ACS Conference Told—

Water Weeds Helpful Against PCB Pollution

By LEAH YOUNG
Journal of Commerce Staff

NEW ORLEANS — It is possible to remove polychlorinated biphenyls (PCBs) from contaminated rivers like the Hudson by using common water bulrushes, the American Chemical Society was told.

Dr. Angelo A. Volpe of Stevens Institute of Technology at Hoboken, N.J., which is on the Hudson River, and one of his undergraduate students, William Reinholtz, reported Tuesday that tests they conducted indicate the bulrushes tripled their growth rate over a two-week period when exposed to water contaminated by PCBs. In one week, they said, PCB condensations were reduced by 40 per cent.

The researchers argued that these bulrushes absorb the PCBs directly from the river silt. This is important, because Dr. James Sinnamaster III and Dr. Donald G. Crosby had told the ACS on Monday that dredging rivers such as the James to remove PCBs can release considerable amounts of this toxin into the air downstream.

Dr. Volpe said he believes that water weeds can be effective against PCB's and related materials such as kepone. He said he intends to apply his method of water purification to kepone, DDT and aldrin pesticides, as well as PCBs.

Another new water purification system was announced Tuesday by Dan N. Campbell of Monsanto Corp. He said that waste from styrene plants can be utilized as a water purifier that meets Environmental Protection Agency (EPA) national interim primary drinking water standards. The process he described converts waste streams from the manufacture of ethylbenzene, a styrene intermediate, into separate aluminum chloride for water purification. This aluminum chloride is then substituted for alum, which is usually utilized for water purification.

Total costs of this system and the carbon beds used in conjunction with the aluminum chloride are estimated to be about five cents per pound of contained aluminum chloride, Mr. Campbell said. This compares with a 10 cents cost per pound of aluminum delivered in the Houston area.

"The significance of the development is that a low-value byproduct from a styrene plant has been upgraded to a very useful chemical," he said.

(Continued on Page 6)

The Journal of Commerce
NEW YORK, N. Y.
D. 26,856
MAR 23 1977

ACS Conference Told—

Water Weeds Helpful Against PCB Pollution

(Continued from Page 2)

pound per year styrene plant using the most modern technology will produce approximately two million pounds of byproduct aluminum chloride. This is enough to treat the water required annually by a city of approximately 250,000 population," Mr. Campbell added.

An alternative approach to water purification was pressed by Dr. Daniel A. Okun of the University of North Carolina. He said that attempting to eliminate pollutants from water used by industry to create safe drinking water is wishful thinking. Therefore, he said, separate water systems should be created for potable water, which is only 10 per cent of demand.

Dr. Okun told reporters that in spite of assurances by the Army Corps of Engineers, there is not the technology to turn the Hudson River into a source of drinking water for New York. Further, he said, present data correlating sources of water and cancer death rates involve current day illnesses resulting from exposures in the 1950s "when the synthetic organic chemical industry was in its infancy."

In a paper prepared for Wednesday delivery, Dr. Okun notes that "if the long-term ingestion of these chemicals is responsible for the disease, we can expect to see a substantial increase in disease in the future" since more chemicals have been released into the water supply in the last 20 years. He told reporters that a "hierarchy of water supply" should be developed, so that drinking water can be derived from protected upland supplies and ground water. Polluted water can be used for all other needs, especially industrial uses, he said.

With a dual system, he says in his paper, the demands for potable water should be small enough to allow for "heroic measures" to purify enough water for potable needs if protected sources of water could not meet this demand.

"Also," he said, "the risk to the population of the lifelong ingestion of the contaminants in polluted waters would be eliminated."

Bayer AG of West Germany plans to increase its plant investments in the U. S. by half a billion dollars in the next five years. (See Page 2).

MONS 001012