ZONOLITE DIVISION
W. R. GRACE & CO.

INTER-OFFICE CORRESPONDENCE

PLAINTIFF'S EXHIBIT WRG-35

Date January 2, 1965

To J. A. Kelley at Home Office

From E. D Lovick at Libby

Subject: Dust at Libby

When the vermiculite operations began in Libby, a dust problem arose. It has remained ever since. The first concentration methods were by dry process and they remained so entirely until 1954 when the wet mill began operation. However, even with the building of the wet mill, the coarse sizes, essentially 8 mesh material, continued to be concentrated by dry methods, and this continues to be so today. In addition to concentration of the coarse sizes, the fine sizes are screened in the dry mill.

Over the years the dust situation has been given attention, and improvements have been made. The first reference we can find in our files on the problem is a letter written by the Montana State Board of Health to John Myers, February 11, 1942, based on an inspection made December 9, 1941. This points out that there is little or no silicate inthe plant so the dust encountered would be classed as nuisance dust. The threshhold limit of this type of dust is 50,000,000 particles per cubic foot of air. This letter refers to control equipment to be installed in the mill to aid the dust problem. We do not know specifically what this control equipment was.

In the ensuing years the dry mill was increased in size to be able to handle larger feed tonnages. With these increases, efforts were made to control the dust largely through ventilation of screens and crushing equipment and other sources of dust contamination. In 1954 the wet mill went into operation and this reduced the dust sources to some degree, but the dry mill still remained as a final concentrating stage for coarse material as mentioned above and a screening plant for all sizes. After the building of the wet mill, considerable effort was put into cleaning up the dust in the dry mill by designing and installing better ventilation equipment. This resulted in improvements.

From the time the vermiculite business began operations in Libby, the company furnished respirators for its employees working in dusty areas. About the time the wet mill was built, or 1954, it was made mandatory for all employees to wear respirators when working in dusty areas. The respirators used are made by the Mine Safety Appliance Co. and approved by the U. S. Bureau of Mines.

In 1956 we started requiring pre-employment physical examinations for all employees, which had not previously been done. A chest X-ray was not required with these physicals.

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Montana has had for many years an Industrial Accident law, but it was not until 1959 that they passed an industrial disease law. This law specified certain specific industrial diseases for which employers would be responsible. The only specified disease which we felt could apply to us was silicosis. The law stated that employers would not be responsible for anything which had been contracted by their employees prior to the date that the law became effective. However, they would be responsible for any contraction of disease after that date or any aggravation of the condition which existed inthe employee due to industrial conditions which existed in a particular plant. In order to protect ourselves and place ourselves on record as to the condition of our employees, as of the effective date of the law, we instituted a program whereby all of our employees would have X-rays at the local hospital. We made arrangements with the hospital to schedule these X-rays and in turn we arranged to have the employees there at the stipulated time. All X-rays were interpreted by a radiologist and a report written on each one.

There were five medical doctors on the staff of the hospital at the time of this program, in addition to the radiologist who actually lives in Kalispell, and comes to Libby one day a week to interpret all X-rays taken at the hospital. We arranged a meeting with all the doctors on the staff, told them of our problem, explained what we wanted and asked their cooperation which was freely given. We polled our employees as to which doctor was his family physician, so we would have that as a permanent record. After the X-rays had all been taken and interpreted, we went through the list and furnished each doctor with a list of the employees who were his patients. We then hadall of our employees check with their own doctor to obtain the results of their X-ray examinations. The doctors agreed that this would be the best plan and they agreed to furnish the results of the examination without charge to them. This applied to all employees, even those whose X-ray interpretations showed normal chests. In this way, we did not give any information to the employees as to their physical condition, so we could not be responsible for or liable in any way for giving out information which might be construed as misleading.

In the case of the employees whose X-ray interpretations showed some intrathoracic pathology, it was up to the doctors to determine whether further tests, examinations or treatment should be given.

After all the results of these X-rays were in, we again met with the doctors and with the radiologist and discussed what our situation actually was in regard to pulmonary diseases from our operation. The preliminary results of the interpretations made it appear that we had a high incidence of pulmonary disease among our employees. However, after the doctors had analyzed the results, the conclusion they came to was that there was nothing to indicate that there was a higher incidence of pulmonary trouble among our people than there was among any other group in this geographical area. In other words, they felt that they could not come to any conclusion as to whether our mill operation presented an above-normal occurrence of respiratory trouble. The radiologist who had had industrial disease experience inthe coal mine fields of Indiana could offer nothing constructive in the way of a conclusion either.

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In this regard, Libby itself has an air pollution problem. Enclosed is a copy of a news release from the local paper on this subject.

In our analysis of the people who had had intra-thoracic pathology of some kind, neither could we come to any conclusion. There were people with some condition of fibrosis where pulmonary emphysema showed up who had been with us only a relatively short period of time. Other people who had been with us over a period of many years and who had worked in jobs where dust exposure had been high, showed normal X-ray interpretations. There seemd to be no relationship to being a higher incidence among the old-time employees than there was among the newer employees.

In the meantime, we continued to do what we could to cut down the dust problem. This is being covered in a report by R. A. Bleich. We continued use of respirators, as mentioned earlier, so people who were exposed to dust had as much protection as possible. In some cases, people who had problems were transferred to jobs which had a lower dust exposure than the ones they had been on. Specific examples of people who were reported to have respiratory problems whose jobs were changed to areas of less exposure were Jack Garrison who was transferred from the mill to the garage and later to the Sheet Metal Shop. Harold Shrewsberry was transferred from the mill to the Sheet Metal Shop. There were other transfers made also.

