September 5, 1968

Mr. R. D. Smith, Superintendent
Hot Rolling Division
Gary Sheet and Tin Works
U. S. Steel
Station 84, North Buchanan
Gary, Indiana 46402

Dear Mr. Smith:

Mr. Dundons has asked me to comment about the skin and eye irritation potential of our hydraulic fluids, the Pydraols.

In appropriate studies with experimental animals it has been found that none of the Pydraols are skin irritants nor serious eye irritants. The experimental data has been confirmed by the many years of favorable industrial experience where there has been exposure to workers.

Manufacturing and use experience does indicate, however, that the Pydraols may have an effect on human skin if there is repeated and prolonged skin contact. The effect is due to the solvent action of the fluids whereby the normal protective fats and oils of the skin are removed and subsequent skin drying and chapping occurs. Secondly, if there is prolonged skin contact where the skin is covered by fabrication (such as the continued wearing of work clothes "wetted" with the fluid) mild to moderate skin reactions may occur. Similar effects could be expected with many petroleum type products and solvents such as paint removers which are commonly used around the home as well as industry.

In the case of accidental contact of the Pydraul fluids with eye tissues the pain experienced by workers is quite severe and is out of proportion to the actual degree of injury to the tissues. When such accidental contact occurs the eyes should be washed or flooded with copious quantities of water for at least 15 minutes. The worker should then be seen by a physician where the recommended treatment is the instillation of ophthalmic solutions of pain relieving eye drops or preparations.

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To our knowledge, in all cases where such accidents have occurred there have been no serious consequences and certainly no permanent injury to eye tissues.

The combination of the experimental animal data and human experience lead us to the conclusion that the fluids are not irritants, per se, but as I have pointed out above, may cause temporary discomfort and annoyance if care is not taken to avoid exposures.

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

Sincerely,

R. Emmet Kelly, M. D.
Medical Director

REK:ejs

cc: R. A. Damiani - Monsanto
Chicago