement called to say that there seems to be considerable pressure from military brass to move Silverbird up as far as Aug 1. We told him we could make no decision but that

Aug 1 was probably too early for us to get ready. He said he would try to reach Donaldson before he left Hawaii and would inform us here what was going on. **THE PLACE HAS DEVELOPED A GOOD CASE OF MASS HYSTERIA. THE GENERAL HAS SNAPPED HIS FINGERS AND ALL THE DOGS ARE JUMPING. THOUGHT FOR A MINUTE TODAY THEY WERE GOING TO SHIP US OUT TO SEA ON THEIR OWN! THEY ARE FIXALLY CONVINCED THAT THEY SHOULD WAIT UNTIL WE ANSWER KLEMENT'S WIRE**

ARTS

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

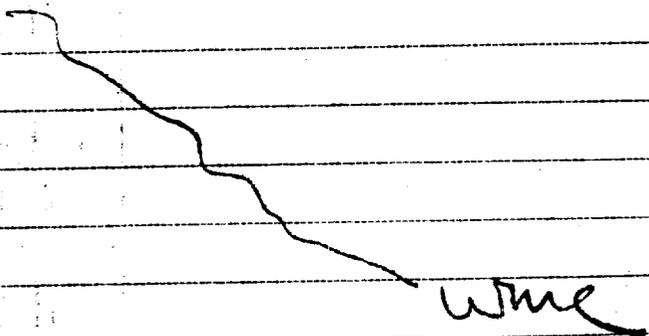
Locality \_\_\_\_\_ Date 28 July (CONT.)  
Personnel \_\_\_\_\_ Weather \_\_\_\_\_  
\_\_\_\_\_ Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

7.1, 7.3, 7.5 ALL SEEM TO BE WORKING INDEPENDENTLY ON THE PROBLEM SO WE GET CALLS IN BATTERIES. AS WE SEE IT, THE GENERAL WANTS TO DIS ESTABLISH THE DANGER AREA THIS REQUIRES OK FROM DBM SO THEY WANT "A LOT OF SURVEY RUN" RIGHT NOW. 7.3 HAS PLACED A DD ON STANDBY FOR THIS TRIP WHICH THEY EXPECT TO HAVE DONE IN A WEEK OR 10 DAYS AND THEN EVERYTHING IS TO BE REMOVED FROM THE DD AND THE SILVERSTEIN WILL THEN BE USED ON SCHEDULE TO COMPLETE THE SURVEY. SOUNDS VERY NAVY TO ME BUT LIKE I SAID THE GENERAL HAS SPOKEN SO EVERYONE SNAPS TO.

Help!!



Wine

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 29 July 1958  
Personnel CANTRELL & CHAMPION Weather FAIR  
7.1, 7.3 & 7.5 Water conditions CALM

Radiation level(s)

Operations:

The morning and part of the afternoon was spent processing Kapingamaringi and Ponop samples. There were an ~~awful~~ awfully lot of them. This morning some confused military man called asking where Kelly and Ed were. The last time he heard they were in Kwaj and that was February. He was getting worried as to where they were. He was afraid they were lost. I assured him that both Kelly and Ed were in Seattle, safe.

Al Klement called and asked what Doc's home address and phone number. He is going to try to call Doc tonight or tomorrow through the home station.

Z

J.C.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date 30 July 58  
Personnel Conrad & Champion Weather fair, normal  
Water conditions normal

Radiation level(s) normal - 84gd

Operations:

We finished up the B-type samples and cleaned up the laboratory again. Al Klement called to say he had called Doc and was awaiting an answer to the problem he had. We have a new addition to Lab of Radiation Biology. A cat - named "CAT" Blackpuckled Bitch - up on the compound and the animal seems to like it here very much. It sleeps all the time - at least during the day. We hope he will make himself useful in combating the mouse problem. MORE MICE SCURRYING AROUND THE COMPOUND THAN WE EVER HAD HERE. EVERYONE WANTS SOMETHING DONE RIGHT NOW. WE ARE BEING AS HELPFUL AS POSSIBLE UNDER THE CIRCUMSTANCES.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 31 July 1958  
Personnel CANTRELL & CHAMBERLAIN Weather 16T w/occ SHOWERS  
Water conditions CALM

