Officials uncertain of threat from PCBs still by N.C. roads

The News and Observer, Raleigh, N. C., Mon., Dec. 14, 1981

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State health and safety officials are convinced, but cannot prove, that all the PCBs illegally dumped in 1978 along 211 miles of North Carolina highways are still there.

In 1979, the last time they checked, the average concentrations of the chemical essentially were the same as they had been a year earlier — sufficient to require that the contaminated roadway soil be moved to an approved landfill, the officials said in telephone interviews.

How dangerous the PCBs are is another question. A Research Triangle Park toxicologist said no one really knows.

North Carolina plans to entomb about 40,000 cubic yards of PCB-soaked earth in a proposed Warren County landfill whose construction was blocked, until last month, by two lawsuits.

Some opponents in Warren County have argued that the PCBs should be left along the roadsides. But an N.C. Division of Health Services environmental engineer says that would violate federal law.

"The state approached Washington ... and requested to treat it in place," said engineer William L. Meyer. "That was refused."

Under the federal Toxic Substances Control Act (TSCA), PCB wastes of sufficient concentrations must be eliminated by incineration, chemical treatment or carefully monitored burial.

"The only alternative we have for PCBs mixed with dirt is to landfill it," Meyer said in a telephone interview. "That was the one method approved."

Polychlorinated biphenyls have been a source of confusion and concern since long before the midnight dumping incident in North Carolina.

In 1968, PCB-contaminated cooking oils caused a major outbreak of skin rashes, headaches and weakness in Western Japan among people who ate food cooked in the tainted oil.

Follow-up studies showed evidence of irregularities in the livers, blood, nerves and immune and reproductive systems of some

Subsequent laboratory studies showed that PCBs also can cause cancer in animals. It has not been shown to cause cancer in humans.

Alarmed Japanese officials banned the chemical from their country. The U.S. Environmental Protection Agency imposed special handling requirements for PCB levels of 50 parts per million and above.

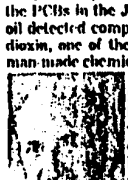
Levels along North Carolina roadsides varied from less than 50 to several hundred parts per million, Meyer said. The concentrations in the contaminated Japanese cooking were estimated at 500 parts per million.

What levels affect human health is difficult to judge, added a scientist at the National Institute of Environmental Health Sciences in Research Triangle Park.

"We don't know how much it takes to be a benith hazard," said Dr. Hans L. Falk, the NIEHS associate director for health hazard assessment. "That's the biggest problem that we have."

PCBs fall into the same family as DDT, a banned pesticide that once was widely used in North Carolina. As a group, PCBs are less toxic than DDT, he said.

But PCBs include 209 different compounds, which vary widely in toxic effects, he added. Studies of the PCBs in the Japanese cooking oil detected compounds similar to dioxin, one of the most poisonous man-made chemicals.



Falk

Like DDT, PCBs accumulate in the body, where they may contribute to long-term health effects. "Their persistence is one of the problems. They are very difficult chemicals to get rid of," Falk said in a telephone interview.

PCBs don't dissolve and go away. And that, Meyer said, has helped North Carolina control the chemicals dumped along its roadsides.

State officials covered the contaminated shoulders with activated carbon, a substance said to bond tightly with PCBs. They then applied a layer of soft asphalt to keep the soil from eroding.

"This stuff is so water insoluble that you could flush water on top, and the stuff would not move," said Meyer, who expressed confidence that the PCBs still are where they were deposited despite years of weathering.

But March 1979 was the last time the position of the PCBs was monitored, said David Kelly, an assistant secretary of the N.C. Department of Crime Control and Public Safety.

"The testing indicated that material was still in place ... in levels exceeding the allowable threshhold that the EPA had established," he said in a telephone interview.

"There is no indication that has changed," Kelly said.

Kelly said some additional spot checks may be run before the state begins digging up the contaminated soil, asphalt and activated carbon.

The state plans to remove a strip 6 inches deep and 30 inches wide — more than the area believed to be contaminated.

"We're picking up a whole lot more to make sure we get it all," Meyer said.

But Falk suggested that more detailed monitoring might be advisable before the state decided whether the benefit of the move was worth the cost or the risk of spreading contaminated soils along the way.

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