

March 28, 1973

~~Captain Gay~~ *WJ*
~~Mr. Carlson~~
~~CDR Wolff~~
~~Major Fava~~
~~Major Cotner~~
~~Mr. Little~~
Major Cotner
Mr. Stewart

MEMORANDUM

TO: W. E. Nervik, Division Leader, Radiochemistry
FROM: R. W. Hoff, Radiochemistry Division
SUBJECT: Eniwetok sample analytical program. Progress Report No. 4.
 Status as of 23 March 1973.

This progress report summarizes the laboratory analytical effort being carried on at LLL by members of the Radiochemistry Division, Bio-medical Division, and Hazards Control Department, at the University of Washington (Dr. Allyn Seymour, Dr. Victor Nelson), 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).

Soil and sediment samples:

(estimate 2,800 soil samples to be processed)
 (estimate 388 sediment and core samples to be processed)
 Initial processing (LLL, Bldg. 412) - Samples in process
 or completed, as of 23 March 1973 - 1,990
 as of 9 March 1973 - 1,640
 as of 23 February 1973 - 1,325
 Current rate: 180 samples per week.

Soil samples
1990 1640 1325

Fish samples (441 samples to be processed):

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

Dried samples subsequently dry-ashed at LLL - 17

Vegetation, other terrestrial biota (350 samples to be processed):

Initial processing (LLL) - 116 vegetation samples completed.

Seawater (58 samples collected):

Chemical separation (LLL) - total of 58 samples; adding carriers and tracers, sequential separation of various elements; in process with a rate of 8 samples per week; 20 samples have had chemistry completed.

Plankton (17 samples collected):

17 samples in process (LLL) - dry, weigh, package; samples are ready for gamma counting.

Core samples (36 samples collected):

Total of 36 collected. In various stages of processing at LLL. These are being sectioned into 5-cm slices, dried, ground, and analyzed. A total of 165 samples will result from 36 cores.

Air filters (61 samples collected):

High-volume samples gamma counted (LLL) - 11 samples.
Wet chemical analysis for ^{239}Pu (MCL) - 7 (in process); first data are being reported on the Pu content of these filters.
Remainder will be processed as soon as results are in on first batch.

Gamma counting, precision Ge(Li) detector spectroscopy:

Samples counted and data in computer bank (LLL) -

	<u>23 Feb. '73</u>	<u>9 Mar. '73</u>	<u>23 Mar. '73</u>
Soils	371	442	686
Sediments	218	223	224
Fish	186	212	310
Vegetation	16	16	46
Air filters	<u>11</u>	<u>11</u>	<u>11</u>
TOTAL	802	904	1277

Chemical analyses, samples dissolved and elements isolated chemically:

McClellan Laboratory (MCL) -

	<u>23 Feb. '73</u>	<u>9 Mar. '73</u>	<u>23 Mar. '73</u>
Samples received	502	614	738
Data on ^{90}Sr and Pu	297	411	554 495
Data on ^{90}Sr or Pu	87	15	45
Chemistry complete, samples counting	43	107	15
In process	75	81	124

LFE Environmental Analysis Laboratory (LFE) -

Samples delivered to LFE as of 23 March 1973 - 322 soils, 4 dried fish for ^{90}Sr and ^{239}Pu analyses (plus ^{55}Fe on fish samples). Expect to start receiving data week of 26 March.

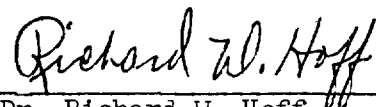
Eberline Instrument Company (EIC) -

Final contract negotiations completed by NVOO on 22 March 1973. A batch of 58 coral samples (50g each) to be analyzed for ^{239}Pu and ^{90}Sr were shipped to EIC on 22 March 1973. The EIC chemists expect to have glassware and equipment ready and to begin analyses on 2 April 1973.

University of Washington, Seattle (UW) -

Analysis of a set of 12 selected fish samples for ^{239}Pu , ^{90}Sr , and ^{55}Fe is in progress at UW and MCL. Data will be compared to assure accurate calibration of tracers, etc.

A progress report will be issued every two weeks.



Dr. Richard W. Hoff
Deputy Division Leader
Radiochemistry Division