T'E TRUDEAU FOUNDATION
FOR
THE CLINICAL AND EXPERIMENTAL STUDY OF PULMONARY DISEASE

AT SARANAC LAKE, N.Y.
E SARANAC LABORATORY
..E TRUDEAU FOUNDATION
THE TRUDEAU SCHOOL

AT TRUDEAU, N.Y.
THE DEPARTMENT OF PHYSIOLOGY
THE DEPARTMENT OF BIOCHEMISTRY
THE DEPARTMENT OF RADIOLOGY
THE TRUDEAU LABORATORY

November 16, 1948

Mr. U. E. Bowes
Owens-Illinois Glass Company
Toledo 1, Ohio

Dear Mr. Bowes:

Enclosed you will find three copies of a report on the results of animal experiments with Kaylo dust. As is our custom, we have summarized briefly material previously presented, including our interim report dated October 30, 1947, and have given detailed discussion only of subsequent developments. When all experiments have been completed, we expect to prepare a final report which will include details of each phase so that all data will be available in one place. However, the experimental study of the effects of inhaled Kaylo dust on normal uninfected animals is now finished and conclusions expressed on that subject are final rather than tentative.

In the report issued one year ago, which describes the findings in animals that inhaled Kaylo dust for periods up to 30 months, the following tentative conclusion was made:

> "In consequence of the experimental studies with guinea pigs to determine the biological activity of Kaylo, it may be tentatively concluded that Kaylo alone fails to produce significant pulmonary damage when inhaled into the lung."

During the 30 to 36 months period, however, definite indication of tissue reaction appeared in the lungs of animals inhaling Kaylo dust and therefore, I regret to say, our tentative conclusion quoted above must be altered. In all animals sacrificed after more than 30 months of exposure to Kaylo dust unmistakable evidence of asbestosis has developed, showing that Kaylo on inhalation is capable of producing asbestosis and must be regarded as a potentially-hazardous material. It should be noted that since neither silicosis nor the diffuse pulmonary fibrosis caused by inhaled diatomaceous earth was observed, the quartz and diatomaceous earth components of the dust apparently do not produce their typical lesions.

In order to present more information on the subject asbestosis, certain evidence derived from our experimental work with asbestos dust has been discussed. As these findings have not yet been released for publication, I request that, while using them as required in formulating a safety program, you regard them as confidential.

ALL-STATE LEGAL® PLAINTIFF'S EXHIBIT WV-000114

ALL-STATE LEGAL® PLAINTIFF'S EXHIBIT 00231.00

THE TRUDEAU FOUNDATION
FOR
THE CLINICAL AND EXPERIMENTAL STUDY OF PULMONARY DISEASE

AT SARANAC LAKE, N.Y.
THE SARANAC LABORATORY
THE TRUDEAU FOUNDATION
THE TRUDEAU SCHOOL

AT TRUDEAU, N.Y.
THE DEPARTMENT OF PHYSIOLOGY
THE DEPARTMENT OF BIOCHEMISTRY
THE DEPARTMENT OF RADIOLOGY
THE TRUDEAU LABORATORY

The new series of experiments with respect to the influence of Kaylo on tuberculous infection are well under way and are progressing satisfactorily. It is, of course, too early to expect significant results on which to base even tentative conclusions.

At this time may I review briefly the financial arrangment for conducting the investigation with Kaylo? The research program up to this year was carried on under a contract, initiated in 1945, by which the experiments would be subsidized with a grant of $5,000. per year. As pointed out in my letter of March 3, 1948, the contract terminated officially on February 15, 1948, but the investigation would be continued without charge until June because the original experiments were started late. Since a check was received which took care of the subsidy up to November 15, 1947, there is due on the old contract the sum of $1,250. for the final quarter of the contract (from November 15, 1947 to February 15, 1948). We have delayed sending an invoice for the final quarter until all work could be finished and a final report submitted. Following the termination of the experiment in June, it has required several months to do the histological work, study the tissue sections, collate the data and prepare the report which accompanies this letter.

We are including in the report a brief review of the new experiments in which the effect of inhaled Kaylo dust on tuberculous infection is being studied. Your purchase order AS-170 authorizing this experiment at $5,000. for one year is dated February 3, 1948, but owing to a shortage of animals and other unavoidable delays the actual experimental work did not get under way until May. Hence we have [illegible] that financial support for this new program should [illegible] 1948. For reasons outlined in my letter of March 3, I suggested a two-year contract at $7,000. per year. Your letter of March 31 acknowledged this but failed to confirm the extra amount of $2,000. involved. Nevertheless, we have proceeded at the old rate and are endeavoring to absorb the increased cost from our Foundation reserve.

In a few days our accounting department will forward a statement of the payments now due in support of the research program, as follows:

Original experiment, begun February 15, 1945, at rate of $5,000. annually	
For final quarter (November 15, 1947 to February 15, 1948)	$1,250.
New experiment, begun May 1, 1948, at rate of $5,000. annually	
For first quarter (May 1, 1948 to August 1, 1948)	$1,250.
For second quarter (August 1, 1948 to November 1, 1948)	$1,250.
	$3,750.

I realize that our findings regarding Kaylo are less favorable than anticipated. However, since Kaylo is capable of producing asbestosis, it is better to discover it now in animals rather than later in industrial workers. Thus the company, being forewarned, will be in a better position to institute adequate control measures for safeguarding exposed employees and protecting its own interests.

Sincerely yours,

Arthur J. Vorwald, M.D.
Director

AJV:LB
Encs. (3)