

CJK Milling Application Response
Permit M1990057

I am writing in response to the again-revised application of CJK Milling Company to process mine wastes at the Leadville Mill. After many hours of reading the CJK Milling application and the latest EPA document on the California Gulch Superfund site*, I am left with three major concerns.

The risks I worry about are:

1.) Digging up and transportation of the mine waste material on Breece Hill by many trucks over Leadville roads to the Mill. The CJK Milling application indicates they hope to move 500,000 tons of mine waste. My concern is the potential to disturb lead contaminated soil and alter the water drainage which has minimized heavy metal leaching.

Following processing at the Mill, 80% of this mine waste will then be stacked in a new tailings pile at the Mill. So that will then become a new site to monitor going forward.

2.) The chemicals that the mine solids will be treated with are promoters, frother, and a flocculent for separation of the metals. They are:

- Aerophine 3418A (promoter),
- Aerofloat 404 (promoter),
- Aerofroth 65 (frother),
- Percol 351 (flocculent).

Table 3-13 in the CJK Milling application shows that 56 lbs. per day of these chemicals will be added to the process water. My concern is the environmental impact of these components if accidentally released through a leak or spill in the milling process. A second table in the CJK Milling application (Table 13-3) indicates that Aerofloat 404 is toxic to aquatic organisms and may cause long-term adverse effects in the environment; for Aerophine 3418A the table states discharge to the environment must be avoided.

3.) My third concern is that the new tailings pile landfill will eventually leak. These re-processed mine tailings are now coated in process chemicals. How long is a synthetic liner guaranteed to last? Not forever, that's for sure. Given that Leadville has 272 nights of freezing temperatures (CJK Milling application), and the liner sits beneath a hundred tons of solid tailings, I worry about leakage to the underground aquifer. The Mill sits at the headwaters of the Arkansas River and escape of these chemicals to groundwater could be very damaging.

A question and two other observations are these.

- While the application states that the milling process will be a closed loop water system with zero-discharge of process water, I don't understand how that will be possible. Each step returns water with residual chemicals to the process water, including the liquid draining from the leachate pond and the tailings pile. With the accumulation of residual promoters, frother and flocculent it would seem this water would soon become unsuitable to be added back to the closed loop system. So, if the process water had to be purged, how would this 27,000 gallons of contaminated water be disposed of?
- The CJK Milling application, section 2.1.1, states that Lodgepole Pines dominate the Leadville Mill site and that no aspen or conifer stands occur on the property. Lodgepole Pines are conifers.
- In Table 13-3 of the CJK Milling application, the row for Human Health Hazards for some of the chemicals shows the first aid measures but does not list the human health hazards.

Finally I am left with this thought. After the EPA, other government agencies, and mining companies have spent several hundred million dollars and worked for over 40 years to remediate 150 years of mining activity in Leadville, I have no idea why we would start this process again.

* U.S. Environmental Protection Agency. (2022, September 28). Sixth Five-Year Review Report for California Gulch Superfund Site, Lake County, Colorado. Region 8