

*Cdr. Wolff*

Interdepartmental letter d

Mail Station L 231

Ext: 8711

August 28, 1973

MEMORANDUM

411567

~~Captain Gay~~ *RR*  
~~Mr. Carlson~~  
~~CDR Wolff~~ *w*  
~~Major Johnson~~  
~~Major Channotta~~ *FC*

**TO:** W. E. Nervik, Division Leader, Radiochemistry  
**FROM:** R. W. Hoff, Radiochemistry Division  
**SUBJECT:** Eniwetok sample analytical program. Progress Report No. 15.  
 Status as of 24 August 1973.

*Operation Read*

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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 prior to 29 June 1973.

Details on completion rates, numbers of samples, laboratories involved, etc. in initial processing are available in earlier issues of this report.

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

Gamma counting of all samples has been completed as of 27 July 1973, with the exception of a few late soil and coconut samples. There is no backlog of uncounted samples now.

The data have been checked for accuracy; correction sheets on errors have been submitted to Bill Phillips.

**REPOSITORY** DOE History Division  
**COLLECTION** R6 326 Tommy McCraw Job # 1320  
**BOX No.** 5  
**FOLDER** Radiological Survey



University of California

LAWRENCE LIVERMORE LABORATORY

Samples counted and data in computer bank (LLL):

Soils	3058
Sediments, cores	352
Fish	407
Algae	3
Seawater (Hydroxide fraction)	58
Plankton	16
Coral	2
Vegetation	208
Air Filters	61
Animals, birds, eggs, etc.	<u>273</u>
TOTAL	4438

The numbers listed here are taken from a computer listing which summarizes sample entries. The actual count of samples which appears in our final report may differ slightly from the above. We are in the process of eliminating certain entry duplications due to mistakes in Sample ID numbers. Until these corrections have been completed, the above listing is subject to revision. Another uncertainty lies in the designation of sediment samples and core samples. Sediment sample designation refers to grab samples taken from the bottom of the lagoon while core sample designation implies sectioning as a function of depth. Since we haven't attempted to keep these two categories separate, the proportion of each is somewhat uncertain but the total number is accurate.

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

As of 24 August 1973, the status of soil 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	1861 (MCL) 1007 (LFE) 486 (EIC)	50
TOTAL	<u>3354</u>	

Status of wet chemical analyses of fish, vegetation, and animal samples

			Data in computer bank, as of 8/24/73						
<u>Samples delivered</u>			<u><math>^{239}\text{Pu}</math></u>	<u><math>^{90}\text{Sr}</math></u>	<u><math>^{55}\text{Fe}</math></u>	<u>Fe (stable)</u>	<u><math>^{241}\text{Am}</math></u>	<u><math>^{113}\text{Cd}</math></u>	
			<u>Total</u>						
Fish	MCL	(20-4/4/73, 101-6/26/73)	121	104	120	115	121	5	14
	LFE	(4-3/16/73, 192-6/20/73)	196	141	14	4	0		
	UW	(12-2/20/73, 43-5/24/73, 13-6/19/73)	114	(22)	(7)	(128)	19		
	Undelivered		0						
Vegetation	MCL		130	0	0	2			
		8/2/73 - 24	20 (Priority I)						
		8/8/73 - 98	110 (Priority II)						
		8/14/73- 7							
		8/21/73- 1							
	LFE		51	11	5	0			
		5/21/73 - 40	40 (Priority I)						
		7/23/73 - 11	11 (Priority I)						
	Undelivered (Priority III)		18						

Analyses table continued.

Status of wet chemical analyses of fish, vegetation, and animal samples

		Data in computer bank, as of 8/24/73			
<u>Samples delivered</u>		<u><math>^{239}\text{Pu}</math></u>	<u><math>^{90}\text{Sr}</math></u>	<u><math>^{55}\text{Fe}</math></u>	<u>Fe (Stable)</u>
		<u>TOTAL</u>			
Animals	MCL	4	0	0	0
	8/8/73 - 4 (Priority II)				
	LFE	105	0	0	0
	8/1/73 - 105 (Priority I)				
	Undelivered (Priority II)	107			

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

	<u>27 July 1973</u>	<u>10 August 1973</u>	<u>24 August 1973</u>
Samples received			
Soil	1,545	1,597	1,597
Sediment, core	222	264	264
Fish	121	121	121
Vegetation	0	122	130
Animal	0	4	4
Air Filter	58	58	58
Plankton	0	16	16
TOTAL	<u>1,946</u>	<u>2,182</u>	<u>2,190</u>

Pu, Sr data reported

Soil	1,149	1,282	1,392
Sediment, core	208	231	231
Fish	59	74	104
Vegetation	0	0	0
Animal	0	0	0
Air Filter	53	53	53
Plankton	0	0	0
TOTAL	<u>1,469</u>	<u>1,640</u>	<u>1,780</u>

Chemistry complete,  
samples counting

303

202

151

In process

174

340

216

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

	<u>27 July 1973</u>	<u>10 August 1973</u>	<u>24 August 1973</u>
Samples received			
Soils	963	963	963
Sediments	44	44	44
Fish	197	197	200
Vegetation	51	51	51
Animals	0	105	105
Algae	3	3	3
Water plant residues	<u>2</u>	<u>2</u>	<u>2</u>
TOTAL	1260	1365	1368
Pu data reported			
Soils	734	848	931
Fish	22	70	141
Vegetation	4	11	11
Sr data reported			
Soils	653	697	850
Fish	4	4	14
Vegetation	4	4	5
<sup>55</sup> Fe data reported (analyses required only on fish samples)			
Fish	4	4	4

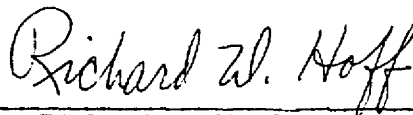
Eberline Instrument Company (EIC) - The analytical work at EIC was begun on April 2, 1973.

	<u>27 July 1973</u>	<u>10 August 1973</u>	<u>24 August 1973</u>
Samples received - soils	486	486	486
Pu data reported	319	319	319
Sr data reported	323	323	323

University of Washington

Samples received (114 marine, 28 filter media)	142	142	142
Pu data reported	(22)	(22)	(22)
Sr data reported	(7)	(7)	(7)
<sup>55</sup> Fe data reported	(24)	(24)	(128)
Fe (stable) data reported	19	19	19

A progress report will be issued every two weeks.



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Dr. Richard W. Hoff  
Deputy Division Leader  
Radiochemistry Division

RWH:mb