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DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

WASHINGTON

April 23, 1925.

Memorandum for Dr. Lyon.

Gandell

Dr. Henderson gave a talk in New York before the American Society of Safety Engineers and International Safety Council on Tuesday evening, April 21, to which I had been invited. I found, however, that it was not practicable for me to attend. Copy of the report of his talk, clipped from the NEW YORK TIMES of Wednesday, April 22, is attached.

It will be noted that Dr. Henderson attacked the Bureau of Mines, accusing it of "arriving at unwarranted conclusion in favor of lead gasoline after improper investigation financed by the Ethyl Gas Corporation." He also stated that "the economy which the Government is practicing just now involved the elimination of many extremely valuable investigations and the curtailment of funds for such scientific work as is continued."

The Bureau of Mines cooperated with the Ethyl Gasoline Corporation on this study, that corporation supplying a certain amount of funds for the work. This has been the policy of the Bureau on many studies and is not different from many of those carried out in the past; some of those in which Dr. Henderson was employed by the Bureau were carried out on this basis.

As to the Bureau arriving at an unwarranted opinion, we of course believe in and have the results of our investigation as a basis, while Dr. Henderson, to the best of my knowledge, has made no investigation upon which to base his conclusion.

Dr. Henderson stated that "the Bureau of Mines had investigated the danger of the public of acute lead poisoning only and had failed even to take into account the possibility that the atmosphere might be polluted to such an extent along automobile thoroughfares that those who worked or lived along such streets would gradually absorb lead in sufficient quantities to poison them in the course of months." The first part of the statement is not a fact, and the last part is covered by a limited portion of our study.

The Bureau of Mines has made and is making a study on the following:

1. The effect of exhaust gases from an engine using normal ethyl gasoline, the result of which is given in Monthly Reports of Investigations No. 2661.

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2. The effect of exhaust gases from an engine using gasoline containing five times the commercial amount of tetraethyl lead.

3. The effect of inhaling ethyl gasoline in the following concentrations:

- a. 1 per cent fumes from normal ethyl gasoline for one hour daily.
- b. 0.3 per cent fumes from normal ethyl gasoline for two hours daily.
- c. 0.1 per cent fumes from ethyl gasoline for three hours daily.

The above concentrations were also tried when the gasoline contained $2\frac{1}{2}$, $3\frac{3}{4}$, and 5 times the amount of tetraethyl lead in the ethyl gasoline. The effects of fumes of straight gasoline in the above concentrations were tried for comparative purposes.

d. Application to the skin of various animals of different amounts of normal ethyl gasoline and of gasoline containing 10 times the commercial amount of tetraethyl lead.

The results of these studies will be available in the near future. The Surgeon General of the Public Health Service has considered calling a conference to discuss all the information available on the subject relating to public health. It was believed best not to hold such a conference until investigations being carried out by the Bureau of mines and other organizations were more nearly completed. I presume that the Surgeon General will call such a conference in the near future.



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