bloc: G. R. Buchanan/R.Davis/S.Shaw FR
C. L. Early
W. R. Richard
L. R. Stark

May 13, 1964

Mr. C. M. Bunting
U. S. Steel Corporation
525 William Penn Place
Pittsburgh, Pennsylvania

Dear Mr. Bunting:

I have been asked to forward toxicity and safe handling information on our heat transfer media, MCS-295. A sample of this new material is currently being investigated by our animal toxicity consultant.

Based on animal toxicity data and human experience with the components of this formulation, we can state that MCS-295 should not be particularly toxic from the standpoint of accidental ingestion or accidental massive skin exposure. At normal temperatures there should not be any serious acute vapor inhalation hazard. We do not expect any serious skin irritation or eye irritation potential if there is intermittent skin contact or accidental splashing in the eyes. We understand that the proposed application for MCS-295 is in a "closed" heat transfer system where the only exposure should occur when the fluid is being added to the system (at ambient temperature) or accidental exposure, should part of the system develop leaks. If, in the latter case, the liquid is at elevated temperatures, there might be volatilization which, in a closed building, could lead to vapor concentrations of various degrees. Toxic concentrations of vapors would be so irritating as to preclude any voluntary inhalation of significant amounts. We would not anticipate that there would be any case for day in and day out inhalation of vapors.

Since MCS-295 contains chlorinated hydrocarbons, we do recommend that prolonged and repeated inhalation of vapors be avoided. Similarly, repeated and prolonged skin contact should be avoided. Although, as indicated above, we would not expect a serious irritation potential, the fluid will act on the skin like many paint thinners or paint removers, dissolving and removing the normal fats and oils on the surface of the skin and thus lead to drying and chapping.

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In the event of the hot fluid causing a burn on the skin, treatment should include removal of the fluid with soap and water and subsequent treatment similar to that for any thermal burn.

If I can be of any further service, please do not hesitate to let me know.

Very truly yours,

R. Emmet Kelly, M.D.
Medical Director

REK:mjb