MONSANTO RESEARCH CORPORATION — *Inter-Office Correspondence*

From LOCATION : Mound Labcratory, Miamisburg, Ohio

DATE : April 26, 1976

SUBJECT : Polychlorobiphenyls (PCB)

REFERENCE :

cc: D. L. Balsmeyer
A. G. Barnett
R. T. Braun
W. T. Cave
T. K. Kozuszek

~~W. G. Engman~~-St.Louis
A. E. Leisy-St.Louis

TO : ~~Mr. M. E.~~ Gibbs
St. Louis
W1A

Messrs. Balsmeyer, Kozuszek and I would like to thank you for the courtesy shown us at the W. G. Krummrich plant on April 15, 1976. We found the subject very challenging and trust the information we conveyed to you will be helpful.

We appreciate the unique position the PCB problem is presenting to you - what with zero discharge being considered in New York and upcoming legislation that would ban any further PCB production.

As we discussed that day, your monitoring data of the air and water emissions indicate good cleanup of the incineration waste streams. The incinerator disposal method appears to have good controls and containment for the PCB's and does not appear to generate significant pollutants during combustion. Until "zero emissions" are strictly defined by EPA or others, it is difficult to discuss the handling and containment required to achieve this result. To achieve no detectable emissions (low parts per billion range) would most probably require tertiary treatment of the air and water including:

- A waste water closed loop system with reprocessing.
- Additional air treatment - possibly absolute filtration/ absorption.
- A collection system for tank vents and the PCB incinerator filling sump.

After the emission target is defined, the need for and complexity of a totally enclosed handling system could be determined. To achieve true zero emissions, however, appears impractical. The present low emission levels should be evaluated with respect to effects on the environment.

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We briefly discussed personnel exposures and concurred this did not appear to be a problem. The primary exposure would appear to be the filling sump. Obviously, to determine how low emission levels should be, analysis of PCB worker's uptake would be advantageous. If necessary, exposures could be reduced by:

- Enclose and exhaust the filling sump operation.
- Exhausting other open PCB vents.
- Using breathing air equipment.
- Wearing dedicated protective clothing.
- Daily laundering of uniforms.
- Strict separation of contaminated areas. Provide change rooms, similar to radioactive work procedures.

We are not, however, suggesting that any of these would be required.

Mr. Thomas W. Hughes at Monsanto Research Corporation, Dayton Laboratory is another contact you might make concerning the PCB disposal. As we discussed, a sophisticated approach to land burial might be appropriate.

The problems associated with the Krummrich plant receiving leaking waste PCB packages could be reduced. Several levels of improvement were suggested:

- Require that new 17E's be used.
- Use a liner (polyethylene) in the drum.
- Make bulk pickups in tank trailers or railcars.
- Use specially coated drums.
- Require that an air pressure test be performed on the drum before it is filled.
- Minimize hold time in the transportation package.

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Mound can assist you further should you desire definitive information about increased PCB containment during incineration, improved personnel protection, environmental impact statements, transferring the fluid or implementing improved transportation packaging.

We thank you for the interesting visit.

D. A. Edling

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