FREQUENTLY ASKED QUESTIONS

Operable Unit 3, Libby Asbestos Superfund Site

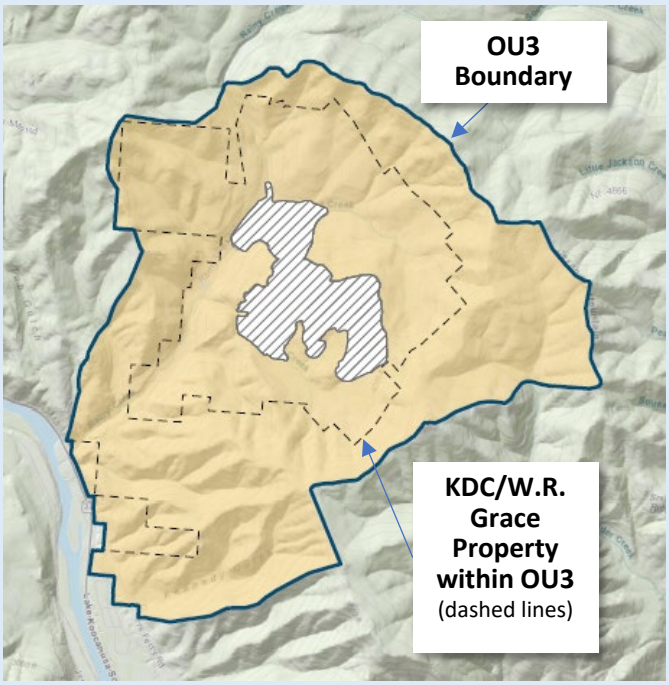
Lincoln County, Montana

What is OU3?

The Libby Asbestos Superfund Site is separated into smaller areas called operable units. Operable Unit 3 (OU3) is the property in and around the former mine that is impacted by Libby amphibole asbestos (also known as LA or LAA). This includes the forest surrounding the mine. Studies show LA is present in many OU3 sources, including soil, duff, tree bark, ash resulting from wood burning, surface water, and sediment.

How was the EPA OU3 boundary defined?

The U.S. Environmental Protection Agency (EPA) OU3 boundary was drawn based on information about human health exposures; LA levels in soil, duff, tree bark; air dispersion and deposition; and topography (see map inset).



Is all the asbestos around Libby from the mine?

Asbestos comes from many sources and LA around Libby is due to both mining-related activities and natural occurrences. Airborne particulates were released by the milling of vermiculite-ore. Waste products were used by Libby and Troy residents. Vermiculite products were used in numerous homes, businesses, and public buildings. LA is also present in Kootenai Valley soils not thought to be affected by mining-related activities. These low-levels of LA in soil likely came from normal geologic processes unrelated to vermiculite ore from Vermiculite Mountain.

Is there asbestos outside of OU3?

Asbestos is naturally-occurring and has been widely used in commercial products. It is everywhere in the environment. Asbestos fibers are often detected in air, even in places with no specific sources. Levels of LA in outdoor air in Libby are similar to those in Eureka and Helena, as well as across the country. LA is present outside OU3 due to both mining-related activities and natural occurrences of LA in the Kootenai Valley.

Is there asbestos in the tree bark, duff, soil, and ash?

LA is present in soil, duff, tree bark, and ash, in the forest around the former mine. In general, LA levels decrease with distance from the mine. The presence of LA does not necessarily mean exposures are above a level of concern.

Is there asbestos in wildfire smoke?

A recent study showed that when LA-containing duff is burned, most of the LA (more than 90 percent) remains in the ash. Thus, the most important fire-related exposure medium is the ash.

Will people be evacuated in Libby if there's a wildfire in OU3?

Monitoring plans are in place to measure outdoor air concentrations of LA and other airborne particulates in Libby and in downwind locations should there be a wildfire in OU3. The Lincoln County Health Department will make

recommendations based on monitoring results and other data (weather and fire specifics). Most fires require no special precautions. In some circumstances, sensitive subgroups or affected neighborhoods may want to reduce exposures by limiting time spent outdoors and the health department will make those notifications.

Do EPA's exposure studies represent the work we do as firefighters?

EPA uses activity-based sampling (ABS) to estimate potential concentrations of asbestos in air from source disturbances. ABS involves the collection of air samples in the breathing zone of someone performing simulated source-disturbance activities. The goal of EPA's ABS is to get the data needed to quantify a long-term (multi-year) average exposure scenario for a certain population. With input from the U.S. Forest Service, ABS investigations included various forest management and fire-related activities in and around OU3. They are representative of the range of expected airborne asbestos exposure conditions that could be encountered by firefighters in OU3.

Will exposure to one fiber put me at risk for asbestos-related disease?

Like all cancer-causing contaminants, there is no "safe" asbestos exposure and people should limit exposures where possible. This does not mean that exposure to one fiber will result in disease. A single short-term exposure to low airborne asbestos concentrations will rarely result in disease. Asbestos-related disease occurs most often with repeated, long-term exposures (over many months and years) or exposures to high levels of airborne asbestos.

What increases my risk of developing asbestos-related disease?

Asbestos fibers are hazardous when released into air and are inhaled. The amount of airborne fibers generated when source materials are disturbed depends on many factors (material disturbed, type of asbestos, intensity of disturbance, and environmental conditions). The potential to develop asbestos-related disease increases with frequent disturbances of source materials over long periods of time without appropriate measures to limit inhalation exposures. People also have differences in their susceptibility for disease—those with other diseases or smokers can have a higher risk. Because asbestos-related disease takes a long time to develop, exposures early in life have a higher potential to cause disease than exposures later in life.

Does smoking increase the risk of asbestos-related disease?

Yes. Cigarette smoking and asbestos exposure interact synergistically for production of lung cancer. Smokers exposed to asbestos have a much higher likelihood of developing lung cancer than non-smokers. Smoking also increases the likelihood of developing mesothelioma and other asbestos-related diseases.