

About EPA's Draft Site-wide Human Health Risk Assessment

Libby Asbestos Superfund Site, Libby, Montana

December 2014

The U.S. Environmental Protection Agency (EPA) has completed its rigorous scientific review of toxicity values and a draft human health risk assessment specific to the Libby Asbestos Superfund Site. EPA has prepared this fact sheet to serve as a summary of the draft risk assessment.

1. EPA has Significantly Reduced Risk from Exposure to Asbestos

EPA has removed major sources of Libby Amphibole (LA) asbestos in and around Libby and Troy. We have investigated thousands of properties and conducted removals at more than 2,000 private homes and properties. Removals include the former export plant, former screening plant, boat ramp, rail yard, golf course, flyway properties, schools and school yards, historic Hotel Libby, creek beds and other public areas. EPA has now removed more than one million cubic yards of impacted soil.

2. It is Now Possible to Live and Work in Libby Without Excessive Exposure to Asbestos

Our risk assessment shows that EPA's indoor and outdoor cleanups have been effective in reducing both cancer and non-cancer risks in Libby and Troy. This means that EPA's cleanup work results in acceptable risk levels. EPA has extensively tested outdoor air in Libby and Troy for LA asbestos and concentrations are now equivalent to those found in other Montana cities. Air asbestos concentrations today are up to **100,000 TIMES LOWER** than when the mine and processing facilities were operating. Higher levels of LA could be found at some properties where owners have not yet provided access and in areas located near the former vermiculite mine. If you have not yet participated in EPA's cleanup, we hope you will contact our Libby Information Office, 406-293-6194, to schedule a property inspection.

3. Remaining Asbestos Needs to be Safely Managed

It is not possible to remove all LA in Libby and Troy. LA is naturally-occurring in this area. In addition, LA that is sealed behind indoor walls or outdoors below the surface does not pose a health risk unless it is disturbed. Ensuring that LA does not present a risk in the future will be part of a long-term plan for the site. EPA and the Montana Department of Environmental Protection (MDEQ) are confident that any remaining contamination can be effectively managed, and the selected remedy will include details on how any waste that is left in place will be managed after cleanup is completed.

Past, Present, and Future Risk

Past (before EPA Removals)

- Significant and uncontrolled sources of LA were found across Libby and Troy due to mining and processing of vermiculite that was contaminated with Libby Amphibole asbestos and the widespread use of this mineral in homes, yards, gardens and public places.
- LA asbestos from these sources was easily disturbed and mixed in the air.
- Inhalation of LA asbestos from these multiple sources presented unacceptable risks and caused significant health hazards.



Present

- The most significant sources of LA asbestos have been removed. Some LA asbestos remains but is inaccessible (either buried or sealed behind walls at some properties EPA has addressed).
- If you have not yet participated in EPA's cleanup, please contact the Libby Information Office at 406-293-6194.
- It is now possible to live and work in Libby and Troy without unacceptable risk from asbestos exposure.



Future (After Remedy is Complete)

- Management plans will be developed to ensure that LA asbestos is managed effectively to protect the remedy and the citizens and Libby and Troy.

4. There are Two Primary Pathways for Exposure to LA Asbestos

Inhalation and ingestion are the two primary ways that people are exposed to LA asbestos. Inhalation carries the greatest risk. Interrupting this exposure pathway is essential to managing risk from LA asbestos. In other words, the way to avoid potential health risks from LA asbestos is to prevent inhalation of the fibers.

5. Risk Management Will be Based on a Combination of Factors – Not a Single Number

Because exposure is associated with dust generation, remedial action objectives will focus on managing source concentrations as well as activities and their locations. For example, higher risks are currently associated with significant soil excavation and soil dust generation or hiking in areas with elevated concentrations of LA asbestos. Risks are also elevated for career contractors working in areas with vermiculite.

How EPA Determines Risk

1. Develop a Site Conceptual Model

How are people exposed?

With the help of the community, EPA has developed a model describing where contamination is found and how people can be exposed.

2. Determine Exposure Parameters

What is the duration and frequency of exposure?

EPA has studied what local residents do and how often they engage in activities throughout their lifetime.

3. Determine Exposure Point Concentrations

What are the concentrations that people are exposed to in soil, air, etc.?

EPA has collected over 4,000 samples in Libby and Troy to determine the concentrations of LA in the environment.

4. Assess the Toxicity of LA Asbestos

What are the adverse effects from exposure?

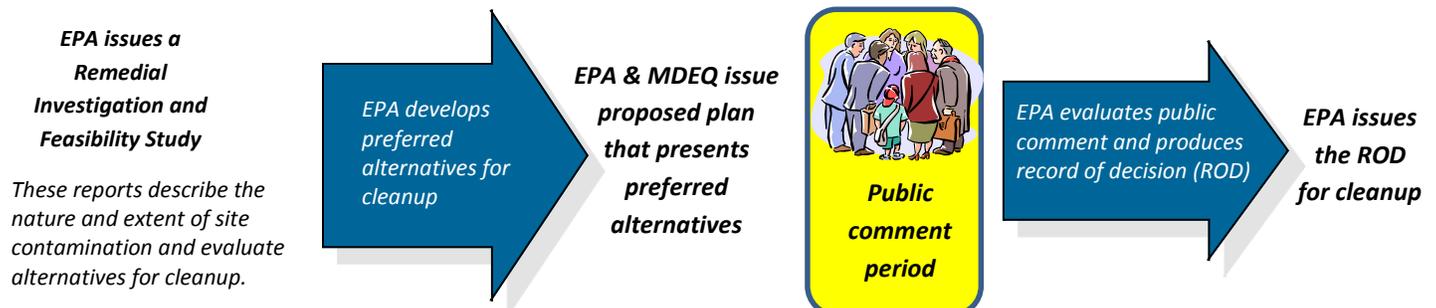
EPA has developed toxicity values specifically for LA asbestos.

5. Calculate Risk

What are the cancer and non-cancer risks?

Using the information above, EPA calculates cancer and non-cancer risk estimates.

What's Next?



Questions?

We are available to answer questions about the risk assessment. Please contact:

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- **Jennifer Lane**, EPA Community Involvement Coordinator, 1-800-227-8917 (ext. 312-6813) lane.jennifer@epa.gov
- **Mike Cirian/Libby Information Office**, 406-293-6194, cirian.mike@epa.gov