

ESSO RESEARCH AND ENGINEERING COMPANY

MEDICAL RESEARCH DIVISION

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To: Dr. E. A. Irvin, Ford
Dr. H. W. Jocz, Chrysler
Dr. S. D. Steiner, General Motors

Gentlemen:

As a follow-up to our meeting the other day in Detroit, I would like to outline to you what I think the Public Health Service's objectives are in studying lead workers in the automotive industry.

They believe that there is some fragmentary but unsatisfactory evidence which indicates that lead levels which are now thought to be safe actually may not be safe, and they believe that a study of a range of industrial exposures would help to develop answers as to what does constitute a safe lead exposure. Thus, they are looking for workers who have been exposed to lead in their occupation and are thinking of those in the automotive industry, as well as those in the petroleum industry and the basic lead industry, such as the battery industry and the lead smelting industry. What they would like to undertake on these workers is either a retrospective study of morbidity and mortality of workers who have been exposed for 5 years or more to lead who have known lead levels either in the blood or the urine. In addition, if records are available, they would like to compare the hemoglobin, red blood cell levels, red blood cell fragility tests, and possibly urinary coproporphyrin. The objective of these studies would be to see if there are any at presently unrecognized effects of lead at levels which are now believed to be safe. The purpose of such studies would not be directed primarily at the workers themselves but rather in attempting to establish standards for the general population.

If it is impossible to undertake retrospective studies, then they would like to see some plans made for prospective studies in which the above determinations of morbidity, mortality, red blood counts, red blood cell fragility, and possibly other potential effects of lead would be studied in a group of workers exposed to lead. Again, the objective of these studies would be to try to help determine what is a safe level of exposure to lead of the general population since at the Muskie Committee hearings and at the Daddario Committee hearings this past summer the implication was made that people may be being affected by present levels of lead in their environment, exclusive of whether they are being exposed to lead in their occupation.

It would seem possible, if this is desired, to have such studies conducted by transferring from your own records onto appropriate form the type of information that might be

needed and having an independent investigator Magnuson and his group at the University of the data so obtained. This would, of course, of the records and the comparison involved of the study is not to determine the size or any company but rather to try to help for the general population. Undoubtedly in a position to apply for a grant from vic- to such studies and in turn be of greatest value in such studies.

The above proposed measures, namely blood leads, morbidity, mortality, hemoglobin, red blood cells, and red blood cell fragility are simply some of the parameters that have been proposed by the Public Health Service, but I am sure that if such a study is to be seriously considered the advice and counsel of people like Dr. Magnuson, and perhaps even the Lead Advisory Committee recently established by the Public Health Service with membership of the Public Health Service, the Lead Industries Association, the API, and the Automobile Manufacturers Association would be able to give counsel and advice on the details of how such a study should be set up.

I trust this letter will answer the questions which you raised with me during our meeting in Detroit. I would emphasize that these studies are designed to help us determine what is a safe level of lead exposure for the general population.

