February 12, 1969

Dr. E. Bindschadler
Safety Administrator
Westinghouse Electric Corporation
Pittsburgh, Pennsylvania 15235

Dear Dr. Bindschadler:

Butch Wager has asked me to reply to your letter of February 3, in which you inquired about the properties of our fire resistant heat transfer medium, [redacted]

This product is heat transfer grade chlorinated biphenyl--biphonyl chlorinated to the extent of 54%. I have enclosed one of the Hygienic Guide Series published by the American Industrial Hygiene Association which discusses the toxicity and safe handling of this class of compounds. Secondly, there is enclosed a reprint of animal toxicity studies on two of the chlorinated biphenyls, including Therminol FR-3.

There is also enclosed a statement by our Medical Director summarizing the toxicity and safe handling of the Therminol fulids and a Monsanto publication discussing the proper engineering for heat transfer systems using Therminols.

The threshold limit value for 54% chlorinated biphenyl is 0.5 mg. per cubic meter of air. I am not sure of the relationship of this value to the odor threshold or a level that might be irritating or discomforting. Our experience indicates that the chlorinated biphenyls can be used without causing chronic toxic effects if the levels in the atmosphere are perceptible by odor but not irritating.

I believe the enclosures answer the other questions raised in your letter. If not, please let me know.

I am sure you know that your company has had many years of experience in handling and using the chlorinated biphenyls as electrical transformer fluids. It is possible that your experience is wider than ours in terms of exposure levels in a users plant as compared to our manufacturing facilities.

Butch asked me to send his personal regards.

Sincerely,

Elmer P. Wheeler
Manager, Environmental Health
Medical Department

EPW/ln
enc.

bcc: Mr. L. C. Weger