DEPARTMENT of the INTERIOR

news release

GEOLOGICAL SURVEY — Forrester (202) 343-4746

For release September 20, 1972

PCB SPOTTED IN NATION'S WATER RESOURCES

PCB (polychlorinated biphenyls) — an environmentally persistent industrial compound chemically similar to DDT -- has been found in an unexpectedly large number of sampling points in streams, lakes, and reservoirs throughout the Nation, according to scientists of the U. S. Geological Survey, Department of the Interior.

The PCB findings were first made public in a paper presented to the Division of Pesticide Chemistry of the American Chemical Society, New York City, August 29, 1972, by Hans J. Crump-Wiesner, Herman R. Feltz, and Marvin L. Yates, of the USGS Water Resources Division, Washington, D. C.

Reporting on work done as part of an interagency monitoring program concerned with pesticides in water supplies, Crump-Wiesner, senior author of the paper, and Chief Chemist of the Geological Survey's Water Quality Laboratory, Washington, D.C., said that "During the past two years, we have analyzed over 2,000 water and sediment samples from streams and lakes throughout the United States, collected from January 1971 through June 1972."

"We expected to find traces of PCBs at sampling points near industrial centers," the Survey scientist said, "but were surprised to find detectable levels in samples from 17 of 39 States covered by the sampling."

"We found PCBs in river water, some newly-developed real-estate lakes, and at two U.S. Geological Survey 'benchmark' stations located in relatively remote areas essentially unaffected by man," Crump-Wiesner said, adding that "we also found lake and stream sediments to have relatively high concentrations of PCB residues. One out of every five bottom sediment samples collected in 18 States contained significant concentrations of PCBs."

Emphasizing that State and Federal health officials have been alerted to the occurrences of PCBs, the Survey spokesman noted that "a safe level for PCBs has not been generally accepted to date."

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The Food and Drug Administration limits the concentration in food products to 5,000 micrograms per kilogram (five pounds per million pounds), and the Environmental Protection Agency, in May, 1972, as the result of information obtained in this and other studies, recommended a maximum limit of 0.01 micrograms per liter (one pound in 50 billion quarts) in river and lake water.

The USGS study indicates that detectable concentrations of PCBs in river and lake water ranged from 0.1 to 4.0 micrograms per liter. Concentrations in bottom sediments of streams and lakes ranged from 5.0 to 3,200 micrograms per kilogram.

First produced about 40 years ago, the PCB compounds have become increasingly useful in such industrial applications as components in transformers and capacitors, heat exchangers, paints, inks, dyes, and for dust control.

"Although previous investigations have generally been concerned with PCB contamination from accidental spills in industrial areas, this study was an attempt to document general distribution of the compounds in our waterways," Crump-Wiesner said.

"PCBs can enter the aquatic environment," he explained, "by atmospheric fallout from low temperature incineration of solid wastes, from spills, or from sewage and industrial waste outfalls."

The USGS paper, "A Study of Distribution of Polychlorinated Biphenyls in the Aquatic Environment," is planned for publication in the American Chemical Society's "Advances in Chemistry" series.

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(Note to Editors: Attached tables give a general State-by-State listing of PCB concentrations detected in the initial survey. Detailed listing of sampling sites is on file with State agencies involved)

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SUMMARY OF PCB RESIDUE DETERMINATIONS - SEDIMENT SAMPLES
January 1971 - June 1972

STATE	Number of Sediment Samples	Number of Samples w/Detectable PCB	Concentration Range (micrograms/kilograms
ALASKA	3	0	--
ARIZONA	--	--	--
ARKANSAS	23	4	20 - 2,400
CALIFORNIA	13	3	20 - 190
COLORADO	--	--	--
CONNECTICUT	1	1	40
FLORIDA	118	50	5 - 3,200
GEORGIA	12	10	10 - 1,300
HAWAII	4	0	--
IOWA	--	--	--
KANSAS	--	--	--
KENTUCKY	--	--	--
LOUISIANA	--	--	--
MAINE	--	--	--
MARYLAND	11	5	10 - 1,200
MASSACHUSETTS	--	--	--
MICHIGAN	--	--	--
MINNESOTA	--	--	--
MISSISSIPPI	8	2	10 - 1,200
MISSOURI	--	--	--
MONTANA	--	--	--
NEBRASKA	--	--	--
NEW JERSEY	12	10	8 - 250
NEW MEXICO	--	--	--
NEW YORK	--	--	--
NORTH DAKOTA	--	--	--
OHIO	1	1	8.8
OKLAHOMA	--	--	--
OREGON	4	2	15 & 140
PENNSYLVANIA	16	11	10 - 50
PUERTO RICO	--	--	--
SOUTH CAROLINA	11	8	30 - 200
SOUTH DAKOTA	--	--	--
TEXAS	294	24	7.9 - 290
VIRGINIA	10	8	5 - 80
WASHINGTON	10	0	--
WEST VIRGINIA	2	1	10
WISCONSIN	--	--	--
WYOMING	--	--	--

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SUMMARY OF PCB RESIDUE DETERMINATIONS - WATER SAMPLES
January 1971 - June 1972

STATE	Number of Water Samples	Number of Samples with Detectable PCB	Concentrated Range (micrograms/liter)
ALASKA	3	0	—
ARIZONA	8	0	—
ARKANSAS	32	0	—
CALIFORNIA	161	2	0.1 & 0.1
COLORADO	32	1	0.3
CONNECTICUT	13	6	0.1 - 0.2
FLORIDA	231	12	0.1 - 2.1
GEORGIA	—	—	—
HAWAII	5	0	—
IOWA	24	0	—
KANSAS	10	0	—
KENTUCKY	7	0	—
LOUISIANA	9	0	—
MAINE	2	0	—
MARYLAND	6	1	0.1
MASSACHUSETTS	5	1	0.2
MICHIGAN	2	0	—
MINNESOTA	3	2	0.1 - 0.3
MISSISSIPPI	8	0	—
MISSOURI	21	0	—
MONTANA	47	0	—
NEBRASKA	44	0	—
NEW JERSEY	11	3	0.1
NEW MEXICO	36	0	—
NEW YORK	325	52	0.1 - 4.0
NORTH DAKOTA	40	0	—
OHIO	—	—	—
OKLAHOMA	19	0	—
OREGON	13	0	—
PENNSYLVANIA	2	1	0.2
PUERTO RICO	7	1	0.1
SOUTH CAROLINA	—	—	—
SOUTH DAKOTA	18	0	—
TEXAS	660	12	0.1 - 3.0
VIRGINIA	4	1	0.1
WASHINGTON	25	0	—
WEST VIRGINIA	4	0	—
WISCONSIN	3	0	—
WYOMING	18	0	—

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