56-55B GROUND WATER
NEWSLETTER
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PCB's CONTAMINATE SOIL DESPITE CONTROLS

Airborne transportation of PCB's, either from the point of manufacture or from plants using the materials, may be the principal pathway to contamination of soil and water nearby rather than actual discharge of treated plant waste waters or runoff over soils. A new survey reports the degree of environmental contamination attributable to polychlorinated biphenyls and terphenyls in the vicinity of the Monsanto Company's manufacturing plant in Sauget, IL., the only source of domestic production of PCB's and PCT's, and at plant sites of two users located in urban Chicago and suburban Detroit.*

The Monsanto products, marketed under the trade name of Aroclors, have been subjected to strict production controls since 1970. At the same time the company voluntarily ceased supplying those users who could not control release to the environment. However, the survey showed that "voluntary control of the release of PCB's and PCT's to the environment by industrial sources cannot be considered entirely effective." Much of the contamination of water and soil present in samples probably occurred since 1972, two years after controls were instituted.

Surface soil samples were collected from sites at all three locations. At Sauget the spatial distribution of the materials in the soil samples indicated that "the entire PCB and PCT mixture is in a vapor state at the point of emission." The plant operates a liquid injection incinerator to dispose of in-house liquid wastes and contaminated PCB's. Soil concentrations were as high as 19 ppm at some sampling points.

Tests at the plants using the materials showed little evidence of contamination of water in a drainage ditch, but PCB's and PCT's were both present in the bottom samples of the ditch. Sludge deposits within the sewer system serving the Detroit user contained 0.14 ppm PCB and 5.0 ppm PCT on a dry weight basis, indicating "intermittent discharge is taking place to the sewer system."

*"PCB and PCT Contamination in the Environment Near Sites of Manufacture and Use." Environmental Science & Technology, Vol. 10, No. 13.