Radiation level(s) NORMAL

Operations:

WORKING IN LABS IN THE MORNING WENT DOWN  
TO THE ROCKPILE TO TAG AND RE-STOCK FISH POPULATION  
IN TANKS (CAUGHT A FEW SMALL GROUPERS). RECEIVED  
A CALL FROM CMDR WENDALL FRANK COLETTE DD 730  
WILL BE AT THE DEEP WATER PIER AT 1300. ALSO  
RECEIVED INSTRUCTIONS FROM FRANK RE INSTALLATIONS  
ABOARD SHIP WORK IS PROGRESSING WITH THE AIDE  
ASSISTANCE OF THE MEN WHO HAVE BEEN GIVEN A PUSH  
TYPE WORK ORDER ON THIS JOB. BOTH PLATFORMS  
WILL BE MOUNTED PORT SIDE AFT BUT DUE TO WEIGHT  
DISTRIBUTION PROBLEM SKIPPER WANTED THE TANK ON  
THE STARBOARD SIDE.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 1 AUG 1958  
Personnel CANTREL & CHAMPION Weather HOT  
Water conditions CALM

Radiation level(s) NORMAL

Operations:

Work still progressing on the COLETT at a good rate we are getting a great deal of cooperation from H&N and harassment from the Navy. They want to know why it isn't done right now (and why our people aren't here ready to go). I am ignoring them thank you. Sam and I went thru back storeroom looking for items that will go aboard ship (cleaned it up too). Can't find 5 HP pump we are supposed to provide meter hooks and other small items. We have set <sup>ASIDE</sup> those boxes that were marked for the SILVERSTEIN. I am having one problem. That is, deciding where to put LAB & counting room. Since I don't exactly know the requirements Frank might have. The decision may have to be made soon if Frank et al. arrive on 7 Aug. Time will tell!!! We have decided to cancel the plankton trip for a few days until the "op fever" dies down here. It seems like everytime we leave the LAB someone is looking for us.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE WASHINGTON

Locality ELMON Date 2 AUG  
Personnel CANTAL & CHAMPION Weather HOT  
Water conditions CALM

Radiation level(s) NORMAL

Operations:  
Work still progressing on COLETTE SHOULD  
BE DONE MONDAY. AFTER THE WINCHES WERE  
PLACED ETC. LOOKED LIKE THE ALLOWING COULD  
HAVE BEEN A LITTLE LARGER THAN THE 20'  
CALLED FOR. WE HOPE EVERYTHING IS SATISFACTORY.  
THE LAB IS STILL HERE BUT HAVE BEEN AT  
THE SHIP MOST OF THE TIME.

LOG # \_\_\_\_\_ VES  
DATE \_\_\_\_\_ SERIES

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality ELMER Date 3 Aug 1959  
Personnel CANTRELL & CHAMPION Weather Hot  
Water conditions CALM

Radiation level(s) NORMAL

Operations: H & N NOT WORKING TODAY SINCE THEY NOW  
HAVE plenty of time. STARTED PROCESSING  
SAMPLES FROM PONAPE etc —

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date 12 AUG 58  
Personnel Arthur & C. Langford Weather HOT  
Water conditions CALM

Radiation level(s)

Operations:

Spent most of the morning Airborne SHIP.  
DECK WORK FINISHED EXCEPT FOR MINOR DETAILS.  
COULD SEE SOME CHANGES THAT MIGHT HAVE MADE  
THE SET-UP A LITTLE BETTER BUT WILL LET FRANK  
DECIDE IF THEY ARE OK. HEN DID A FINE JOB  
AND THEY WERE VERY COOPERATIVE. ALSO WORKED  
ON SAMPLES THIS MORNING.

