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Via UPS Overnight and
Email at lucas.west@state.co.us

Mr. Lucas West
Division of Reclamation, Mining and Safety
1313 Sherman Street, Suite 215
Denver, CO 80203

Re: Concerned Citizens for Lake County Objection and Protest
Leadville Mill Permit Application
CJK Milling Company, LLC
Conversion Permit Amendment Revision (Permit No. M-1990-057)

This letter provides comments and objections on Union Milling/CJK's ("CJK's") 112(d) Permit Amendment Revision ("Application") submitted to the Colorado Mined Land Reclamation Boad for its Leadville Mill (the "Mill") facility in February 2024.

We provide this objection and protest on behalf of this firm's clients Diane and Brad Smith, Ruth Goltzer, Jim Kohlmoos, Betty and George Benson, Patricia and Brian Nagel, Doug Yeakel, Laurie Strasburger, and Steven McCauley, who are collectively referred to herein as Concerned Citizens of Lake County ("CC4LC"). The members of CC4LC own and reside on property located near the Leadville Mill, including the residential properties bordering the Leadville Mill.

CJK proposes to employ cyanide leaching to process mining waste material transported from off site. Due to the exceptionally high toxicity of cyanide, it is listed as a "hazardous waste" under the Resource Conservation and Recovery Act (6 CCR 100703, Part 261, Appendix VII (F007-F011 wastes) and Appendix VIII (P030 cyanide, and P106 sodium cyanide)) and as an "extremely hazardous substance" under the Emergency Planning and Community Right to Know Act. (40 C.F.R. Part 355, Appendix A.) Cyanide also is a "hazardous substance" under the Clean Water Act (40 C.R.R. § 116.4 (listing numerous cyanide compounds)).

As a group of adjacent and nearby residents that will be directly impacted by the proposed operation, CC4LC is extremely concerned about the cyanide leach processing proposed to take place at the Mill. CC4LC members draw their drinking water through domestic wells from the same aquifer that lies beneath the Mill, breath the air that drifts from the Mill, enjoy the natural environment and wildlife that surrounds the Mill, and would be directly impacted by activities at the Mill, both during operation and long after CJK ceases operations at the site. The proposal to

resume milling at this long-dormant site by adding cyanide leaching is wholly inconsistent with the surrounding residential properties and should be denied.

Furthermore, the Arkansas River provides water for municipal, agricultural, industrial, recreational, and domestic use to hundreds of thousands of people in Colorado. It is a vital resource that already has been the subject of numerous remediation and cleanup projects due to historic mining activities around Leadville, including the California Gulch Superfund Site. CJK now proposes to operate a cyanide leach mill only a few hundred feet away from the Arkansas River headwaters. Even a small risk of contamination could have devastating repercussions for nearby residences and every water user downstream. The Application does not adequately address this risk.

Because of the material threat posed by CJK's proposed operation, we request that the Board deny the Application. If the Board elects to approve the Application, CC4LC requests that the Board require CJK to submit additional revisions to its Application to address the concerns raised below.

1. Mining Plan

The Mining Plan describes the flow of MDM material through the Mill. Per the Application, the Mine Dump Material (MDM) will be sourced from the Penn Mine Group Dump east of Leadville and transported via truck to the Mill. The MDM material will be stockpiled onsite in a bunker then moved, using heavy equipment, into the initial crusher.

Despite providing greater detail regarding the milling process than prior applications, the Mining Plan is still ambiguous in several areas and inadequately describes the proposed operation, treatment and handling of chemical reagents, and information supporting its new permanent disposal plan for tailings material.

a. Raw Mine Dump Material (MDM)

Section 4 states that "Mine Dump Material" will be dumped into the MDM Bunker. The Application depicts the MDM Bunker as a three-sided concrete structure with a metal roof. It is not clear if the MDM Bunker is covered, and there does not appear to be any liner proposed to prevent potential infiltration of MDM constituents into the soil and groundwater. (Mining Plan, 4-13).

b. Emergency Containment Sump (ECS)

Spills in the Mill building will be pumped via various sump systems and returned to one of several holding tanks in the building. The proposed plan for catastrophic event spill containment, where all the sumps are overwhelmed, is that all the spilled solution will "report to the Emergency Containment Sump." ("ECS"). (Mining Plan, 4-78). The ECS is either 5.6 or 6.2 million gallons (there are conflicting reports of the volume, the 6.2 million figure may incorporate anticipated freeboard, but that is not made clear). The Application does not specify how the

solution will report to the ECS, other than it will flow there via gravity. There is no discussion of whether it will be conveyed via a pipe or lined ditch, or whether it will just flow over the bare ground. If the proposal is to allow for overland flow, there is no discussion of potential groundwater impacts. There is also no discussion of how all the various reagents will react if they are all mixed together in the ECS.

