DR. MC CONNELL
MR. VANDIVER BROWN
DR. GARDNER

On April 12, Dr. Gardner of Saranac, Dr. Shepard of our Pacific Coast Head Office, and I went to Lompoc, California, to visit the operations of the Johns Manville Company there in connection with the mining and processing of diatomaceous earth. We were taken for a trip around the properties, the various operations being the same as those described in our report of December, 1935. At Lompoc, we met Mr. Kelly, in charge; Dr. Truax, the Company physician; and several of Mr. Kelly's staff.

Mr. Kelly pointed out various changes and improvements made in the mill since our survey, with the object of controlling the dust, and stated that he felt that with the exception of the packing operations, they had materially lessened the dust. We did not, of course, take any dust samples at this time.

We visited the Company hospital and went over a good many films and records with Dr. Truax. We reviewed some of the films that we had seen at the Home Office, which were taken several years previously, as well as the films recently taken. The X-ray equipment is first class in every respect and the films which Dr. Truax is now making are most excellent. He is hiw own technician and develops his own films. It was our understanding that all new employees are X-rayed before being hired.

The general impression that both Dr. Gardner and I got from looking at both the older and the more recent films of the various employees at this plant was not that of a typical silica hazard. Most of the films showed no evidence of dust reaction but there were a few of men who had worked for considerable periods of time which revealed an unusual type of shadow. These pictures only faintly resembled the nodulation of silicosis and they were not characteristic of the ordinary reaction to non-siliceous dusts, a simple exaggeration of the linear markings. Where more than one film had been taken of the same individual over periods of several years we could not see appreciable evidence of progression. Nothing suggestive of a disabling degree of fibrosis was observed.

It was our impression that evidence of a typical silicosis, comparable to that produced by the inhalation of crystalline silica, was not present in these men exposed to diatomaceous earth. However, the presence of atypical reactions in a number of employees exposed for prolonged periods of time suggested that this dust might have harmful potentialities. This impression is strengthened by Dr. Gardner's experimental observations that intravenous and intraperitoneal injections of diatomaceous earth will produce a progressive fibrosis. The animal reactions were not quite the same as those excited by similar injections of crystalline silica, but the reaction was more marked than that caused by injecting pure amorphous silica in the

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form of opal. It was characterized by some nodules and much diffuse fibrosis. Such experiments demonstrate that diatomaceous earth is capable of causing fibrosis when it establishes contact with the tissues in sufficient quantities. They prove nothing as to the inhalability of dust of this nature.

Conditions at the Lompoc plant may be such that the men do not inhale much dust, but the discovery of a few cases with abnormal films after prolonged exposures makes one hesitate to state that there is no hazard. It would be desirable to have films of all employees taken not only at the time they are placed on the pay roll but at intervals of two or three years. In this way, it may be possible finally to evaluate a hazard about which little is known.

A. J. Lanza, M.D.
Assistant Medical Director

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