MAILED SAMPLES

Plants - 91-106 Fish - 510-574 575-588, 589-602, 603-615,  
616-620

INVERT - 83-104

SOIL - UZELANG

ALSO LOGS

86

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Elmer

Locality Cantrel & Champion Date Aug 5, 1958

Personnel \_\_\_\_\_ Weather Hot, little w.

Water conditions calm

Radiation level(s) Normal

Operations:

Finished packaging Porrope & Kapingamaringer  
samples, all but a few livers which  
should be dry tomorrow or the next  
day. U.S.S. Collett is out at anchor so  
we couldn't do anything aboard ship.  
Actually, H & N has done a beautiful job  
and all that we can do is done

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date Aug 6, 1958  
Personnel Conrad & Champion Weather hot - mild  
Water conditions calm

Radiation level(s) normal

Operations:  
Again a greater portion of the day was spent cleaning up the lab after completion of Rongelap & Rongerik samples. Ed's shipment for Rongelap is here except for 10 carboys. All the others arrived OK!

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

(Cont'd)

Locality Elmer Date Aug 3, 1958  
Personnel Control & Champion Weather Hot - fairly calm  
Welanders & Weeks Water conditions calm to choppy  
Palumbo & towman  
Radiation level(s) Normal

Operations:  
Welanders Weeks, Palumbo & towman arrived  
EPO at 0900 and are housed in 128 with  
Control & Champion. Part of the morning was  
spent washing dishes etc.

Checked in with Ernie Wynkoop, Comdr. Wendell and Clement of  
DBM. Several prior three and one one is a big rush to get the survey  
under way so that they can go home.

At 10:00 AM went to large pier to meet ship. Checked  
in with Captain <sup>J.D.</sup> Peterson re to operation of ship during cruise.

Don had the spectrometer repaired and in working condition before  
noon.

The probe had gone to Honolulu prior to our flight and  
was locked up in the Airborne Freight warehouse. Sgt Pelot of  
71st Hickam is going to ship it to us on the next flight.

In afternoon collected necessary equipment and supplies at  
the lab for transport to the ship. Inspected ship and made  
arrangements for labs to be installed. The shipfitters shop  
below the main deck will be used for chemistry and the  
1st class lounge for counting room.

Champion & Control have done a good job getting  
the ship outfitted for the cruise. The winches are installed  
and a canvas awning on the fantail. All of the boxed gear  
is aboard.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date August 7 1958  
Personnel Conrad, Champion, Weeks, Welander, Weather fair  
Palumbo, Lowman Water conditions smooth

Radiation level(s) \_\_\_\_\_

Operations:

In morning went to lab to pack for the Collett trip. Took the  $\beta$  counters and the spectrometer apart for shipboard use. Boxed and stored (also inventoried) the extra gear in the laboratory.

H+N is building the new addition on the building so the noise level is fairly high.

Made arrangements w/ H+N to build tables in the shipboard labs and to construct 4 blocks to use on the second winch and the probe unit. Put cable on the two winches after removing the old cable which was very rusty.

Checked with Frank Beebe about getting S&R plugs, cars, and red devil fans.

Talked to Cmdr Wendell about sailing date. Is dependent upon arrival of the probe.

Took the  $\beta$  counters and the spectrometer to the ship in late afternoon and installed in the labs. Made up S&R adapters for use w/ the equipment.

After evening chow went to ship and checked out the gear. Trouble in the analyzer which Don quickly remedied with a new tube.

Set up the chem lab for operation.

