August 29, 1960

Mr. S. Facini
Engineering Department
Portable Compressor Division
Chicago Pneumatic Tool Company
Manufacturing Division
Franklin, Pennsylvania

Dear Mr. Facini:

Your letter to Mr. James D. Wright of our Company has been forwarded to me for answer. Your questions are difficult to answer in a generalized way.

As you know, the Pydraul fluids are insoluble in water as well as heavier than water. Unless these materials are strongly emulsified they will sink to the bottom of any receiving stream and as such will not give rise to the typical picture of oil pollution. If the material is discharged in large concentrations it will adversely effect the organisms in the bottom of the receiving stream which will effect the aquatic life in the stream. This effect will probably not be any more serious than the effect of heavier petroleum oils. If large concentrations of these materials are contemplated in your discharge stream they could probably be removed by emulsion breaking and settling. This can be accomplished by gravity separation if the emulsions can be readily broken.

We have had no experience with any regulatory agency concerning the discharge of these materials. I would imagine that these agencies would frown on the discharge of large quantities of any type hydraulic fluid.

Based on the toxicity studies of these fluids with laboratory animals I would not expect them to be very toxic to aquatic life. On the other hand, this is a surmise on my part since we have no tests on aquatic animals.

In summary I would like to say that if small quantities of these materials are accidnetally spilled into a receiving stream there would probably be no harmful effect. If, on the other hand, a great deal of the material was spilled some readily identifiable damage might ensue.

I realize that this information is somewhat sketchy but as you know the pollutional potential of any individual discharge can only be measured by the factors that influence that particular discharge. These factors would include the amount of fluid discharged, the total dilution water available in the effluent stream, the total volume of water in the receiving stream and the condition of the fluid in the effluent stream - emulsified or not.

We would be glad to discuss any individual occurrences that you might have in mind.

If we can be of any further help, do not hesitate to let us know.

Sincerely,

Jack T. Garrett
Industrial Hygienist
Medical Department

JTG:pjk

CC - Mr. Richard Davis
Mr. Dale F. Smith
Mr. James D. Wright

Enclosure: Original of attachment to file copy sent back to Dale F. Smith, GO.