Monsanto

FROM (NAME & LOCATION): W. R. Richard - Research Center

DATE: March 7, 1969

SUBJECT: AROCLOR WILDLIFE

REFERENCE:

cc: E. Wheeler
R. Kelly
J. Garrett
P. Park
E. Tucker - RES. 2
R. Keller

TO : FILE

We have been cooperating with Aroclor samples to the following investigators.

Jensen and Widmark Tatton	1966,1967 (1/16/68-Jensen)	
Dept. of Interior Fish & Wildlife Service Bureau of Sport Fisheries Denver, Colorado	2/1/68	Richard A. Wilson Sr. Res. Chemist
Wisconsin Alumni Res. Found. Madison, Wisconsin	2/14/68	Francis B. Coon Head, Chem. Dept.
Nat'l Agric. Chemicals Assn. Washington, D. C.	2/19/68	Donald A. Spencer (Aroc. Bulletins only)
State Univ. of N. Y. College of Medicine Syracuse, N. Y.	2/28/68 (Aroclor 1262)	Dr. David B. Peakall Assoc. Prof. Coll. of Med. Dept. of Pharmacology
Cornell U., Div. of Bio. Sci-Ecology	3/27/68 (Aroclor 1262, 1254)	Jeffrey Lincer (Was at Syracuse U Res. Corp. 3/68)
FDA Wash. D.C.	6/18/68	Dr. A. R. Glasgow Chief, Pesticides (Jerry Burke doing work)
USDA Agric. Res. Service Pesticides Regulation Division	6/18/68 (Looking at Aroclor in formulated pesticides.)	Dr. Blickenstaff
Regional Primate Res. Madison, Wisconsin	7/15/68 (Bulletins)	Dr. J. R. Allen Univ. of Wis. Assoc. Prof. of Pathology
U.S. Bur. of Comm'l. Fisheries - Ann Arbor, Michigan	7/19/68 (All Aroclors)	Dr. Reinart (For studies in Lake Mich.)
Rome Pollution Lab Rome, N.Y.	8/7/68 (Aroclor 1242)	Earl J. Harris

MONS 096515

EXHIBIT WBP M-32

EXHIBIT WBP M-78

TOWOLDMON0003805

Wildlife Research Dept. of Interior Wash. D. C.	9/5/68	Walter Dykstra
Patuxent of USDI	9/5/68	Dr. Lucille Stickel Chief Chemist
U. of Wisconsin Labs	9/5/68	Dr. Joe Hickey
Denver Labs Fish & Wildlife Div.	9/5/68	Glen Crabtree
U. of Calif., Riverside	12/3/68	F. A. Gunther Prof. of Entomology)
Industrial Bio-Test Labs	1/21/69	Dr. Otis Fancher
Medical College of S. Carolina	2/13/69	Dr. Julian Keil (Aroclor 1242 in blood)

WR.

W. R. Richard

ms

MONS 096516

TOWOLDMON0003806

AUG - 1 1969

WARF *Institute, Inc.*

P.O. BOX 2037 • PHONE 608/257-4651 • 606 WALNUT ST.

Madison, Wis. 53701

August 19, 1969

Dr. Elmer Wheeler, Manager
Environmental Health
Monsanto Company
800 North Lindbergh Boulevard
Saint Louis, Missouri

Dear Dr. Wheeler:

Enclosed is our invoice to cover the cost of analysis of 20% of the Lake Michigan samples for P C B's. We trust that by now you have been briefed by Fran Coon on our progress.

We shall look forward to working with you.

Very truly yours,

John J. Birdsall

John J. Birdsall
Vice President

JJB/lm

Enc.

EXHIBIT
WBP M-78.1

EXHIBIT
WBP M-37

MON-MT-008614

TOWOLDMON0003807

WARF Institute, Inc.
P.O. BOX 2037 • PHONE 608/257-4851 • 506 WALNUT ST.
Madison, Wis. 53701

September 15, 1969

Mr. John F. Carr
Bureau of Commercial Fisheries
P.O. Box 640
Ann Arbor, Michigan 48104

Dear John:

Enclosed is a brief summary of the report I presented at the meeting on Monday. I shall look forward to seeing you at the next session.

Very truly yours,

John J. Birdsall
Vice President

jjb/p
Enc.

RECEIVED SEP 17 1969

EXHIBIT
WBP M-37.1

Wisconsin Alumni Research Foundation • Madison, Wisconsin

Summary of Results as of September 8, 1969

Lake Michigan was circled by boat from July 8 to July 25, 1969. Samples were collected at each major tributary and clam monitoring stream. Additional samples were collected at sites of outfalls and certain other streams and harbors.

The numbers of samples collected are as follows:

	Major Tributary & Clam Monitoring	Additional
Stream sediment	57	12
Stream water	57	18
Stream plankton	57	9
Offshore lake water	60	6
Offshore lake plankton	41	4
Fish	14	4

Analyses of the 57 stream water and sediment samples have been completed and the stream plankton samples are nearly completed. Results to date are inconclusive. High, unusual G.C. peaks in a few northern and a number of southern area streams and sediments need to be studied further.

Additional water samples have been collected from Racine and Kenosha industrial sites and are in process.

John J. Birdsall
September 15, 1969

MON-MT-008616

TOWOLDMON0003809

bcc: Messrs. W. R. Richard
H. S. Bergen
E. S. Tucker
J. E. Springate
H. L. Payton

April 10, 1969

Mr. Robert Z. Rollins, Chief
Chemistry Laboratory Services
California Department of Agriculture
1220 North Street
Sacramento, California 95814

Dear Mr. Rollins:

In reply to your recent letter, we have sent to your attention under separate cover, three bottles containing about 50 grams each of our Aroclor 1242, 1254 and 1260. These products are biphenyl chlorinated to the percentage level indicated by the last two figures in each number. The samples are electrical grade materials representative of our normal production.

We are aware of the work of Dr. Robert Risebrough at the University of California, Berkeley. We have an analytical research program underway for the identification and measurement of polychlorinated biphenyls in biological and plant materials. This work is based on concentration schemes followed by gas chromatography procedures with final characterization by mass spectroscopy. To date, we have no methods at a suitable state of development for release. For your information, we are also following work reported by Holmes, et al in Nature 216 227 (1967).

To the best of our knowledge, Aroclors are not used as solvents in pesticide formulations.

All of the Aroclors are practically insoluble in water. For example, Aroclor 1242 is soluble at 25°C only to the extent of about 200 parts per billion; Aroclor 1248 100 ppb and Aroclor 1254 50 ppb.

If we can be of any further assistance, please let me know.

Sincerely,

Robert E. Keller
Manager of Applied Sciences

db

EXHIBIT
WBP M-78.2

MON-MT-008709

TOWOLDMON0003810