JUNE 1958

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer + aboard the Collett Date Aug 8 1958  
Personnel Palumbo, Welander, Weeks, Chempun, Weather Rein!  
Cannill + Lowman Water conditions medium rough

Radiation level(s)

Operations:

Finished loading the gear from the lab aboard ship.  
The probe arrived at 0900 and was installed by our group  
and HAN went to J-4 + got batteries for probe. Probe didn't  
work so Weeks started trouble shooting.  
Installed blocks on probe boom + forward winch frame.  
Got 6 coils, 2nd devils + snakes from Burke.  
Rain was coming down in sheets during the entire operation.  
Checked out the counters by running pleiscams and calibrating  
w/  $^{60}\text{Co}$  standards. Calibrated the spectrometer.  
Ralphie Art finished cleaning up the lab.  
At 2:00 PM boarded ship and headed for sea. A few  
miles out ran 700' of wire out of aft winch through the  
metering block and painted the wire at 100' intervals.  
Then placed the metering block on the forward winch for  
use with the Nansen bottles.  
Revised trip route and put off 300 miles and  
added 2 more stations. Sea is fairly smooth so we are  
using less diagonal runs and more N+S and E+W.  
First station #34 at 1752 to 1812 took 8 ml plankton at 70 M  
and water samples at 0, 25, 50, + 200 M. Plan to take water samples  
at 0, 25, 50, 100, + 300 M but had a foul up on the 1st station.  
2nd station #33 at 2145 to 2220. 16 ml plankton from 35 M  
took planned water samples.  
Spectrometer + counters working fine - probe snafu. Still working  
on it but are also taking surface readings with a survey.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality USS Collett Date Aug 9 58  
 Personnel Weeks, Welander, Central, Weather fair (rain at night)  
Champion, Palumbo + Lowman Water conditions smooth (nobody sea sick so far.)

Radiation level(s)

Operations:

Stations	Time	total ml. plankton	plankton depth	Water samples
35	0135-0200	30	35M	2 planned
36	0507-0527	12	35	lost 100 M
3	0902-0930	35	40	2 planned
38	1252-1312	20	35	" "

At station 36 the hinge that connects the bottle to the cable clamp came loose and the bottle was lost. Now have 5 bottles. We should get two more bottles before the Silverstein trip.

The shifts we are using are as follows:  
 Team A Lowman, Champion, Palumbo 0200-0600  
 Team B Welander, Weeks, Central 0600-1200  
 1800-2400

Here 12 men from the ship were helping us on 4 hours on and 8 hours off schedule. Payne, Hopkins, N. Holt, Crossland, Clamen, Potts, Beck, Colman, Eiswirth, Kunkler, Justice and Chesley are the assigned men.

At 2:00 PM sent message on stations through #38 to Klement.

In early afternoon one of the crew became very ill and had spasms so at 1600 we headed for Eniwetok. Arrived at Eniwetok at 2310. Had sent message requesting Klement to meet us.

Ed called by radio when we arrive in Part and requested information about some of their supplies. Klement was also at the phone so we talked to him and informed him for fuel will discuss. KI

UNIVERSITY OF WASHINGTON  
 LABORATORY OF RADIATION BIOLOGY  
 SEATTLE, WASHINGTON

Ship: USS Collett Date: Aug 10  
 Personnel: Steve & Aug 9 Weather: fair (rain before dawn)  
 Water conditions: smooth

Station level(s):

Stations:

Station	Time	total ml. plankton	depth of plankton	water samples
39	0635-0653	22	35M	as planned
32	0952-1022	8	"	"
31	1330-1400	14	"	"
29	1830-1851	10	"	"
28	2152-2212	12	"	"

On stations 32 & 31 collected samples (1 liter) at all depths <sup>to depths</sup> as planned and some size for us. On 32 collected 5 gal surface for Hartley.

On station 31 the ship stopped for the sampling and for some time then started up again. The probe was broken off when the screw - we also lost 150' of probe cable. We almost hit the plankton net too. The screw put a mighty dent in the cable ~~and~~ weight. We are still taking the surface readings of the survey net.

Ralph put on a safety line and went down to look the probe. Nothing on the screws.

Sent second message to Klement on stations 39, 32, & 31.

