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PCB's Are Found In More Waterways; New Curbs Planned

By ALLEN F. RICHARDSON

Recent disclosures of widespread PCB's contamination in New York waterways have renewed alarms that the toxic chemical is present in high amounts not only in this area, but in remote parts of the planet as well.

Despite the efforts of Monsanto Company, the lone US producer, to limit the sales of the PCB's to special applications – where danger to the environment is minimized – decades of industrial use make immediate solutions impossible.

Environmental Protection Agency (EPA) and the New York State Environmental Conservation Department are seeking a viable standard that will slow plant discharges of PCB's. Investigation is under way to determine how PCB's presence in air and water can be eliminated.

PCB's (polychlorinated biphenyls) are thought to cause liver cancer and skin diseases in chimpanzees and rats. Its effect on humans is yet to be established.

Ogden R. Reid, the State environmental commissioner, said last week that several species of fish in the Hudson River have been contaminated with PCB's and possibly were unfit for human consumption.

After a meeting with forty scientists studying the problem, Mr. Reid concluded that the Hudson may be "approaching irre-

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PCB's Are Found

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versible and irreparable damage. Restoration, he said, "is a process that could take decades."

A spokesman for Mr. Reid told CMR that the gathering was "organizational and exploratory in nature." No conclusions on a course of action have been reached.

But, the Environmental Department is aiming for zero discharges by September 30, 1976.

The General Electric Company has been charged with dumping PCB's into the Hudson. The company operates two plants on the river at Hudson's Falls and Fort Edward, about 60 miles north of Albany.

PCB's are used in the manufacture of electrical equipment. Apparently, the chemical finds it way into the river through sewer pipes that carry GE's industrial rinse water.

Thirty percent heavier than water, PCB's sink to the bottom of rivers and lakes, attaching to silt and sediment. They are highly soluble in fats and concentrate in underbellies and eggs of fish.

GE has admitted to dumping as much as thirty pounds of PCB's a day into the river. Published reports indicate that the figure may have been much higher in the past.

State officials are also concerned that PCB's in the ground surrounding the plants may be running into the Hudson during rain storms. They believe that accidental spills have also contributed to the problem.

While the State is involved in the issue, the EPA has also begun proceedings to halt GE's activities in this area. Federal standards set five parts per million of PCB in fish as the highest allowable amount.

According to Mr. Reid, fish have been found in the Hudson containing 13.4 parts per million to over 100 parts per million.

To contain the problem, EPA has issued a permit to GE that would lower the discharge rate considerably. The agency wants only 99.84 grams per day let into the river by 1977. The abatement schedule, which is set up by EPA in such cases, was objected to by GE.

GE asked and received a hearing on the permit, slated for some time this year. The action, in effect, delays the abatement schedule until GE and EPA can work out their differences.

An investigative team from EPA found, last week, that GE had already reduced the amount of PCB's being discharged into the water. A preliminary report says the company is now down to about three to five pounds per day.

Meanwhile, EPA is examining the permit. A spokesman for the agency said last week that "we are in the process of setting policy on PCB's." Apparently, the agency now wonders if the provisions are stringent enough. They are also studying the effect of PCB's residues in landfills.

PCB's are used as a heat transfer fluid in electrical capacitors and transformers. At one time it was used in a variety of products, including carbonless carbon papers, handsoaps and food packaging. The presence of these materials in various areas near river banks has worried those close to the problem.

They feel that PCB's could be a problem for years to come as the chemical washes down in loose soil, contaminating the rivers and lakes and eventually ending up in drinking water.

Eradicating PCB's from water is a difficult task, according to W. B. Papageorge, manager of Monsanto's product acceptability department. "We are watching this issue closely," he comments, "knowing

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how difficult it is to separate PCB's from water."

Monsanto has controlled the PCB's coming from its plants since the early 1970's, when PCB's were first scrutinized. Losses from the company's production unit are less than one-half pound per day. And, that water is further treated by a municipal plant.

By the time the water reaches the Mississippi, says Mr. Papageorge, the amount of PCB's are close to zero. "We are talking about parts per trillion, if any," he adds.

Mr. Papageorge has worked closely with the EPA on the problem for nearly six

AROMATIC PRICE CHANGES

Week Ending Sept. 19, 1975

ADVANCED

None

REDUCED

None

COMPARATIVE PRICE INDEXES

(1000 - 1958 average)

Last Week	Prev. Week	Last Month	Sept. 20, 1974
200.15	200.15	200.15	104.03

For Current Prices See Page 40.

years. He thinks the odds of meeting the New York State standard by next year are long, "I don't know if anybody can meet that," he says.

Another problem inherent in PCB's levels and set standards is what Mr. Papageorge calls "a moving target." "One of the functions of a changing technology is that we may not be able to call a zero standard valid in future years. Present measuring systems may be inadequate."

PCB's were first detected as a long-lasting contaminant in 1966. At that time Monsanto began phasing it out of its production line. The company has voluntarily limited its sales of PCB's to "sealed systems."

The chemical is shipped in heavy guage steel drums and tankcars with special safeguards to eliminate exposure to the environment. Monsanto now makes about 40 million pounds per year, down from a peak of 80 million pounds. PCB's are also produced in Western Europe, the Soviet Union and China.

Concentrations of PCB's have also been found in the Great Lakes Region, Orange County—near Los Angeles and the Chester River, which flows into the Chesepeake Bay. In the New York State area, PCB's have been discovered in Lake Champlain and the St. Lawrence river.

Monsanto and environmental experts are confused over some of the findings. Since Monsanto does not have customers in many of these areas, spillages from several years ago are suspected. Speculation is that the chemical somehow becomes part of the evaporative process or is pumped into the air from incinerator stacks.

Normal incinerators for city and office wastes often do not achieve high enough temperatures to destroy PCB's. As a result, it is volitized, goes up the exhausts and comes back in the form of rain or snow.

The chemical has been found in Wisconsin snow. Researchers have also discovered PCB's traces in remote forests of Sweden and core samplings from Antartica.

Before the hazards of PCB's were discovered, it was "virtually dumped into the environment," says one expert. This proba-

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