It is unclear if the ECS actually has a sump pump, and if so, to where the ECS water is pumped. CJK must specify how it will remove water from the ECS after precipitation and runoff events, and where that water will be discharged or stored.

c. Filtered Tailings Deposit (FTD)

A significant change from the previous application appears to be the proposed change in the FTD liner system. CJK is proposing to use a geosynthetic clay liner topped by an HDPE liner for the FTD, rather than a double HDPE liner with a leak detection system, purportedly due to the fact that the samples taken from the source material (Penn Mine Group Dumps east of Leadville) were run through a laboratory-scale milling process and analyzed. According to the analysis CJK performed, the milled MDM material tested below RCRA thresholds for the constituents to be considered hazardous. Therefore, CJK proposes to use 24-inch clay or geosynthetic clay liner, over prepared subgrade, followed by HDPE liner and drainage blanket for leachate collection system. Per the Mining Plan:

> "The results indicate that the tailings generated via the current Leadville process meet all criteria as non-hazardous wastes under RCRA, meet all acceptance criteria by Lake County, and pose minimal risk to the physical environment and local groundwater when applying best available management practices in concert with accepted industrial standards for sampling and performance monitoring." (Mining Plan, 4-82).

These determinations and changes raise several concerns.

It appears that the FTD no longer includes a leak detection system, instead, any leachate is conveyed into a containment pond which transports water back into the mill for processing.

There is no discussion of the sampling techniques or reports that would demonstrate the samples are representative of the Penn Mine material as a whole.. Considering the mining and reclamation plans both rely on the lab analysis conclusion, CJK should be required to provide the sampling collection methods and explain how they provided data that is representative of proposed operations.

The plan also states that "further testing" will be performed to confirm characterization of waste. However, CJK has not submitted a sampling plan for review and comment. Therefore, the application should be denied or a sampling plan should be required before further review of the application.

Also, CJK indicates that it may process material from other locations. The plan contains no discussion of the potential toxicity of those materials or how they will be assessed and managed to prevent hazardous waste from entering the FTD.

The asserted full capacity of the FTD is 500,000 tons, "which provides approximately 3.5-to-4 years of storage assuming full plant production." (Mining Plan, 4-88). The life of the facility described in CJK's public notice is ten years. CJK should clarify the life of the facility and describe whether the FTD capacity will be adequate.

2. Reclamation Plan

Upon closure of the mill, all open but unused reagents will be added to process water and dumped in the ECS. The ECS water will be sprayed on the liner walls and allowed to evaporate, then residue will be buried through backfilling the entire ECS. Again, there is no discussion of potential reactions from mixing reagents and combining them in the ECS. The Application does not address potential impacts to air quality resulting from the evaporation of reagents from the ECS, nor does it assess the potential need for an air quality permit for this activity and no APEN is included with the Application.

The overall process for closure appears to be placing everything into the ECS and burying the ECS. "Solutions in the leach tanks are drained from the leach tanks into the ECS. Note all leach tanks have a tap at the bottom where a hose is connected. The tanks will mostly drain via gravity." (Reclamation Plan, 5-8). The Mill building itself will remain, but the concrete structures will be demolished and deposited in the ECS. There is no discussion of how throwing concrete debris into the ECS may impact the HDPE liner's integrity.

There is no discussion of what will happen to the FTD Collection Pond, which will supposedly remain in place after closure. Under the Mining Plan, the Collection Pond water is routed via gravity and piping back to the mill reclaim tanks for use as processing water. The volume of the Pond is 170,000 gallons (roughly ½ an acre foot). The Collection Pond will contain FTD leachate, and its volume is insufficient to permanently contain the volumes that will accumulate from FTD stormwater and snowmelt runoff.

CJK's Reclamation Plan will potentially result in a 500,000 ton tailings waste pile within several hundred feet of numerous residential properties and the headwaters of the Arkansas River. CC4LC strongly believes this potential hazard is by itself reason enough to deny CJK's application. At the very least, should the Division decide not to deny the Application, CJK must be held to strict proof that its reclamation plan eliminates all risk of contamination of the nearby residential domestic wells and the Arkansas River.

