Possible Asbestos at the Sheep Creek Mine by Larry Campbell

Out of the many potential harms that could result from the proposed Sheep Creek rare earth element mine at the head of the Bitterroot River one stands out. The presence, or not, of asbestiform actinolite is a critical human health issue. There is good reason to believe there may be asbestos closely associated with the minerals US Critical Materials Corporation is proposing to mine.

Geologists at Montana Tech report that actinolite is one of most common matrix minerals in the host rock, and the veinlets that cut across the host rock are "actinolite-rich". https://www.friendsofthebitterroot.net/sheep-creek-info-montana-tech/

There is reason to believe the actinolite at Sheep Creek may be asbestiform. The Montana Bureau of Mines and Geology Crowley Bulletin reports actinolite at Sheep Creek "forms masses of radiating fibers surrounding other crystals." https://mbmg.mtech.edu/pdf-publications/B18_Text.pdf

The American Mineralogist, a prestigious industry journal, reports, "Amphiboles: Hornblende and actinolite, which are widespread, are concentrated in the thicker deposits near the walls but in thinner ones are disseminated, with the former showing sub-parallel orientation. Dark green hornblende forms single crystals; light green actinolite forms clusters of fibers, usually in radiating groups." https://rruff.info/doclib/am/vol46/AM46_1424.pdf

For an overview of the potential human health dangers of actinolite see: https://scivast.com/articles/understanding-dangers-actinolite/

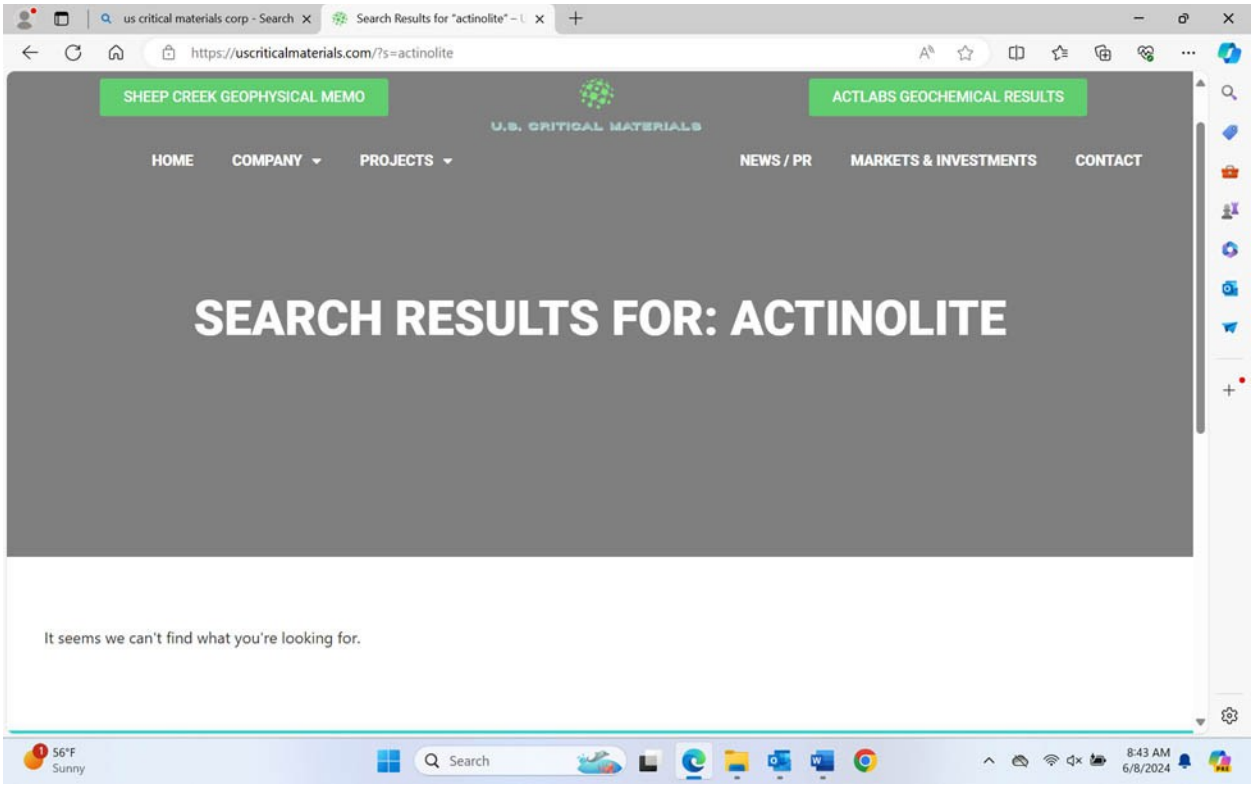
> "The lack of widespread awareness regarding actinolite complicates efforts to mitigate its health risks. Unlike more commonly known asbestos types, such as chrysotile or crocidolite, actinolite often remains underestimated....Actinolite occurs in both fibrous and non-fibrous forms, but the fibrous type has garnered a reputation due to its links with asbestos....Relying on proper testing methods and expert knowledge is essential to accurately determine whether actinolite presents as a health hazard...Understanding precautionary measures is crucial when dealing with actinolite. The health risks associated with this mineral cannot be overstated. ....Health Risks: Exposure to actinolite, particularly in environments where it is disturbed, poses significant respiratory health risks. The potential for mesothelioma, lung cancer, and other diseases expands with prolonged exposure."

In Montana we have seen the deadly effects of tremolite, a mineral closely related to actinolite. "Hundreds of people died and more than 3,000 have been sickened from

asbestos exposure in the Libby area, according to researchers and health officials." https://apnews.com/article/asbestos-libby-montana-bnsf-railroad-trial-e9b7587c0cc78fb93afca24436639eb6

"Asbestos litigation, now thriving in this country as symptoms of mesothelioma have begun to manifest over the past 40 years, is rooted in proving the company, building owner or other entity did not take adequate precautions to shield workers, employees and residents from harmful contamination. Generally making a claim on Actinolite asbestos exposure involves proof that due diligence was not practiced by the responsible party and as a result, avoidable harm was done to the victim." https://asbestos.laws.com/actinolite-asbestos

Given the history of Libby asbestos litigation one might think USCM would do due diligence and be forthcoming in their highly self-touted, but absent, public relations campaign, so I searched the USCM website and, unsurprisingly, found no mention of actinolite.



Screenshot captured from https://uscriticalmaterials.com/?s=actinolite on 6/8/24

If there is asbestos at the mine the danger of lethal dust contamination would begin as soon as the ground is disturbed. USCM should be required to hire an independent lab to test for asbestos as the first step in any exploration permitting process. Mineral exploration is dusty business. Dust in the wind knows no boundaries. Clean up would be practically impossible. There is no "safe" level of asbestos. Mesothelioma has no cure.

Contact the officials below about your concerns:

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