UNIVERSITY OF WASHINGTON  
 LABORATORY OF RADIATION BIOLOGY  
 SEATTLE, WASHINGTON

Locality USS Collett Date Aug 11  
 Personnel same as Aug 9 Weather fine  
 Water conditions smooth

Radiation level(s) \_\_\_\_\_

Operations:

Results to date

Station #							(5' above H <sub>2</sub> O)
	Plankton d/imp/l	Surface d/imp/l	25M d/imp/l	50M d/imp/l	100M d/imp/l	300M d/imp/l	Surface $\dot{r}$ in mr/hr
34	43,000	255	801	96	---	331	0.14
33	2,600	1,250	234	931	4560	0	0.11
35	15,700	9,220	1,620	11,400	2,470	365	0.06
36	125,000	44,400	46,500	157,000	---	9,180	0.15
3	851,000	33,100	53,100	20,300	15,400	3,190	0.22
38	213,000	75,500	101,000	47,400	1,690	7,110	0.25
39	310,000	59,800	69,800	23,000	6,260	22,000	0.21
32	18,700	5,500	4,970	22,300	13,700	2,300	0.21
31	35,500	2,490	9,040	11,300	2,190	3,760	0.30
29	5,650	190	0	0	0	0	0.175
28	5,110	160	65	0	0	0	0.08
27	410	130	0	0	0	---	0.14

UNIV. CITY OF WASHINGTON  
 LABORATORY OF MARINE BIOLOGY  
 SEATTLE, WASHINGTON

(2)

Locality: VSS Collett Date: Aug 11 1958  
 Personnel: Weeks, Wolander, Palumbo Weather: fair  
Champion, Connel & Lawson Water conditions: smooth

Radiation level(s)

Operations:

Station	Time	Total ml Plankton	Depth of Plankton	Water samples analyzed
27	0120-0140	14 ml	35 M	9, 25, 50, 100, <del>200</del> 300 M
13	0503-0523	12 "	"	10, 25, 50, 100, 200 M
1	1252-1312	15 "	"	"
37	1612-1632	10 "	"	200 M
2	1937-1955	14 "	36 M	" " " " 300 M
4	2245-2310	20 "	36 M	"

became fouled in water bottle.

One net torn beyond repair. Processed & mounted samples. Samples being taken with greater efficiency. The crew, both young and old, were very efficient by experience. Travelling was rapidly between stations - 19 knots.

The water bottles have given us occasional trouble & need some work after every station.

New net lost when snap became unhooked while washing out net. Using device from now on to attach net.

Results to Date

Sta #	Plankton D/ml/cc	Surface 1100 D/ml/l	25 M d/ml/l	50 M d/ml/l	100 M d/ml/l	300 M	Above surface 5' net 5' ml/hr
13	2560	72	0	0	0	180	0.12
1	3320	1300	1100	52300	0	370	0.30
37	27,100	37,000	35,000	42,400	3900	3900	0.34
2	34900	53,400	50,500	157,300	5,400	6000	0.27
4	190,000	218,000	202,000	85,000	1740	4300	0.20

9!

UNIVERSITY OF WASHINGTON  
 LABORATORY OF RADIATION BIOLOGY  
 SEATTLE, WASHINGTON

Locality U.S.S. Collett Date Aug. 12, 1958 (Tuesday)  
 Personnel Lowman, Welles, Palumbo Weather Fair  
Cantril, Champion, Welander Water conditions SW 0th

Radiation level(s)

Operations:

Station	Time	Total ml Plankton	Depth of Plankton	Water Samples
5	0210-0230	14	35	0, 25, 50, 100, 300 M
7	0520-0540	24	"	" " " " "
8	0834-0854	6	"	" " " " "
6	1141-1201	6	"	" " " " "
9	1447-1507	12	"	" " " " "
11	1755-1815	10	"	" " " " "
16	2100-2115	15	"	" " " " "

Travelling 19 knots between stations. Taking fathometer readings at each station. Bombardier consumption reduced.

