Summary of correspondence between Dr. Emmet Kelly and Dr. Meigs on
AROCLOR TOXICITY - CHLORACNE

April 28, 1954

From Dr. R. Emmet Kelly, Medical Director, M.C.C.

To: Dr. J. Wister Meigs, 310 Cedar Street, New Haven, Connecticut
Yale University School of Medicine

Your article in the current number of the JAMA is certainly confusing to me. We have had men exposed to concentrations of chlorinated diphenyl four or five times what you have recorded for periods of five to ten years and have had no chloracne.

Could you tell me which Aroclor was used? I notice you have referred to the product they manufactured as organic acid A. Are you at liberty to tell me what that product was? If you are not, does it contain any chlorinated compound or is any chlorinated compound used as an intermediate? Is organic acid A the only product this plant manufactures? And if not, are any other chlorinated compounds, such as pentachlorophenol, 2,4,5-T, 2,4-D, or DDT manufactured?

May 7, 1954

To Dr. R. Emmet Kelly

From Dr. J. Wister Meigs.

Our observations of chloracne (mostly quite mild) were confusing to me too. That was one reason for publishing the data, since there is a tendency among all of us to assume that certain conditions can be characterized as "safe" on the basis of environmental studies alone. None of us here (including the State Health Department Survey people) have any good answer to why the air samples were so low. We assume that somehow other conditions may have existed for a few weeks or months prior to the recognition of chloracne.

Organic acid A did not contain chlorine, nor did anything else in the particular building. However, the product may have played a part, although by itself it acts only as an irritant (it is packaged as a powder). The Aroclor was from one of the large suppliers and was a combination of high boiling chlorinated hydrocarbons. Since the repairs on the circulating system there have been no more cases - over a three year period.

My conclusion is that chlorinated hydrocarbons should ultimately be judged as safe or hazardous in relation to observations of workers themselves. Study of the environment would seem at best to be only a guide.

One of our purposes was to stimulate interest in occupational medicine. I hope the article will not cause a rash of claims. It seemed to us that the diagnosis of chloracne was so specific that any competent dermatologist could make it. Therefore, disputed cases should not be frequent. On the other hand, if even mild chloracne is occurring, management representatives would want their doctors to be alert to it, as it would seem to be a preventable condition.

Finally, I am not suggesting that the m.a.c. for Aroclor has been set too high. It will take years of observation and experience to determine this. Our "outbreak" may have been an isolated experience not likely to be duplicated. In that connection, it would be helpful and informative if you could publish your experience on exposures over long periods to these substances. We need many more reports to have a basis for sound judgement.

May 25, 1954

From R. Emmet Kelly

To: Mr. H.S. Bergen - KXOK

I think there are only two ways of handling this situation. One would be to write a letter to the editor of the JAMA and C & E News stating the experiences of our customers as well as ourselves in the last ten years and the fact that no chloracne has developed. I doubt seriously whether the JAMA would publish such a letter, but we could try. However it might only serve to keep the controversy alive and do moreharm than good.

Or we could send out a bulletin similar to the one attached. We could also send Dr. Meigs' letter as long as it stayed with our Salesmen's hand, and was not passed to customers.

INTERPRETATION OF DR. MEIGS' ARTICLE ON AROCLOR by R. Emmet Kelly

The article by Dr. J. Wister Meigs describes what he terms as quite mild chloracne in workers who were exposed to very low limits of chlorinated diphenyl. All this occurred over three years ago. The individuals had exposure in some cases up to nineteen months before any skin condition developed.

The article presents a distorted picture of the possible hazards when aroclor is used as a heat transfer agent. The reasons for this is that the product which was being manufactured, is a skin irritant by itself; it causes a dermatitis when it comes in contact with the skin; and is packaged as a powder. Therefore there certainly must have been other factors involved in addition to this very slight aroclor exposure.

Our basis for these conclusions is that there has never been a case of chloracne reported from its use as a heat transfer agent. Likewise, in our own plant we have had at least twenty men exposed to concentrations considerably higher than those reported by Dr. Meigs forperiods as long as fifteen years without any such manifestations.

It should be noted that Dr. Meigs is not at all in favor of changing the recognised maximum allowable concentration of chlorinated diphenyl.

From Dr. R. Emmet Kelly 8th July 1954

To: Dr. H.R. Newman.

The attached correspondence explains our thinking concerning Dr. Meigs' article. I don't believe there is anything more I can say.

If you have any further questions, please let me know.

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