bcc: C. Paton/J. J. Roder
1650 P. L. Slayton
1650 J. S. Pullman

November 2, 1971

Mr. William Lintner
UOP Chemical Division
Route 17
East Rutherford, N.J. 07073

Dear Mr. Lintner:

Per our telephone conversation of November 1, I am holding your purchase order, number 19837, for two drums of Therminol FR-1. I understand the Therminol FR-1 fluid is used in fifteen small heating systems in the production of flame retardant plasticizers and aroma chemicals for cosmetics. We are concerned about potential leakage of the heat transfer fluid into the end use products in your plant.

As I indicated during our conversation, the Therminol FR-1 heat transfer fluid contains polychlorinated biphenyls (PCBs) of various types. The PCB concentration in our environment has come under the scrutiny of various governmental agencies and scientific laboratories. In some studies, certain PCBs have been found to be a persistent environmental contaminant, and possibly, injurious to certain forms of bird, aquatic and animal life. Accordingly, it is very important that PCBs be kept out of the food chain.

We feel that any leakage of the Therminol FR fluid into products used in cosmetics would be an undesirable situation. In this regard, we suggest you consider the use of an alternate Therminol heat transfer fluid -- one that does not contain PCBs.

Two fluids, Therminol 55 and Therminol 66, are considered to be satisfactory alternates for the Therminol FR-1 fluid presently in your system. I have attached physical property data on Therminol 55 and Therminol 66 fluids. Selection of Therminol 55 or 66 can be based on your heat transfer fluid use temperature. At temperatures below 525°F Therminol 55 would be suitable. At temperatures above 525°F Therminol 66 would give long term performance. Therminol 66 can be used at temperatures near 650°F, if required.

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Neither Therminol 55 nor Therminol 66 have the fire resistant characteristics of the Therminol FR-1 fluid. We would recommend that you contact your insuring agency regarding the need for additional protective devices to minimize fire risk when using either of the alternate fluids.

The price on Therminol 55 in one to four drum quantities is $1.05/gallon, FOB Alvin, Texas. The price on Therminol 66 in one to four drum quantities is $0.40/lb. ($3.34/gallon) FOB Anniston, Alabama.

We encourage a change from the Therminol FR fluid at this time. All FR fluid drained from your system should be returned freight prepaid to our Sauget, Illinois plant for incineration. We will waive our normal incineration charge of 3¢/lb. on this conversion.

Again, I will hold your purchase order until you have had time to evaluate the alternate Therminol fluids for your application.

If you have any questions concerning this conversion please contact Jay Pullman, our Therminol representative in New York City, or me in St. Louis. Jay Pullman's New York address is:

Monsanto Company
277 Park Avenue
New York, N.Y. 10017
(212) 982-4111

Very truly yours,

D. E. Roush
Product Specialist
Heat Transfer Fluids

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Enclosures