

Cdr. W. Wolff
TESTS

Mail Station L- 231

JULY 16, 1973

Ext: 8711

MEMORANDUM

Captain Gay
~~Mr. Gussler~~
~~CDR Wolff~~
Major *Getner Johnson*
~~Major Giannotta~~ SFG

TO: W. E. Nervik, Division Leader, Radiochemistry

FROM: R. W. Hoff, Radiochemistry Division

SUBJECT: Eniwetok sample analytical program. Progress Report No. 12.
Status as of 13 July 1973.

Operation Radiological

This progress report summarizes the laboratory analytical effort being carried on at LLL by members of the Radiochemistry Division, Biomedical Division, and Hazards Control Department, at the University of Washington (Dr. Allyn Seymour, Dr. Victor Nelson, Dr. William Schell), at McClellan Laboratory (Col. R. McBryde, Maj. W. Myers), at LFE Environmental (Mr. Leon Leventhal, Mr. William Major), and at Eberline Instrument Corporation (Mr. Eric Geiger, Mr. Ernest Sanchez).

I. Initial processing. All efforts completed as of 29 June 1973.

Soil, sediment, and core samples:

Initial processing efforts at LLL have been completed as of 15 June. We have revised our bookkeeping on numbers of samples processed in Building 412. Revised totals are as follows:

3,050	soils
225	sediments
125	cores
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3,400	TOTAL

The sediment and core samples were collected from the lagoon floor.

REPOSITORY DOE History Division
COLLECTION RG 326, Tommy McCraw Job 1320
BOX No. 5
FOLDER Radiological Survey

Fish samples (441 samples to be processed; breakdown - 407 fish, 28 seawater filters, 3 algae, 2 sediment, 1 coral):

Initial processing phase at UW, Seattle, complete as of 23 February 1973.

Dried samples subsequently dry-ashed at LLL - 121.

Terrestrial animals, eggs, etc. (281 samples to be processed):

Initial processing (LLL) - 281 samples completed as of 29 June 1973.

Seawater (58 samples collected):

Chemical separation (LLL) - initial separation chemistry completed as of 18 May 1973.

Initial processing completed on the following samples prior to 20 April 1973:

Vegetation (208 samples)
Plankton (16 samples)
Air Filters (61 samples).

II. Gamma counting, precision Ge(Li) detector spectroscopy:

Samples counted and data in computer bank (LLL)

	<u>15 June 1973*</u>	<u>29 June 1973*</u>	<u>13 July 1973</u>
Soils	2760	2994	3052
Sediments	(224)	(224)	(224)
Cores	101	122	127
Fish	(407)	(407)	(407)
Algae	2	(3)	(3)
Seawater (Hydroxide fraction)	(58)	(58)	(58)
Plankton	(16)	(16)	(16)
Coral	2	(2)	(2)
Vegetation	(208)	(208)	(208)
Air Filters	(61)	(61)	(61)
Animals, birds, eggs, etc.	<u>77</u>	<u>146</u>	<u>266</u>
TOTAL	3916	4240	4424

* Parentheses indicates categories where gamma counting has been completed.

III. Chemical analyses, samples dissolved and elements isolated chemically:

As of 13 July 1973, the status of sample delivery to contract labs is the following:

<u>Sample type</u>	<u>Delivered for chem. anal.</u>	<u>Remain to be delivered</u>
Soils, sediments, cores	1656 (MCL)	315
	888 (LFE)	
	486 (EIC)	
	<u>TOTAL</u> 3030	
Fish	121 (MCL)	NONE
	196 (LFE)	
	114 (UW)	
	<u>TOTAL</u> 431	
Vegetation (208 samples gamma counted)	40 (LFE)	152
Animals (281 samples gamma counted)	0	216
Air filters	55 (MCL)	NONE

McClellan Laboratory (MCL) - The analytical work at MCL was begun in December 1972.

	<u>15 June 1973</u>	<u>29 June 1973</u>	<u>13 July 1973</u>
Samples received (13 July - 1446 soils, 210 sediments, 121 fish, 55 air filters)	1477	1832	1832
Data reported on ⁹⁰ Sr and Pu (13 July - 1040 soils, 208 sediments, 17 fish, 53 air filters)	1041	1215	1318

McClellan Laboratory - continued

	<u>15 June 1973</u>	<u>29 June 1973</u>	<u>13 July 1973</u>	
Chemistry complete, Samples counting	370	324	264	307
In process	66	293	250	4

LFE Environmental Analysis Laboratory (LFE) - The analytical work at LFE was begun on March 5, 1973.

	<u>15 June 1973</u>	<u>29 June 1973</u>	<u>13 July 1973</u>	
Samples recieved				
Soils	679	880	881	103
Sediments	6	7	7	44
Fish	5	196	196	57
Vegetation	40	40	40	71
Algae	0	3	3	3
Water plant residues	2	2	2	1
TOTAL	732	1128	1129	200

Pu data reported				
Soils	507	637	674	107
Fish	4	4	4	4
Vegetation	0	4	4	4

Sr data reported				
Soils	474	587	619	107
Fish	4	4	4	4
Vegetation	0	0	2	2

55 Fe data reported (analyses required only on fish samples)				
Fish	4	4	4	4

Eberline Instrument Company (EIC) - The analytical work at EIC was begun on April 2, 1973.

	<u>15 June 1973</u>	<u>29 June 1973</u>	<u>13 July 1973</u>	<i>27 Jul</i>
Samples received - soils	326	486	486	
Pu data reported	220	314	319	<i>31</i>
Sr data reported	44	102	217	<i>22</i>

University of Washington

	<u>15 June 1973</u>	<u>29 June 1973</u>	<u>13 July 1973</u>	
Samples received (114 marine, 28 filter media)	105	142	142	

All samples have been ashed as of 29 June 1973. *14*

Preliminary data have been reported by letter (22 Pu's, 7 Sr's, 24 Fe's). Computer card format has been received by UW and data cards should be forthcoming. Data reported columns will reflect data reported as final data on computer cards.

A progress report will be issued every two weeks.

Richard W. Hoff

Dr. Richard W. Hoff
Deputy Division Leader
Radiochemistry Division

RWH:mb