

## Western Mineral Products / W.R. Grace Vermiculite Plant: Information for Former Workers and Their Families

### **Vermiculite and Asbestos**

Vermiculite is a naturally occurring mineral used in insulation, construction, and gardening products. From 1924 -1990, most of the world's supply of raw vermiculite ore came from a mine in Libby, Montana. This ore was contaminated with high levels of asbestos.

Asbestos is a mineral fiber that is very toxic if inhaled. Growing evidence shows that the needle-like fibers of asbestos from the Libby mine, or "Libby asbestos," are more toxic than commercial asbestos.

Ore from the Libby mine was shipped by rail to many processing plants around the country, including several plants in Minnesota. From 1938 to 1989, over 130,000 tons of ore from the Libby mine were processed at the Western Mineral Products plant located at 1720 Madison Street in northeast Minneapolis. In the 1960s, this plant became part of the W.R. Grace company.

### **What do we know about asbestos exposure to workers?**

At the Western Mineral Products plant, raw vermiculite ore was heated in furnaces until the moisture trapped in the ore caused it to expand, or "exfoliate." During this process, the trapped asbestos fibers in the ore were released into the air inside and around the plant. Former workers and nearby residents have described the process as very dusty. The leftover waste rock from the process contained more asbestos than the product. The plant also mixed commercial asbestos into vermiculite-containing products.

The Minnesota Department of Health (MDH) has evaluated information from air monitoring tests conducted in the 1970s and 1980s by W.R. Grace at this plant. These tests show that prior to about 1985, workers were routinely exposed to levels of asbestos in excess of the current occupational limit of 0.1 fibers per cubic centimeter of air (f/cc).

At times during some work tasks, such as bagging, unloading ore, or sweeping, exposures were much higher (above 10 f/cc). Higher levels of airborne asbestos fibers were also present before improvements in equipment and plant ventilation were made in the 1970's.

The MDH is working with the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) on the investigation of the Minneapolis plant. ATSDR is also engaged in a national study of vermiculite processing plants in the U.S. Information gathered by MDH about the Minneapolis plant from former workers, their families, and the community has been critical to this effort.

### **What are the health effects of asbestos exposure?**

People exposed to asbestos may suffer from several diseases. Asbestos fibers can cause a type of permanent lung damage known as asbestosis. People who have asbestosis often have shortness of breath and increased risk of serious lung infections.

Asbestos can also cause lung cancer, and a rare type of cancer known as mesothelioma, which affects the lining around the lungs and abdomen. It can also cause other

abnormalities in the lining of the lung, called pleural plaques or pleural thickening. In some cases, these pleural changes may get worse and cause breathing difficulties.

Published reports have shown that even a relatively short-term exposure to Libby asbestos from the processing of vermiculite ore can result in asbestos disease many years later.

### **Should family members of former Western Minerals' workers be concerned?**

Studies show that health problems from asbestos exposure can occur in both workers and their families. We now know that many family members of workers were exposed to asbestos by contact with the fibers workers unintentionally brought home on their clothing. For example, family members who washed workers' clothing could have been exposed to the asbestos dust.

### **Why is this information being collected? What good will it do?**

MDH is actively engaged in a study of workers and their families to better understand exposure to Libby asbestos resulting from operations at the Western Mineral Products in Minneapolis. Through this study, MDH will be able to provide workers and their families with information about their asbestos exposures so they can discuss them with their physicians.

So far, we have learned important details about the history of Western Minerals and about Libby asbestos exposures from our interviews with former workers. We have learned that exposures to Libby asbestos are closely related to activities that disturb the

material and make dust. This includes work activities as well as children's play near the plant. While some people, especially workers, were exposed for many years, most exposures in the community were short-term or sporadic. We also know that as exposure to asbestos increases, so does the likelihood of developing asbestos disease.

Understanding these past exposures to Libby asbestos will help us to understand the health risks. This information will be given to physicians to improve recognition and diagnosis of asbestos disease, possibly leading to better treatment options.

### **What else can I do now?**

Take these steps to keep your lungs healthy:

- If you smoke, quit smoking. The risk of developing lung cancer greatly increases for a person who also smokes.
- Avoid exposure to asbestos and other dusty situations.
- Get a flu shot and regular check-ups to ensure you are doing all you can to keep your lungs healthy.
- Engage in routine exercise.
- Make healthy nutritional choices to increase your overall health.

If you develop an asbestos related disease, find a support group; they are a good way to connect with other people, share concerns and discuss options. Contact your local clinic/hospital, the American Lung Association (1.800.586.4872), or the American Cancer Society (1.800.227.2345) for local support groups in your area.

### **Contact Information**

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