RCC F. T. Nemits - Los Ang.

November 28, 1960

Mr. R. C. Cuffel
Senior Specialist-Technical
Standard Oil Company of California
Western Operations, Inc.
1318 Fourth Avenue
Seattle 11, Washington

Dear Mr. Cuffel:

Mr. Hempelmann has forwarded your request of November 21 for toxicity information on our hydraulic fluid Pydraul 625.

In animal toxicity studies, the oral lethal dose of Pydraul 625 in rats was found to be approximately 35,000 milligrams per kilogram of body weight. The oral lethal dose in rabbits was found to be between 4000 and 5000 milligrams per kilogram. The greater sensitivity or susceptibility of the rabbits is not uncommon with materials similar to hydraulic fluids.

When applied undiluted to the skin and eyes of rabbits and allowed to remain for twenty-four hours, the effect was classified as "mild irritation." Rats survived a six-hour exposure to an atmosphere saturated with vapors of Pydraul 625. These animal studies and plant experiences lead us to the conclusion that Pydraul 625 does not present serious toxicity problems from the standpoint of massive, single acute exposures.

If a man's clothing and body were drenched with the fluid as a result of a hydraulic line rupture, the clothing should be removed and the man should bathe. Although the individual would not suffer any serious toxic symptoms if he delayed this procedure, common sense and good industrial practice dictates that no long, undue delay should be permitted.

If a workman swallows some of the fluid accidentally, vomiting should be induced by a finger down the throat or the administration of warm salt water. Again, one would not expect an individual to suffer serious consequences if a small amount of fluid is swallowed. At the same time, prudence indicates that

the material should be removed from the stomach as would be the case with any hydraulic fluid or, as a matter of fact, practically any industrial chemical.

I have mentioned above the effects when undiluted fluid was dropped in the eyes of rabbits. It is true that the degree of irritation is not significant. We do know, however, that in case of workmen, the degree of pain is out of proportion to the degree of irritation that develops. For that reason, physicians have used ophthalmic ointments containing anesthetics to relieve the pain. Perhaps it is unnecessary to point out that the initial treatment is flushing the eyes with copious quantities of water for at least fifteen minutes.

The hydraulic fluids may dissolve the fats and oils normally present on the surface of the skin and lead to drying and cracking. For this reason, we recommend that prolonged and repeated skin contact be avoided.

If I can be of any further assistance, please let me know.

Very truly yours,

R. Emmet Kelly, M.D.
Medical Director

REK:dh

cc Mr. A. W. Hempelmann
Monsanto Chemical Company
911 Western Avenue
Seattle 4, Washington