July 3, 1969

W. E. Neeld, Jr., M.D.
Director, Medical Division
E. I. duPont deNemours & Company
Chambers Works
Deepwater, New Jersey 08023

Dear Doctor Neeld:

I enclose a memorandum containing my opinion in the case of Mr. [redacted] whose records you sent to me for examination. As I indicated in our telephone conversation of July second, I would like to have as much further information as can be obtained about Mr. Moore's exposure, the nature and time (in relation to the termination of his exposure) of occurrence of the onset.

While the record is not entirely satisfactory, being lacking in certain pertinent facts, it is sufficient, I believe, to indicate fairly strongly, that his mental disturbance is functional, and that it merits appropriate psychiatric therapy. I may have something further to say after I hear further from you.

Thanks for letting me review this man's record. I shall continue to be deeply interested in the medical problems which arise out of this industry.

Sincerely yours,

Robert A. Kehoe, M.D.
Professor Emeritus of
Occupational Medicine

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Memorandum and Opinion Concerning the Illness of [redacted] as Reported in the Records Supplied by W. E. Neeld, Jr., M.D., Director, Medical Division, Chamber Works, E. I. du Pont de Nemours and Company, Incorporated

While the precise nature and extent of the exposure of Mr. Moore to alkyl lead compounds, in the course of the employment in which such exposure occurred, are uncertain, the illness of which he complained initially, as represented in his medical record, is compatible with the effects of mild exposure to tetraethyllead either alone or in association with the other alkyl lead compounds which may occur in commercial antiknock compounds. That is to say that while nausea and vomiting and dizziness are not specific in any sense, the reportedly intense insomnia, when coupled with frightful dreams, "nervousness" and apprehension, come very close to being diagnostic by reason of their severity in the aftermath of an experience involving the opportunity for exposure to these compounds. I would be disposed, therefore, in view of the clinical symptomatology and the sequence of events, to accept the high probability of a significant but not highly dangerous absorption of an alkyl lead compound(s).

The course of the illness of Mr. [redacted] from there on does not follow my expectations based upon personal experience and the corresponding experience of competent professional associates in the United States and Great Britain. Several cases of persistent symptomatology referable to the central nervous system have been seen, fully described, and successfully treated with eventual recovery. These have appeared to result from the initiation or exacerbation of a type of psychiatric disturbance which several psychiatrists, independent of each other, have regarded as amenable to shock therapy and have so demonstrated. On the other hand, of approximately one hundred well-documentated cases of tetraethyllead poisoning, some of which were very severe, indeed, in contrast to the present case (that of [redacted], not one has been associated with a demonstrable organic brain lesion during the illness or as a sequel thereof. Those men who have recovered (about 70 percent) have regained

their physical and mental health apparently unimpaired.

A survey of the reports of physicians who saw and examined or treated Mr. [redacted] has failed to yield any convincing evidence of a destructive lesion of the brain. It is true that the findings of the examiners, with the exception of those described by the consulting psychologist (which are related only to the patient's psychologic responses to tests) are not given in such detail as to be open to objective interpretation. Consequently, one must either accept or reject the opinions expressed by these examiners without adequate basis for agreement or disagreement with their conclusions. Nevertheless, in view of the mildness of the intoxication of this man, and the overwhelming evidence of the course and outcome of other cases of tetraethyl-lead poisoning, one cannot accept the likelihood of the occurrence of organic brain damage in such a case. Attention is called to Dr. Steiger's statement in his letter of May 27 to Dr. Sungenia, in which he says that "As conclusively as possible, I believe we have demonstrated that Mr. [redacted] has suffered organic brain damage - - -. Earlier, (May 20), in the letter of Dr. Sloane to Dr. Steiger, the concluding statement was made that "his (the patient's) present symptoms are perfectly compatible with an organic brain syndrome due to lead poisoning, if there is definite evidence of this"(underscoring mine, RAK). There being no such "definite evidence," so far as the present record is concerned, and since such a lesion (or lesions) is historically unlikely to occur, I reject the conclusions of the examiners, (who, at no time, have considered the striking difference between lead encephalopathy due to the absorption of the alkyl lead compounds and that which follows the absorption of the inorganic compounds), in favor of the much greater likelihood that the disturbance of the brain of this patient is functional, and that he will recover.

I recommend that the attempt be made to resolve the tendency which will exist in this case to create a precedent (based on the opinions of consultants as expressed in this record). I would seek a consultation with the best available neuropsychiatrist - or alternatively two consultations, one with a competent

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neurologist who would provide a detailed record of his examination, the other with a psychiatrist, who would undertake appropriate therapy (whether that suggested above, or such psychotherapy as he considers applicable), to rehabilitate this man and enable him to return to satisfactory work.

Robert A. Kehoe, M.D.
Professor Emeritus of
Occupational Medicine

July 7, 1969

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