MONSANTO CHEMICAL COMPANY

ST. LOUIS 4, MISSOURI

July 25, 1956

Mr. H. W. Speicher, Administrator
Industrial Hygiene
Westinghouse Electric Corporation
East Pittsburgh, Pennsylvania

Dear Mr. Speicher:

Thank you for your letter of July 19 requesting toxicity information on several of our Aroclors and atmospheric sampling methods.

I am sending under separate cover two detailed reports published by personnel at the Kettering Laboratories entitled, "The Toxicity of the Vapors of Aroclors 1242 and 1254." The data contained herein were condensed and presented by Dr. Treon at the AIHA meeting in Philadelphia this year. It was published in the form presented in the June, 1956 issue of the "AIHA Quarterly," a copy of which I am sure you must have. I am asking Dr. Treon, by a copy of this letter, to send you a reprint of his publication if such is available at the present time.

You will note that Dr. Treon has proposed that the hygienic standard for Aroclor 1242 be tentatively established at 2 milligrams per cubic meter and that the standard for 1254 be established at 1 milligram per cubic meter. I am sorry that we do not have similar data on Aroclor 1250. However, we have no particular reason to expect that a 60 per cent chlorinated biphenyl offers any greater hazard than a 54 per cent chlorinated biphenyl.

You will note further that Dr. Treon's work discusses a modified Willson hydrocarbon apparatus used in the sampling of his test atmospheres. In a limited amount of sampling in our own plants we have used the Willson equipment as shipped to us. I have enclosed a description of the operating procedure prepared by one of our research groups which is somewhat more detailed than that provided with the instrument.

You have previously seen our complete reports on the decomposition of Pydraul when allowed to drip or flow onto a heated metal Inconel surface. The data in these reports have convinced us that there is no greater acute hazard should Pydraul accidentally contact metals at the temperatures investigated than there would be with other industrial hydraulic fluids. I do not have any data to support any conclusions as to what might occur if the Pydraul were to be used

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as a hydraulic fluid in making magnesium die castings. We do have a report that one plant handling large quantities of molten magnesium purposely sprayed Pydraul into the molten material primarily to see if there would be a great deal of spattering of the magnesium. The company reported to us that their tests convinced them that Pydraul could be used. Whether or not they are using Pydraul, I cannot say.

I noted in rereading your letter that I have not answered your question relative to skin effects following Aroclor contact. We recommend that repeated and prolonged skin contact with any of the Aroclors be avoided. We have patch tested several of them with negative results. In addition, reported cases of skin irritation have been surprisingly few in view of the heavy tonnage quantities of Aroclor manufactured and handled in the last twenty years. We believe, however, that care in handling and good personal hygiene is necessary to avoid irritation.

As with many chlorinated hydrocarbons, exposure to sufficient quantities over a long enough period of time could conceivably result in chloracne. In this respect, however, the Aroclors are not the potent chloracenegens, such as chlorinated naphthalenes. To our knowledge, there have never been any cases of chloracne in the electrical industry's use of these products.

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

Very truly yours,

Elmer P. Wheeler
Assistant Director
Medical Department

EPW:SMB

Enclosure

cc Dr. Joseph F. Treon
The Kettering Laboratory

Mr. Paul G. Benignus
Monsanto

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