September 30, 1955

Captain Lloyd B. Chone, (MC) USN
Acting Director
Preventive Medicine Division
Department of the Navy
Bureau of Medicine and Surgery
Washington 25, D. C.

Reference: BUMED-72-JJS-cac
L5/N8

Dear Captain Shone:

Thank you for your recent letter requesting information as to the composition and toxicity of our product, Pydraul 150. There has been some delay in my reply since I have been out of the office. Since, however, the data that you requested me to send Dr. Hodge had been forwarded to him in August, I hope the delay has not inconvenienced you.

In April of this year, Chief of the Bureau of Ships was furnished with the information shown in the attached. There is no date shown on this copy inasmuch as the original of this copy was forwarded to Mr. H. S. Litzsinger of Monsanto as a suggested letter for him to send to Captain Bennet, Code 348. This was furnished Mr. Litzsinger on April 18, 1955 and I am told he sent it on to Captain Bennet a day or two later.

In August, Dr. Hodge requested information on Pydraul 150 of Dr. Treon of Kettering Laboratory. Dr. Treon has informed me that on August 19 he sent some information to Dr. Hodge and followed this up with a subsequent letter on August 31 at which time he enclosed a copy of the letter which we had previously sent to the Bureau of Ships.

When the question of toxicity of Pydraul 150 was presented to me in the spring of this year, I did not realize that Pydraul 150 was the same product as Fluid OS-57. During the developmental stages of this product, OS-57 was used to designate the Fluid. When the product was turned over from the development group to the sales group, it was renamed Pydraul 150. Because of this difference in names, I did not realize that the Fluid had been submitted to our consulting laboratory for the usual battery of toxicity screening tests and I so informed Mr. Easley. Now that

MONS 090842

the matter of nomenclature has been straightened out, I find that Pydraul 150 (Fluid OS-57) was investigated by Scientific Associates, our toxicological consulting laboratory, in the fall of 1954. Attached is a verifaxed copy of their report on this Fluid.

Briefly, the report indicates that this Fluid was non-lethal when given orally to rats in doses as high as 28.5 grams per kilogram. As I'm sure you recognize, this is a very massive dose and indicates that the Fluid may be considered "relatively harmless" by this route of administration. As reported, the only symptoms in the animals were diarrhea and loss of appetite.

In the studies on the application of the Fluid to the skin of rabbits, it may be concluded that the material is not readily absorbed inasmuch as the maximum dosage of 9.5 grams per kilogram did not kill the animals. There were no evidences of systemic effects.

In relation to skin irritation and eye irritation, the animal studies indicate that Pydraul 150 (Fluid OS-57) should not cause any difficulty. The score of 1.3 out of a possible 8 on the skin irritation studies is equivalent to the degree of irritation caused by many toilet soaps under the same conditions of investigation. The average maximum score of 8 out of a possible 110 on the eye irritation studies compares to a score of about 20 which is obtained when a 10 per cent Ivory soap solution is instilled in rabbits' eyes. As I am sure you know, the higher the score, the more irritating the material in the rabbit's eyes.

The vapor inhalation studies, although very limited, indicate that massive exposures for several hours are not fatal to rats.

I'm sorry that there has been a delay in forwarding this information to you. If I can be of any further assistance, please let me know.

Cordially yours,

R. Emmet Kelly, M.D.
Medical Director

REK:SMB
Attachments 2
cc Mr. K. W. Easley
Dr. Harold C. Hodge
Mr. H. S. Litzsinger
Dr. Joseph F. Treon

MONS 090843