August 25, 1959

Dr. Lester V. Cralley
Aluminum Company of America
1501 Alcoa Building
Pittsburgh 19, Pennsylvania

Dear Les:

I have been asked by our sales representatives to send you information relative to the toxicity of Pydraul A-200, one of our newer (and less expensive) synthetic hydraulic fluids.

I have enclosed for your information, copies of three reports on animal toxicity studies indicating the effects of acute exposures. You will note that the sample studied was identified as "OS-95" at the time of the investigations. This was the nomenclature of the fluid during development phases. The use of the name "Pydraul A-200" was assigned when the product was transferred from our Development group to Sales.

You will also note that we repeated the original work done on skin absorption MLD and skin irritation potential. The second series of studies confirmed in part the original results although they more precisely determined the minimum lethal dose in the order of 1250-1500 milligrams per kilogram as compared to the initial study indicating the lower lethal dose of 625-1250 mg/kg.

Our interpretation of the data is that accidental ingestion is not a particular hazard in view of the high oral lethal dose. Similarly, single massive skin exposures should not be immediately hazardous. The lethal dose following skin penetration is such, however, that prolonged and repeated skin contact should be avoided. Such exposure must also be avoided to prevent skin irritation.

I believe that the low score on potential eye irritation does not indicate the degree of pain which might result if there is accidental contact with eye tissues. This thought

is based on reported experiences with our other fluids where animal eye irritation studies have indicated low scores and yet we know in the case of humans that the pain from accidental eye contact is much greater than would be expected from the numerical score in the animal tests.

I mentioned above that we feel that skin exposure should be avoided. I think you will also agree that vapor inhalation should be avoided when the fluid is at elevated temperatures. Such exposure again relates to prolonged or repeated exposures rather than massive or acute exposure. In the case of the latter, I don't think anyone would voluntarily subject himself to concentrations that are hazardous for short periods.

If you have any comments or questions concerning the above information, please let me know.

Very truly yours,

Elmer P. Wheeler
Assistant Director
Medical Department

EPW:dh
Enclosures 3*

BCC Richard Davis-GO
J. W. Newcombe/G. R. Buchanan-GO
J. D. Wright-Pittsburgh

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