Bio-Test Tissue Analysis

A review of the status of the Aroclor toxicity studies and associated tissue analyses was held 5-11-71 with representatives from Industrial Bio-Test Laboratories and Monsanto's Medical Department, Specialty Product group, and the Applied Sciences Section. Minutes of the meeting were published and a plan for the analysis of the tissues generated in these studies developed.

Freezer space for the storage of tissues in St. Louis has been obtained and Industrial Bio-Test Laboratories has been requested to transfer all tissues from the 2 year chicken and rat studies to St. Louis.

PCB analysis of all tissues from the 3 month and 12 month sacrifices of the 2 year study with rats have been completed. Upon completion of the analysis of the tissues from the final 24 month sacrifice, the PCB residue levels will be correlated with toxicity results and a review held.

Customer and Plant Support Analysis

No. of Samples	Sample Source	Sample Description	Status of Analysis
25	Central Soya	Products associated with commercial chicken production	8/25 Completed Holding
8	Westinghouse Aquatechnics	Treated Plant Effluents	Completed
1	Woodson-Tenent Laboratories	Chicken Feed	Completed
2	NCR (Dayton)	24 Hour Storm Sewer Composite Reclaimed Oil	Scheduled for Completion 6/4/71
2	J. F. Queeny	Plant Effluent Composite (April and May)	Scheduled for Completion 6/4/71
1	Ohio Dept. of Agriculture, Div. of Foods, Dairies & Drugs	No. 42379	In Transit
3-4	Inter-County Farmers Coop Assn., Inc. Woodridge, N.Y.	Finished Chicken Feed	In Transit
1	Rozansky Feed	Chicken Feed R110	Scheduled for Completion 6/9/71

BIODEGRADATION TESTING

MCS 1016 and Aroclor 1142 Distillation Residue

Semi-continuous activated sludge (SCAS) testing of MCS 1016 and its distillation residue at a feed rate of 5 mg per 7 day cycle are continuing. Analysis of the recent data is still in progress. The initial data points were somewhat erratic, as expected.

Trichlorodiphenyl Ether and Tolylxylyl Sulfone

Two new SCAS units are being started on trichlorodiphenyl ether and tolylxylyl sulfone to determine the primary disappearance rates of these materials. At the same time, development of the analytical methods that will be used to monitor these materials has been started.

Aroclor 5432, Aroclor 5442, Aroclor 5460, Arobrom 5465, and Hexabromobiphenyl

Development work on the analytical methods for monitoring these materials continues. Sampling of these units will be started as soon as the analytical methods have been demonstrated. The Aroclor 5460 SCAS unit is showing possible toxic effects from the test compound as witnessed by a decreasing sludge volume and an observable decrease in LAS degradation. Feeding of this unit has been stopped to determine if it will recover.

A review of the progress to date toward developing biodegradation testing methods was held 5/11/71.

Polychlorinated Terphenyls (PCTs)

Attempts to measure PCTs by EC/GC have not been successful. The 300°C upper temperature limit of the EC detector did not allow the column temperature to be held high enough to completely elute the PCTs. Fractions of each of the materials were eluted but the relative responses indicated that only small percentages of the higher boiling materials were eluted. This approach has been dropped and an attempt will be made to monitor total organic halogen microcoulometrically.

E. S. Tucker

db
6/1/71