Flying fish found on board between stations 7 & 8. Processed liver, muscle, viscera, & Bone.

Results to date.

Sta #	Plankton d/ml/cc	50MH <sub>2</sub> O d/ml/l	25MH <sub>2</sub> O d/ml/l	50MH <sub>2</sub> O d/ml/l	400MH <sub>2</sub> O	300M H <sub>2</sub> O	Abn Surv Y amt
5	21,900	18,300	16,300	710	97	5700	0.1
7	17,600	13,200	17,900	1460	1040	3330	-
8	9110	3830	3510	251	1610	2050	0.22
6	<del>7110</del> 7110	72	460	460	1610	1870	
9	1070	1700	640	1160	130	460	0.4
11	<del>1060</del> 1060	237	0	0	0	772	0.16
16	4670	4950	1800	1360	805	2830	0.22

UNIVERSITY OF WASHINGTON  
 LABORATORY OF RADIATION BIOLOGY  
 SEATTLE, WASHINGTON

Locality U.S.S. Collett Date Aug. 13, 1958 (Wed)  
 Personnel Lowman, Cantrel, Palmbe Weather ~~Sun~~ Fair  
Weeler, Champion, Welander Water conditions Smooth

Radiation level(s) \_\_\_\_\_

Operations:

Station	Time	Total ml Plankton	Depth Plankton	Water samples
10	0014-0034	10	35 M	0, 25, 50, 100, 300
17	0314-0334	8	"	" " " " "
18	0633-0656	10	"	" " " " "
22	0930-0950	8	"	" " " " "
19	1250-1315	10	70	" " " " "
15	1651-1716	10	35	" " " " "
20	2045-2100	8	"	" " " " "

Injured  $\phi$  sooty tern landed on deck.

Results to date

Sta. #	Plankton d/ml/cc	Surface H <sub>2</sub> O d/ml/l	25M-H <sub>2</sub> O d/ml/l	50M-H <sub>2</sub> O d/ml/l	100M-H <sub>2</sub> O d/ml/l	300M-H <sub>2</sub> O d/ml/l	51abc Surfa T mifh
10	1580	65	0	0	0	0	0.20
17	1270	770	620	0	97	0	0.13
18	1740	194	0	0	0	0	0.15
22	1608	497	0	90	0	720	0.24
19	8320	6710	6840	9440	9010	2460	0.70
15	4060	1210	4290	695	920	2720	—
20	1510	0	0	0	0	0	0.14

UNIVERSITY OF WASHINGTON  
 LABORATORY OF RADIATION BIOLOGY  
 SEATTLE, WASHINGTON

Locality USS Collett Date Aug. 14, 1958 (Thurs)  
 Personnel Lowman, Palumbo, Cantrol Weather Fair to stormy  
Champion, Weeks, Welander Water conditions Smooth to rough  
gusted to 39 knots

Radiation level(s)

Operations:

Station	Time	M.L. Plankton	Depth Plankton	Water samples
21	0034-0054	8	35 M	0, 25, 50, 100, 300 M
23	0434-0459	16	"	" " " " "
24	0905-0930	10	"	" " " " "
25	1244-1259	15	"	0 25
26	1544-1604	8	"	0, 25, 50, 100, 300
14	1920-1945	12	"	" " " " "
12	2230-2255	12	"	" " " " "

Station 25 water sampling incomplete because of squall - winds up to 39 knots. Water bottle cable angle to surface of water was about 30° or less - could not get the bottle down to any depth.

Processed & counted samples, sent in the usual message. Received no message.

