

boe 1800 J. A. Kriss
✓ B23C ~~cl Patch~~/Dr Roush
1800 D. R. Hansen

October 5, 1972

Mr. Robert Hollingsworth
Entalco Aluminum
P.O. Box 937
Permdale, Washington 98248

Dear Mr. Hollingsworth:

This will confirm your October 3, 1972 phone conversation with our Mr. Don Roush. We appreciated the opportunity to review with your company once again the desirability of discontinuing the use of Therminol FR fluids and to relay Monsanto's continued emphasis ~~for~~ the return to us of PCB containing fluids for proper disposal by high temperature incineration.

As you know from previous correspondence, Monsanto has responded to the increasing concern about PCBs* by confining sales to certain limited end use applications.

In May, 1972 the Federal Government's Task Force on PCBs recommended against the use of PCBs as heat transfer fluids. Enclosed is a copy of a summary article on their proposals for your review. Also enclosed is a copy of a Wall Street Journal article which highlights restrictive action proposed by the FDA.

In April, 1971, our Mr. Papageorge sent a letter addressed to "Plant Manager" of your plant. You may want to review this letter for additional background on this PCB subject (a copy of which is enclosed).

You may be aware that some Federal and State agencies are sampling plant effluents and marine life looking for, among other things, PCB chemistry. If PCB is found, the agencies tend to determine the PCB source.

In light of the above, we believe you should seriously consider prompt conversion of their Therminol FR system.

*Polychlorobiphenyls

MONS 094379

I have enclosed literature on two possible replacement fluids, Monsanto's Therminol 55 and 66. Therminol 66 has the higher maximum operating temperature (650° vs. 575°F.). It is, of course, your decision what product or system you choose as a replacement for Therminol FR. Enclosed is a price bulletin for T-55 and T-66 products.

We want to point out that unlike the Therminol FR products, Therminol 55 and 66 are not classified as fire-resistant heat transfer fluids. Consequently, you should consider the use of protective devices to minimize any added fire risks. We suggest you consult with the insurer of your property and the manufacturer of your equipment relative to this matter.

In order to protect Therminol 55 or 66 from oxidation, we suggest the use of an inert gas blanket on your expansion tank system to preclude air contact with hot fluid. If you use a recirculating line to the expansion tank, this should be valved closed during the normal system operation.

A snuffing device should be installed on the combustion chamber if you have a gas fired heater. Steam, carbon dioxide or nitrogen may be used to extinguish a furnace fire caused by a heater tube rupture. The snuffing device may be activated by a high temperature switch in your furnace stack.

Please refer to the enclosed Therminol Conversion Bulletin for additional information.

When converting your system to Therminol 55 or 66, we suggest you thoroughly drain the Therminol FR. Flush the piping, equipment and expansion tank with T-55 or a non-chlorinated solvent and again drain into leak-free drums. If T-55 is selected as the flush fluid, it may be advantageous to operate the system several days before draining to loosen and remove system soil.

You may experience some fine material collecting around pump seals, resulting in some fluid leakage. Such material is probably iron salts from the FR-1 system. It may be necessary to spot flush the pump and other "hold up" equipment in order to effectively remove such material and to maximize removal of the FR fluid.

Enclosed is a bulletin on pump seal problems.

Monitoring Converted System

To monitor your Therminol 55 or Therminol 66 fill, we suggest checking the viscosity, acid number and appearance of the fluid for particles on at least a monthly basis. An increase in acidity to 0.3 - 0.5 and the formation of particles in the fluid mixture are signs of decomposition of the Therminol by acid forming from residual FR-1 fluid. Should the particle content build to approximately 1%, I would suggest either filtering of the Therminol mixture or a change of fluid. A doubling of fluid viscosity is also an indication of fluid decomposition.

Return of Used Fluids for Incineration

We will, until further notice, continue to make available our high temperature incineration service for proper disposal of any Therminol FR fluid or fluids contaminated with PCBs which your company may have on hand, on the following basis:

1. We will charge 3¢/pound to incinerate fluids sent freight prepaid to our Sauget, Illinois plant for:
 - a) Therminol FR series fluids
 - b) Therminol 55 or 66 fluids which may contain PCBs formerly in your system.
2. We will charge 5¢/pound to incinerate non-aqueous, non-Monsanto fluids contaminated with PCB if sent freight prepaid to our Sauget, Illinois plant.

When you have fluids for return, please contact me at (314) 694-2500 as to the fluid type, number of drums and any special invoicing procedure you may require. I will send you the necessary pre-addressed drum return labels which we request be used.

We cannot handle aqueous solutions or solids (i.e. sawdust, rags or sludge). For these materials, we suggest you check local authorities and your own environmental department for an approved land fill or disposal method. Our Sauget plant is instructed to refuse receipt of containers containing solids, and to return same to the sender at the sender's expense.

If your system drain and flush approximates 4000 gallons, you may want to return the fluids in one of our 4000 gallon rail tank cars that we have dedicated for this service. If you go this route, we will need a minimum of three weeks lead time to finalize arrangements.

Thank you for your cooperation and please feel free to contact me at (314) 694-2500 if there are further questions.

Sincerely,

Paul W. Gann
Project Coordinator
Heat Transfer Fluids

PWG:cs

Enclosures

April Papageorge Letter
Govt. Task Force Letter
FDA Article
T-55 bulletin
T-66 bulletin
Conversion bulletin
Price bulletin
Mechanical Seal bulletin