BC: Mr. D. F. Smith

March 20, 1963

Mr. L. N. Rodenhouse
Acme Protection Equipment Company
1201 Kalamazoo Street
South Haven, Michigan

Dear Mr. Rodenhouse:

Your letter of March 4 has been referred to me for reply.

Monsanto's hydraulic fluid Pydraul A-200 contains chlorinated hydrocarbons. In the daily use of the fluid in dye casting machines, the system should be leak-proof so that there is not day-in and day-out exposure to the vapors liberated if the fluid drips onto heated metal surfaces.

In the event of a broken hydraulic line where the fluid might be sprayed onto heated or molten metal, significant quantities of the fluid itself will be evolved into the atmosphere as vapors. These in themselves are not harmless. Depending on the temperatures involved, the amount of fluid reaching the heated surfaces, etc., the fluid may be broken down to phenolics or cresols, aldehydes, CO, CO_2, and hydrochloric acid. Experiments with animals and practical experience where accidental breakage has occurred, indicates that the irritation to the eyes and respiratory tract from the HCl and the vapors of the fluid itself are so irritating that persons will not voluntarily expose themselves to seriously toxic concentrations. Where accidents have occurred, workers have been able to shut down equipment before evacuating the contaminated atmosphere.

Proper respiratory protection to re-enter the contaminated area should be aimed at removing acid gases and organic vapors. There has been no indication that carbon monoxide levels have been sufficiently high to be a major factor in the length of time that a worker wearing respiratory protection would be exposed.

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

Very truly yours,

Elmer P. Wheeler
Assistant Director
Medical Department

EPW:sf