

Feared PCB chemical may be made safe, useful

By THERESA A. BLAS
Of the Courier-Post

PHILADELPHIA — A local chemistry professor is trying to prove polychlorinated biphenyls (PCBs) can be turned into useful substances, rather than simply be incinerated at high cost.

One of the proposed incineration sites is in South Jersey, at the Rollins Environmental Services plant in Logan Township.

Dr. Louis L. Pytlowski, an assistant professor at Drexel University, Philadelphia, who last spent a sabbatical leave at the Franklin Research Center, has experimented in converting PCBs into polychlorinated biphenyls, compounds that were used until recently in food preservatives.

"No one has directly associated PCBs with a problem in human beings, but they have been shown to be toxic in animal studies," he said.

IN BILLINGS, MONT., recently

the eggs of children that ate contaminated food had to be destroyed. The food was contaminated from PCBs that leaked from an electrical transformer.

"Like so many things in chemistry, PCBs once served a real purpose," Pytlowski said.

"They were used as a substitute for normal hydrocarbon oils in high-voltage electrical systems because they are resistant to fire.

"But we now realize that PCBs are very soluble in fat, so the body stores them up, rather than getting rid of them," he said.

"Chlorinated materials of all kinds do not degrade and are bound to be picked up by fish, food and other animals if leaked into waterways or into the soil," Pytlowski said.

"PCBs get into human beings mostly by being in the oil-spread, in the food people eat."

THE ENVIRONMENTAL Protection Agency has banned the man-

ufacture of PCBs — which have caused cancer in laboratory animals and are suspected of causing it in humans — but the problem remains of how to dispose of any of the clear, syrupy liquids that have been drained from electrical equipment and lost to storage.

"The EPA has put a lot of money into incineration studies and has come up with indications that it can be done safely, but no one wants to dig at an incinerator near his house," he said.

the reaction in Logan Township has been typical, with residents protesting that incineration could release the toxic substances into the air.

A permit for such incineration has not yet been granted to Rollins or to any other plant, said Richard Raszynski, regional sales manager.

There are only three or four plants like this in the country that could handle the high-temperature incineration (2,300 degrees F. or 1,300 C.) Pytlowski said.

The EPA has provided a one-year grant of less than \$100,000 for the PCB research at the center, which is a division of the Franklin Institute.

Pytlowski estimated that it would cost between \$1 million and \$2 million to convert PCBs into water-soluble compounds.

"This is the big thing of incineration costs, which could be as high as \$600 a ton."

The development of a commercial-scale conversion process could take about three years, he said.

PCB Incineration

→ XC-5711
DAVE WOOD



Courier-Post photograph by Ron Kaprielian

Dr. Louis L. Pytlowski, shown yesterday in his laboratory at Franklin Research Center, is attempting to show that toxic PCBs can be converted to harmless and useful chemicals instead of having to be incinerated, a process opposed by fearful residents of Logan Township, site of Rollins Environmental Services.

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