bcc: GMB/RD/AGR/SS
C. L. Bradford - CBRAD
T. C. Tupper - TTUPP

September 2, 1966

Mr. John C. Christensen
Plant Engineer
KELLOGG COMPANY
9601 F. Street
P. O. Box 3866
Omaha, Nebraska 68103

Dear Mr. Christensen:

The following analytical results are reported for the sample of THERMINOL FR-2 submitted 8/24/66.

	8/24/66 Sample	New FR-2 Specifications
Viscosity @ 100° F., centistokes	70.6	53 Maximum
Acid Number, mgKOH/g.	1.404	<0.01
Hiboiler, %	3.6	None

The results indicate that the THERMINOL fluid in your system has undergone a degree of decomposition. The viscosity increase compared to the maximum allowable for new fluid is approximately 33%. This increase is also reflected in the hiboiler content of 3.6%. I am not particularly concerned about the increased viscosity because the polymers formed are completely soluble in the THERMINOL, and should not themselves present a reduction in heat transfer efficiency within the system. I am, however, somewhat concerned over the high acid number which has, as you know, brought about some mild corrosion in the system which has manifest to the point of residue deposition in the Votator jackets.

You can continue to operate with this fluid for a period of time providing that the temperature of the fluid is maintained sufficiently high to avoid a low temperature pumping problem. I would suggest, however, that the fluid be changed in the near future if practical.

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I trust that the cleaning of the Votator jackets has improved your operation. If we can be of service in the interim, please contact either Larry Bradford or me at Monsanto Company, 800 North Lindbergh Blvd., St. Louis, Missouri 63166, telephone (314) 993-1000.

Sincerely,

Donald E. Roush
Technical Specialist
Functional Fluids

/ng

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