Results to date:

Sta. #	Plankton d/m/lc	Surf. H <sub>2</sub> O d/m/l	25M-H <sub>2</sub> O d/m/l	50M-H <sub>2</sub> O d/m/l	100M-H <sub>2</sub> O d/m/l	300M-H <sub>2</sub> O d/m/l	5' above surf Y m/hr
1	1770	319	0	60	0	0	0.18
23	293	0	0	0	0	0	0.16
24	3410	252	97	130	0	0	0.20
25	6780	178	0	0	0	0	0.17
26	5060	0	463	0	0	0	0.22
14	1940	0	0	0	0	198	0.10
12	5410	640	1030	1930	0	360	0.175

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality U.S.S. Collett & Elmer Date Aug 15, 1958 (Fri.)  
Personnel Lawman, Palumbo, Weeks Weather Fair  
Cantail, Champion, Welander Water conditions Smooth

Radiation level(s) \_\_\_\_\_

Operations:

~~Results~~ Collett into lagoon & locked 1st at oil barge about 0700. Went in on Captain's gift & met with Ennie Wyucrop, later, Cmdr. Welander & Al. Clement. We were concerned about the use of the Collett for the next phase of the track but met with no encouraging response. We feel that the data should be tied together as well as possible & the chances of this fade as the dates between the 2 trips become separated.

Started to unload ship & completed same in less than 8 hours.

$\gamma$  Spectrometer had not been working properly the last 24 hours of the trip. Repairs are under way.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality U.S.S. Collett & Elmer Date Aug 15, 1958 (Fri)  
Personnel Lawman, Palumbo, Weeks Weather Fair  
Cantail, Champion, Welander Water conditions Smooth

Radiation level(s)

Operations:

~~Collett~~ Collett into lagoon & docked 1st at oil barge about 0700. Went in on Captains gig & met with Ernie Wyucop, later, Cmdr Whedel & Al Clement. We were concerned about the use of the Collett for the next phase of the track but met with no encouraging response. We feel that the data should be tied together as well as possible & the chances of this fade as the dates between the 2 trips become separated.

Started to unload ship & completed same in less than 8 hours.

V-Spectrometer had not been working properly the last 24 hours of the trip. Repairs are under way.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Elmer Date Aug. 16, 1958  
Personnel Lowman, Palumbo, Cantrell Weather Rain, etc.  
Weeks, Champion, Welander Water conditions Fair

Radiation level(s)

Operations:

Cleaned up storeroom area & porch - the latter left in a mess by the Bongelapese.

Continued efforts to get Country equipment in shape at the lab.

Set up Resin columns in cold room (6 small)

Collett left at 12:00 noon today.

The addition to EMBL is almost ready & will give much needed bench space and storage facilities.

Cleaned and rearranged the storage room. Fine job by Welander and Champion. The entire Lab now is in spic and span shape.

Lowman called out of movie by Admiral Tyree to discuss the Collett Survey. We all dropped into 119 to check with Al Klement who had been asked about lack of fish data. We all emphasized the difficulty of catching fish at the speed travelled between stations and the poor luck of the fishermen aboard. Al understood completely and sent a Tux explaining the situation. This Tux is being copied for our files. Will send a copy to you today.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Perry Is. Date August 17  
Personnel Conrad Chapman, Palumbo Weather fair  
Wesley Welander, Lowman Water conditions Smooth

Radiation level(s) \_\_\_\_\_

Operations:

Set up resin columns for 7 samples. 4 Macroplankton, 1 microplankton, and two fish. Wet ashed the samples.

Started drying plankton plates to get dry wt. and for second counting of plates.

Oiled extra cable for winch. Made plastic covers for winches. Worked on a sick gamma spectrometer.

Set up the  $\beta$  counters after cleaning the pigs, slides, and counter tubes.

UNIVERSITY OF WASHINGTON  
LABORATORY OF RADIATION BIOLOGY  
SEATTLE, WASHINGTON

Locality Perry Is. Date Aug 18  
Personnel Same as Aug 17 Weather Fair - showers  
Water conditions smooth

Radiation level(s)

Operations:

Sorted resin column experiments. Weighed dried plates.  
Calibrated the  $\beta$  counters with standards and worked on  
the  $\gamma$  specimens which is really kept after the three  
power failures aboard ship.  
Started recounting the plates. Worked over waste bottles  
for next trip.