Traces of PCB in treated sludge

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Traces of the chemical compound PCB, which can affect the nervous system if taken in large quantities over a long period, have been found in the city's sludge digester system at the waste water treatment plant, Utilities Director Galen Gault reported this morning.

Last week, because of the PCB problem, Gault shut down the distribution of new sludge from the digesters to area farmers who use the substance as a fertilizer additive. Gault said there is no danger since the concentration of PCB found in the sludge is "extremely low." The distribution program will be starting up again "very soon," he said.

The temporary curtailment of the sludge distribution by Gault was the result of PCB being found in an old sludge lagoon near the sewage treatment plant on July 29. The distribution program has been shut down since Aug. 1 as a precautionary measure.

The lagoon, which had not been used for the dumping of sludge for about ten years, was being bulldosed away for construction of a $3.5 million sludge dewatering facility. The facility, to be located on the site of the lagoon, is one of the final projects of a $22 million water pollution abatement program started in 1973 by the city and the Ohio Water Development Authority (OWDA).

Gault said he received telephoned confirmation late Tuesday afternoon of the PCB being in the new sludge from laboratory officials of the Ohio Environmental Protection Agency in Columbus.

The utilities director reported he was told that based on a ratio of one part per million, "levels showing five-tenths of one part per million parts were found in the digestive sludge."

Gault sent samples of the new sludge and the sludge from the lagoon to the EPA laboratory and to a private lab in Ann Arbor, Mich., for testing. He said he has not received results from the private lab.

Gault said the low level of contamination in the sludge is not dangerous and the farmers shouldn't worry.

Using information supplied from the American Society for Testing and Materials (ASTM), the Federal Register and other sources, Gault pointed out that the Federal Drug Administration (FDA) tolerance levels for PCB show the sludge is in a more or less safe category.

PCB, which stands for polychlorinated bi-phenyls, is basically ingested into the human body through food, primarily fish. Gault said the FDA tolerance in fish is five parts per million. In milk the tolerance is two and a half parts per million, in poultry it is five parts per million, in eggs it is five-tenths of one part per million, and in "infant and junior foods" the FDA level is set at two-tenths of one part per million, Gault said.

The PCB compound is in the same family as many insecticides but is not used in that manner, Gault and Cliff Merritt, northeast Ohio district engineer for the EPA in Bowling Green reported earlier.

Gault pointed out the compound is used as a cooling agent in electric transformers and capacitors. Earlier Gault said PCB hasn't been manufactured for the past three years because of its persistence and the fact that it will last virtually forever. This morning, however, Gault said all PCB manufacturing plants in the country have been closed and dismantled except for one—Monsanto Industrial Chemical Co. plant in Sauget, Ill. The plant still manufactures "closed" cooling systems for transformers and capacitors using the PCB compound, he said. Sales are restricted to the closed systems which are sold under the trade name, Arocior, Gault said.

The utilities director noted that within the next few days sewage department workers would be testing 13 different areas in the city's sewer system to see if there are any traces of PCB. Gault said he does not know where the contamination is coming from and is hopeful the testing will bring results. He added the sludge digesters will continue to be checked on a regular basis.

Gault pointed out the farm distribution program will start up again after he receives written confirmation of the lab tests from the EPA.

He cited more ASTM information that reported PCB is virtually everwhere in the world. "It is found in fish in Lake Michigan and the North Atlantic," Gault said, adding the substance was also discovered in the mist in England, and even in the Arctic.

"PCB has been in use for the last 45 years," he said.

Commenting on the old lagoon that revealed the problem, Gault said the EPA officials told him there was a high level of contamination there. One test showed 30 parts per million of PCB while other tests on the lagoon sludge showed "300 to 600 parts per million." But this is suspect because of interference," Gault added.

Merritt said the interference is caused by other chemicals in the sludge. "It's nasty stuff to test," Merritt said. He indicated that the tests were very complicated and difficult to run but they were thorough.

Gault said he had no idea what contaminated the old lagoon. He mentioned the city's interurban transit system of the 1920s and early 1930s. When that transit system was scrap-

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ped long ago, the electric components in the computer train cars "were just dumped anywhere," he said. The lagoon sludge will be moved and enclosed in a clay-lined area near the present site, Gault said.

As to the PCB chemical family, "it's up to the imagination" how many chemicals there are, Gault noted. People have lived with PCB for years, he indicated.

There have been PCB scares around the world in the past, Gault noted. He again pointed out the heavy contamination in Lake Michigan fish. There was also a heavy contamination scare in Japan, he said.

Gault said the city's sludge is almost demanded by the farmers in the county. "It's a very good fertilizer," he said. The sludge contains phosphorous, ammonia, nitrogen, pot ash and humis which is good for maintaining soil quality, he said.

The utilities director continued that with the concentrations of PCB in the soil around Lima over the years, "there is probably more of it in the soil than in the sludge."

The city has been involved in the farm distribution program on a fulltime basis since 1973. Farmers used to come to the sewage treatment plant and haul the sludge away themselves. In 1976, with the help of federal funds, the city purchased five tank trucks for spraying the liquid sludge free of charge for the farmers. The free hand out was cheaper than the city getting rid of the sludge, Gault said.

The city has 4,300 acres of farm land in Allen County involved in the program, and about 50 farmers are contracted, he said.

The cost of running the program is basically covered by the quarterly sewer bills customers pay the city, according to Mayor Harry Moyer and Gault.

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