

DEC 2 1982



The Ohio State University
Ohio Agricultural Research
and Development Center

Department of Dairy Science
Wooster, Ohio 44691
Phone (216) 264-1021

November 29, 1982

Mr. John H. Craddock, Director
Product and Environmental Safety
Monsanto Industrial Chemicals Company
800 North Lindbergh Boulevard
St. Louis, Missouri 63166

Dear Mr. Craddock:

In our recent telephone conversations I have discussed with you the meeting held November 4, 1982 in Lansing, Michigan, concerning the disposal of PCB contaminated silos. The aforementioned meeting was called by the Michigan Department of Agriculture because the Michigan Toxic Substances Commission has mandated that a "Task Force" of personnel from the Departments of Agriculture, Natural Resources and Public Health develop a plan for silo disposal.

At the November 4th meeting I presented a one-hour plus seminar on the history of PCB silos and our research program here at Ohio Agricultural Research and Development Center. Following my presentation, Dr. David Homer of the EPA Region V, reported the disposal requirements of materials that contain more than 50 parts per million of PCB. Naturally, scrapings from a Cumar treated silo have many times that amount of PCB.

I reported that it was my opinion that most of the Cumar silos would be below 50 ppm when based on the weight of the entire silo. Unfortunately, I could not provide conclusive evidence to support my contention as we did not have a measure of the distribution of PCB into the matrix of the silo staves.

It is my opinion that disposal of these silos in a hazardous waste facility is unnecessary because most of these structures would be well below the 50 ppm guideline. Without the scientific studies required to base estimates of the concentration of PCB in the total silo, I'm afraid that disposal in hazardous waste sites will be recommended. The cost of such unnecessary procedures seem like an unjustified waste of agricultural, industrial and governmental resources plus consumes valuable space in hazardous waste sites.

Development of profiles of the migration of PCB into silo stave blocks is the missing, yet important, key to estimating total PCB concentration of silos. My laboratory and personnel are particularly well suited to conduct the necessary research studies. As you know, we have been conducting research on PCB contaminated silos since 1971.

The proposed work involves sectioning concrete silo stave blocks in order to analyze the PCB content at known depths. Sectioning must be conducted in a precise manner in order to prevent cross contamination. Contamination of samples with resins from cutting equipment must also be avoided. During November, 1982, we developed an effective procedure to obtain five sections through a stave and avoid the contamination problems.

0755764

Mr. John H. Craddock, Director
November 29, 1982
Page 2

Staves from silos in Ohio and Michigan, known to be contaminated with PCB, will be sectioned. Sections will be homogenized and analyzed for PCB content utilizing solvent extraction and electron-capture-gas-chromatography. If PCB significantly penetrated into the stave blocks a curvilinear distribution function is expected and hopefully can be mathematically defined. The information developed from these stave sections will be integrated with other data from our laboratory to make estimations of the total concentration of PCB in the entire silo.

I have determined that the cost of these experiments will be approximately \$6,000. This will be utilized for labor and materials to cut the sections from the stave blocks, the PCB analyses, and data analysis. It will also cover a portion of the travel to locate and obtain the contaminated staves. Some of the necessary staves are already in hand.

If this information is to be available for use by the "Michigan Task Force" it is important that this work proceed without delay. I hope that you feel that this is a timely project and will recommend that it be funded.

Sincerely,


L. B. Willett
Associate Professor

cc: Mr. Nassif

0755765