bcc: Mr. H. ... Newman - Newport
Mr. J. F. Churchill -London
Mr. F. H. Langenfeld-St. Louis

December 18, 1962

FILE	✓	
Destroy		
JTG		
WHH	✓	✓
MNJ	✓	
REK		
RAM		
EPW	✓	✓

Dr. Richard B. Body
The Steel Company of Wales, Ltd.
Port Talbot,
Glamorgan

Dear Dr. Body:

I have been asked to forward toxicity information on our fluid Pydraul 150.

The toxicity report on Pydraul 150 indicates that it is practically innocuous when fed orally to rats since the animals survived single doses of 28.5 grams per kilogram with loss of appetite and severe diarrhea as the only toxic effects. The fluid apparently is not absorbed through the unbroken skin of rabbits since this species survived doses up to 9.5 grams per kilogram of body weight. In rabbit skin and eye irritation studies, Pydraul 150 was no more irritating than a 10 per cent soap solution tested similarly.

In cases where workmen have accidentally splashed or rubbed Pydraul 150 into the eyes, there has been severe pain out of proportion to the degree of irritation. This is similar to the situation with most synthetic fluids as well as with many light petroleum oils. Physicians have used a 1 per cent pontocaine solution and ophthalmic cortisone acetate solution to relieve irritation.

In acute vapor inhalation studies, rats survived a six-hour exposure to an atmosphere saturated with Pydraul 150 vapors at room temperature.

Based on the animal toxicity data and handling experience, our label includes the following precautionary information:

CAUTION! CONTAINS CHLORINATED HYDROCARBONS

Avoid prolonged breathing of vapors or mists.
Avoid contact with eyes or prolonged contact with skin.
If skin contact occurs, remove by washing with soap and water. Following eye contact, flush with water.
If clothing becomes soaked with fluid, launder before wearing again.

We have not carried out inhalation tests on this material at higher than ambient temperatures. However, I am certain that, based on this type of work with somewhat similar compounds, no hazard would exist from such exposures as would be necessary to turn off machines, stop major leaks, etc. I feel that at quite elevated temperatures, the character of the vapors would be irritating sufficiently that either respiratory protection would be used or the individual would not remain in the atmosphere.

We do not, however, have any MAC's available because this figure is, as you well know, for eight hour inhalations, and not for acute episodes.

The flash point for Hydraul 150 is 425°F., Cleveland Open Cup. The fire point is 465°F., Cleveland Open Cup. It is my understanding that the flash and fire points at these temperatures are the results of breakdown of the fluid rather than being the flash and fire points for the vapors of the fluid itself. Although we do not have complete analytical data as to the composition of breakdown products, I would expect that a major constituent would be carbon monoxide along with phenolics, aldehydes, CO_2 and water, depending on the degree of breakdown.

If you have any further questions, please write me directly.

Very truly yours,

R. Emmet Kelly, M. D.
Medical Director

REK/ln

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