At the time of the first X-ray survey, it was thought that a follow-up would be helpful in analyzing our situation. It was decided that this would be done in 1964. We again met with the local doctors and Dr. Little, the radiologist, to plan this program. They again agreed to cooperate. The mechanics of this program were similar to what had been done the first time. It was felt that as well as the X-rays, if functional tests were given to record objective measure of respiratory function for present use and future comparisons and to note any correlation between X-ray change and pulmonary function, this might be meaningful. Accordingly, Dr. Woodrow Nelson took spirometer readings on all employees. These were analyzed by him. A copy of his preliminary report is included and his records have been turned over to the engineering and medical staff of our insurance carrier for further review and analysis.

Upon the completion of the X-rays and interpretations by Dr. Little, the reports were again turned over to the employees' personal doctors for notification of results as before. In this survey there were 143 X-rays taken, which included 21 salaried supervisory people. Of the 143, 92 have had more than 5 years employment with us. Of these, 30 show some emphysema or fibrotic respiratory condition. The radiologist interprets 14 as having an increase since 1959. There was no fibrosis noted in any employee who has been employed less than 5 years. However, there are 2 cases where employees with less than 5 year employment show slight emphysema. Of the 122 hourly employees who generally would be expected to have greater exposure than salaried supervisory personnel, 39 have had over 10 years employment with us. Of this 39, the radiologist interprets 21 of them to have normal chests and 18 to have abnormal chests. A listing of these people showing total months of employment and months of mill employment follows.

Normal Chests

	Total Employment MONTHS	Mill Employment
L. J. Baenen	213	
John Baker	205	
Tom Beaulieu	157	
W. D. Fields	215	
David Foster	192	
James Gidley	118	33
Donald Hutton	169	
Donald Johnson	164	164
Fred Johnson	301	(some mill exposure)
Fred Koehler	152	146
Jim Lyle	184	
Charles Mercer	164	
Harvey Noble	153	153
Derward Preston	349	(some mill exposure)
Arnold Smith	170	
Donald Smith	157	
James Smith	242	
Paul Thieman	235	
Fay Tisher	118	46
Albert Urdahl	245	
Edward Wittlake	152	

Abnormal Chests

Clyde Basham	191	
Allen Boothman	185	150
Robert Cohenour	139	106
Floyd Cole	181	
Jack Garrison	163	94
Orville Haines	214	
Ernie Hamilton	189	
Louis Hoppe	264	
Michael S. McNair	193	
Lloyd Miller	189	171
Richard Rayome	217	
Stuart Risley	156	
Harold Shrewsberry	146	116
Elmer Stanley	212	98
Lionel VanHorn	166	
R. C. Watts	164	
L. D. Welch	181	2
Orland Welch	192	

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We have never had a known case of silicosis among our employees. Silicosis is caused by free silica. The minerals we process are silicates and do not cause silicosis. We have had employees with pulmonary diseases. The most offensive substance in the dust in our operations is not definitely known, but it is thought to be asbestos.

In 1958, one of our employees, Glenn Taylor, who had been with the company approximately 19 years, was obviously having respiratory trouble. His foreman tried several times to get him to go to a doctor but was unsuccessful. Finally the man became so bad off that there was a question whether he should be working at all. We finally told him that we wondered whether he should be working because of his obvious physical condition, and in fairness to him, if he would go to the local doctor of his choice, we would pay for his examination to get a report from the doctor. He went to one of the local doctors who diagnosed his case as advanced pulmonary tuberculosis. He arranged for Mr. Taylor to be admitted to the state tuberculosis sanitarium at Galen, Montana. After a stay of 38 days at the sanitarium, this man was discharged and the final diagnosis of his case was, 1; "Histoplasmosis" and 2; "Questionable asbestosis." This man never did return to work and died in 1961. During the time of his stay in Galen, they conducted several X-ray and laboratory examinations and still only came up with the final diagnosis of questionable asbestosis.

Since this time, we have had other inquiries on some of our employees, or past employees, because of having had doctors' diagnoses of various respiratory problems. In 1962, we had correspondence from a doctor in Wyoming on an employee who had worked for us for approximately 10 years and his doctor diagnosed that he had progressive pulmonary fibrosis, which he said on X-ray resembled that produced by prolonged exposure to asbestos. In 1961, we had correspondence with a doctor in Spokane concerning a former employee who said that the man's chest X-ray revealed extensive bilateral pneumonicosis with definite progression in the fibrous deposits in the lungs, since the previous exmaination in May of 1960. These cases were referred to Chicago and handled by our insurance carrier.

There have been other cases as in the case of Eitel Ludwig in 1964, of which there has been correspondence between Mr. Rupp, the insurance company, and myself.

As to plans to the future for coping with this, we will continue and will watch carefully that all people in high dust concentration areas wear their respirators at all times to see that they have this protection. We will also do what is possible to cut down the dust concentrations at the various points as is covered in R. A. Bleich's letter, and as has been decided, the present dry mill will be eliminated as a concentrating stage, and the only dry operation will be a screening operation. When this is achieved, it will be the biggest single step that could be done. With the design of the final screening plant the dust situation can be designed for and brought under good control. This is the goal that we must work toward.

EDLovick/jbg
c.c. R. A. Bleich

Enclosures:

1. Dr. Woodrow Nelson - Report of Spirometry Tests, 1964.
2. Newspaper Copy - Air Pollution in Libby
3. Medical Report - Charles M. Wagner (11 years employment)
4. Medical Report - Walter McQueen (18 years employment)
5. Medical Report - Eitel Ludwig (7 years employment)
6. Medical Report - Glenn Taylor (19 years employment)

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c.c. R. A. Bleich

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