September 16, 1941.

Mr. Milton D. Levin,
24 Commerce Street,
Newark, N. J.

Dear Mr. Levin:

On my return to the Laboratory some days ago, my associate, Dr. Willard Machle, turned over to me the complete file of the case of [redacted] v. Schmidt Holding Company, concerning which case you had asked our advice. Having gone over the file referred from your office on September 10, I am impressed with the fact that you are in need of considerable assistance, since the record of the examination by your physician, Dr. George E. Meehan, is rather more of a disadvantage than of an advantage to you. Let me first make a brief summary of the case as it appears to me, after which I will make certain comments on the inadequacies of Dr. Meehan's report.

The diagnosis of lead poisoning must be made on the basis of the occurrence of significant exposure to lead compounds, and the existence of a clinical syndrome which is at least compatible with the effects of lead. Since the clinical picture of lead intoxication is not unique for lead alone, it is also necessary to assure oneself that there is not some other existing illness capable of explaining the entire picture.

In the present instance the lead exposure of William Stobie has not been demonstrated. According to the information, he was employed as a gasoline filling station attendant. So far as we are able to establish, lead poisoning does not occur among filling station attendants. In other words, this occupation does not constitute a lead hazard, and it is not to be expected that a filling station attendant carrying out the usual activities of such occupation will develop lead poisoning. It is possible, of course, that filling station attendants may be engaging in painting or in a number of other activities which involve lead exposure. If, however, the handling of leaded gasoline is believed to have provided the lead exposure, then it is quite apparent that someone is misinformed, for there have been no recorded cases of lead poisoning from this cause, and in fifteen years of investigation and research, we have been unable to find evidence even of lead exposure in this occupation. The assumption that lead exposure has occurred is, therefore, unfounded.

The illness of this man is in no wise characteristic of lead

poisoning, and moreover, there is a history of epilepsy prior to the supposed exposure. Accordingly, there is nothing in the clinical picture which would support the diagnosis of lead intoxication. Even the lead analyses which have been carried out have not yielded results which are indicative of abnormal or hazardous lead absorption, and there is nothing in the entire record of submitted evidence to demonstrate or even to offer the suspicion that Mr. Stobie had any recent lead exposure. The diagnosis, therefore, is bizaare, utterly unreasonable, and should be completely unsupportable in court.

It is this situation which makes the medical report of Dr. Meehan so surprising. Apparently, Dr. Meehan assumes that the demonstration of lead in the urine necessitates the assumption that he had occupational lead exposure and some degree of intoxication. On the contrary, the concentration of lead indicated by the analyses is neither abnormal nor unusual. (In view of the fact that we do not know how the analysis was carried out, it may or may not be a true picture of the patient's lead excretion.) In any case, the concentration of lead in the urine must be beyond the normal limits to have any clinical significance, and in this instance, this is not the case. For Dr. Meehan's information, it should be pointed out that all normal individuals have lead in their urine and feces, and that the concentrations found in normal urine vary between 0.01 and 0.10 milligrams per liter. The lead in the feces has no diagnostic significance in this instance since it is not expressed in any terms which make it possible to interpret its meaning. However, normal individuals have lead in their feces to the extent of about one third of a milligram per day on the average. The quantities may be under 0.1 milligrams or in excess of 1.0. You will see from these figures that the results obtained in the case of Mr. Stobie are not unusual. Therefore, they do not suggest lead exposure, but rather tend to prove that no appreciable lead exposure occurred. I am not sure from Dr. Meehan's report as to whether later analyses were made at his request, and therefore, I refer above to the report of Dr. Edel, from the Orange Memorial Hospital, dated March 26, 1941. However, in the body of his report, Dr. Meehan speaks of lead in the urine together with granular and hyaline casts, and records these as evidence of lead intoxication. He does not mention the quantities involved, and this ommission, of course, adds further confusion to the issue, since the mere presence of lead in the urine is inevitable, and is without any diagnostic significance whatever. Reference is made also to the XRay examination of Mr. Stobie. I should point out to you that it is not possible to demonstrate the presence of lead in the skeleton of the adult by XRay technique, and, therefore, this reference to XRay is irrelevant. Dr. Meehan also says, "Blood cells are negative for lead". I presume he means that no stippling of the red blood corpuscles was present. This point is of some consequence, for if the test is made properly, and if no stippling is found, one can be

reasonably certain that active lead intoxication is not present. However, the expression as employed in the report is singularly naive, since stippling, even if it were present, occurs in a variety of cases which have no relation to lead intoxication.

From the above criticisms I think you will gather that I consider Dr. Meehan's report as worse than useless to you. I am not in the habit of speaking thus critically of my colleagues, and I regret the necessity of doing so, but I think I should point out to you that Dr. Meehan's report in itself is sufficient to demonstrate that he is not adequately informed on the subject of lead poisoning and should not be asked to appear in connection with this case, without a great deal of coaching. I realize that you are in a somewhat embarrassing position, since I am thus discrediting your own expert. I tell you this in confidence, and I should hope that as the best escape from your difficulty, it might be wise for me to discuss this diagnostic problem in some detail with your medical advisors. Out of some such a conference we might arrive at a reasonable means of presenting the facts, and without violating the professional amenities.

I should appreciate it if you would let me know as soon as possible how I can be of service to you further.

Very truly yours,

Robert A. Kehoe, M. D.

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