Soil Percolation Experiments

The soil columns were prepared as follows: A column 2.5" dia. by 10" in length was filled with three 3" layers of soil. The middle layer was coated with 2½% of Aroclor 1016. Distilled water was percolated through the soil columns and collected in 100 ml fractions. The eluant water fractions were analyzed for PCBs. (Anal. Chem. Method 71-35) The three soils used and the total eluant through each was as follows.

Norfolk Sandy Loam	12 liters
Drummer Silty Clay	5 "
Ray Silty Loam	7 "

DSW 283443

No breakthrough of the PCBs was observed. Experiment was abandoned because of low flow rates through soil columns and some apparent channeling through

The soil columns

A second experiment is in progress with a fresh set of soil columns. A constant flow of water to the columns is being maintained via a Mariot bottle set-up. The eluant water is passed through polyurethane columns which quantitatively collect PCBs from water. The PCBs are eluted from the poly-urethane columns with acetone/hexane and detected on EC/GC. [Analytical Letters, 4(12), 883-886 (1971)] The following amounts of water have been passed through the columns.

Norfolk Sandy Loam	4.5 liters
Drummer Silty Clay	2.3 "
Ray Silty Loam	6 " "

No breakthrough of the PCBs has been observed.

DSW 283444

STLCOPCB4064860