bcc: J. A. Heilala - Akron
R. A. Garcia - Akron

February 23, 1971

Mr. Richard Pfieffer
Union Carbide
P.O. Box 180
Sistersville, West Virginia 26125

Dear Mr. Pfieffer:

In substituting Therminol FR-0 for the non-available Aroclor 1232 in your heat transfer application you are maintaining the very desirable features of stability at relatively high temperatures and fire resistance but must still review the environmental contamination considerations.

To keep stability and fire resistance in Therminol FR-0 we use some of the more resistant polychlorinated biphenyls (PCB) which have been identified as environmental contaminants. We believe, however, that the advantages gained warrant the extra care involved in its use.

To prevent the escape of PCB's to the environment calls for a level of control and housekeeping many of us have never been asked to achieve in the past. Every effort must be made to prevent leakage and spillage. Maintenance must be kept at a very high standard. For those areas where leakage and spills will occasionally occur, catch pans must be provided. These pans must drain to a collecting basin or be emptied by responsible employees on a scheduled basis.

Mixing of Aroclors with waste water streams should be avoided since separation of PCB's from water can be costly. If mixing cannot be avoided, a catch basin and settling pond should be provided to separate the heavy Aroclor from the water.

Unusable contaminated Aroclor should be disposed by incineration which assures complete destruction to CO_2, H_2O, and HCl. Any incineration below 800°C will result in vaporization which will contaminate the atmosphere or in partial oxidation which may yield materials which are highly toxic. To avoid polluting the atmosphere with HCl the stack gases must be scrubbed and neutralized before disposal into the plant waste water system.

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To help our customers with their liquid disposal problems, we have offered to accept for future incineration scrap liquid Aroclors shipped to Monsanto Company, W. G. Krummrich Plant, Sauget, Illinois, Attention: Supervisor, Dept. 246. The charge for this disposal is 3¢ per pound of material. This charge is tentative pending a complete evaluation of incineration costs and does not include freight or container costs. The services of a waste disposal company such as Rollins-Purle, Inc., 3208 Concord Pike, Wilmington, Delaware, 19803, (302) 478-5150 should also be investigated.

Contamination of the atmosphere must also be eliminated. All handling systems must be closed wherever possible. Fumes exhausted from a tank, vessel, or working area must be trapped and collected using condensers and entrainment separators.

Solids contaminated with PCB's pose a greater challenge. Until a proper incinerator is designed, we are suggesting that disposal be made in an authorized, properly operated land fill away from any water systems. These solids include absorbing materials used to contain spills, rags and containers.

In summary, control of PCB's can be achieved with equipment engineered to prevent losses and maintained properly coupled with good manufacturing practices which result in a high standard of housekeeping.

From the interest and concern which you have expressed, I am certain that you will do all you can to reduce the escape of PCB's from your operation. When all of us succeed in this objective, I am confident that no regulatory agency will be compelled to take precipitous action regarding the use of PCB's in vital applications.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

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