MONSANTO RESEARCH CORPORATION

Inter-Office Correspondence

From LOCATION : Dayton Lab - Environmental Services

DATE : 13 February 1978

SUBJECT : Environmental Services

REFERENCE : Quotation No. MRC-3469

cc: A. D. Snyder
W. M. Haynes
D. J. Dahm
N. F. Hodgson
File

TO : Robert G. Kaley - T2B
MIC App Sc R&D

As Neil Hodgson promised in your recent telephone conversations, we have prepared a Dayton Laboratory cost estimate for the analysis of the PCB content of 500 fat samples originating from a monkey reproduction study. The analytical method to be used is cited in Reference 1.

The analysis consists of the following separate operations:

1. Preparations of Reagents and Alumina Columns - dried alumina is 5% deactivated; sodium sulfate is dried for 1 hour. One alumina column is prepared for each sample.

2. Tissue Homogenization - weighed sample homogenized in hexane three times, then filtered through anhydrous sodium sulfate.

3. Column Separation - sample eluted from alumina column with hexane.

4. Evaporative Reduction - Kuderna - Danish evaporative concentrator used to reduce column eluate to 5 ml.

5. Determination of Lipid Weight - separate sample of extract evaporated and weighed.

6. Analysis by electron capture G.C. w/calibration and calculation of data.

In lots consisting of at least twenty-five samples, the time involved for these operations is estimated at 2.5 hours per sample. For the total 500 samples, 1250 hours would be required, which would be distributed as follows:

Research Cehmist	630 hours
Research Technician	600 hours
Supervision & Consulting	20 hours
	1250 hours

Total time costs would be approximately $36,000. Equipment and chemicals required will be:

Chromatographic grade alumina	$200.00
Pesticide - grade solvent	600.00
Anhydrous Sodium Sulfate	175.00
Glass Chromatographic Columns, 10 ea.	167.50
Gas Chromatographic column	103.00
Total Equipment Costs	$1,245.00

Total estimated cost for the analysis of 500 samples is thus $37,245.

It should be noted that if samples require operations not included in the above outline, such as sulfuric acid treatment and additional separations over alumina, additional cost would be incurred. Should there be any questions concerning the work or its estimated cost, please feel free to call Neil or me here in Dayton. Your authorization number for transfer of charges for this work should be directed to me.

D. B. Nelson
Manager,
Environmental Services

DBN:cet

Ref 1. "Tissue Residues from Subacute Oral Feeding of Polychlorinated Biphenyl Dielectric Fluids" R. G. Kaley, O. Hicks, W.M. Mees, E. S. Tucker, J. P. Mieure, F. R. Johannsen and G. J. Levinskas Bulletin of Environmental Contamination and Toxicalogy. Vol. 15, 699, (1976)