PROGRESS REPORT
ORGANIC CHEMICALS DIVISION
TECHNOLOGY DEPARTMENT

REPORTED BY	FOR	DETAILS	REPORT NO.	DATE
W. J. Litschgi W. M. Mees J. P. Mieure E. S. Tucker	Sept. 1971	YES	2	9-28-71

LOCATION	JOB NOS
St. Louis - S. Second Street	2-21-760.01-13480, 85010, 16300

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PROJECT TITLE

ENVIRONMENTAL ANALYTICAL STUDIES - RESEARCH AND DEVELOPMENT, MANUFACTURING AND OUTSIDE SUPPORT STUDIES

PROJECT OBJECTIVE

Identify, locate and assess the magnitude of Aroclor pollution problems, help determine what needs to be done to control pollution sources, verify the effectiveness of proposed pollution control procedures, guide development of recycle and/or disposal methods, and provide collaborative data for legal and regulatory purposes.

SUMMARY

During the month of September ~60 environmental and research samples have been analyzed for polychlorinated biphenyls (PCB's) by electron capture gas chromatography. Analysis of these samples represents a minimum man power expenditure of 210 hours.

PCB's, typical of our Aroclors, have been found at levels below and above action levels in:

- Fish meal, soybean meal and meat meal (animal and poultry fed components)
- Paperboard and polyethylene film (food packaging materials)
- Environmental samples from three customer sites (oil, sediment, and water)
- Two Monsanto products
- Fish and sewer effluents from two Monsanto manufacturing sites

An over view of the analytical results is shown in Table I in the detail section.

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Additional external and internal support has been provided in the form of:

- On site PCB methodology training for laboratory personnel from Ralston-Purina, St. Louis; St. Regis Paper Co., Dallas, Texas; and Monsanto, Ag Div., Nitro, West Virginia
- Attendance at pertinent meetings on PCB problems (Working Group on Pesticides, Washington, D.C.; National Broiler Council, Scientific Advisory Committee and Lake State's Governors Interdisciplinary Pesticide Conference)
- General internal and external analytical consultation
- Distribution of Aroclor methodology and reference standards
- Preparation of, and participation in, inter- and intra-laboratory checks on PCB methods of analysis

FUTURE PLANS

1. J. F. Queeny monthly sewer effluent composites.
2. St. Regis Paper Company - Polyethylene film and paperboard samples.
3. Distribution of PCB's in whole milk (fat vs skim).
4. Complete PCT extraction and separation work.
5. Request pertinent plant effluent samples from Anniston for PCT analysis.
6. Complete recovery check and write up of methods for determination of PCB's in Santoquin and CaMHA.
7. Evaluate Dr. O.W. Berg's PCB perchlorination technique for quantitation of altered PCB residues.
8. Analysis of MCS 1016 and Kanechlor for polychlorinated dibenzofurans.
9. Complete inter-laboratory PCB methodology check.
10. Participate in panel discussion of PCB methodology.
11. Analysis of USDA turkey tissue extracts to help establish contamination source(s).

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