Additionally, CJK proposes to leave the FTD on the Mill property forever. Again, should the Division decide not to deny the Application, the Division must require CJK to perform regular monitoring events, including groundwater sampling, of the surrounding area to ensure no migration of contaminants from the FTD. CJK should be held responsible for continued

management and monitoring of the FTD so the State does not have to bear the burden of remediation should it be necessary.

3. Exhibit G - Water Information

Per the Mining Plan, all emergency spillage that exceeds operating secondary containment capacities in their respective areas of the plant will migrate to the ECS. The Mill will shut down and treat all ECS water in the event any process water reports to the ECS. (7-11). The water treatment process is explained only to the extent that it will be treated through the cyanide detoxification process and be used as recycled process water.

The identified water sources are one of three options:

- On site well
    - It is unclear what well CJK expects to use. The wells on the property are currently only monitoring wells. CJK does not identify any water rights that could withdraw groundwater for milling operations.
- Leadville Sanitation
    - Per the Leadville Sanitation District's (LSD's) minutes for the Board meeting held on December 14, 2023, the District has already voted against allowing CJK to tap into its nearby water line.
- Parkville Water District
    - This option also purportedly relies on using the LSD's supply line to get water to the property.

Considering the anticipated water demand for this proposal, CJK should demonstrate an adequate water supply prior to its application moving forward.

The Application asserts that "the facility will operate under a significant deficit and therefore all direct collected precipitation and snowmelt could be consumed . . .this approach could virtually eliminate accumulation and/or evaporative losses and therefore eliminate the need for augmentation plans for consumptive industrial uses." CJK's proposal appears to be to collect any precipitation and/or snowmelt in the on-site containment ponds, including the ECS, and use the water either in the milling process, for dust control, or for revegetation purposes.

This approach presents several issues. First, if CJK's proposal is to use water from the on-site containment ponds, including the ECS, it is proposing to use potentially contaminated water (from the FTD collection pond or the ECS), to spray directly on the ground for either revegetation or dust control. CJK also proposes to use the ECS water for fire protection, which would result in discharge of the ECS water all over the property. CJK must demonstrate its ability to mitigate the effects from discharging potentially contaminated water directly onto the ground, and that any pollutants will not migrate through the groundwater and impact the numerous nearby residential wells.

Second, any consumptive use of water in the Arkansas River Basin will require an augmentation plan to replace depletions to the Arkansas River. CJK's collection of precipitation and runoff in its lined containment ponds will result in depletions to the Arkansas River, regardless of whether CJK allows the water to evaporate or incorporates it into the milling process. CJK must demonstrate its anticipated consumptive use depletions and why an augmentation plan will not be required under Colorado law.

4. Cyanide Management Plan

The Cyanide Management Plan states that the "Pregnant solution pond and barren pond" will be fenced to prevent contact with wildlife (CMP 24.5.1). There is no mention of either of these ponds in the Mining Plan, but an open cyanide-bearing pregnant solution pond presents a whole range of issues CJK does not address.

The remainder of the plan is just a recitation of the general procedures that will be followed to protect employees handling cyanide during mill operations. There is no specific discussion of safe storage practices or secondary containment outside of a statement that CJK will "ensure that cyanide handling and storage is upheld to a standard consistent with the Cyanide Code and all federal regulations" (CMP 24.5.3). As discussed above, cyanide is an extremely hazardous substance that CJK proposes to use within several hundred feet of numerous residential properties. CJK should be required to specifically describe its cyanide management and storage plan in greater detail than just generally referencing the "Cyanide Code."

5. Exhibit S – Permanent Man Made Structures

Exhibit S shows the structures within 200 feet of the affected area proposed in the permit, and includes an engineering report in support of the conclusion that there is "negligible risk" to nearby properties. The engineering report briefly describes the possibility of FTD failure, specifically that the moisture content test for the FTD materials concluded "that even after being exposed to extreme vibration, only minor deformation [of the FTD] would be observed." CJK should be required to further explain the possible "minor deformation" that may occur to the FTD and how such deformation may impact the FTD liner and collection pond to analyze the risk of contaminated materials settling on unprotected soil outside the anticipated boundaries of the FTD.

6. Exhibit U - Designated Mining Operation Environmental Protection Plan

Per the discussion above, the Environmental Protection Plan states that "water, if purchased from Parkville Water District will be supplied using a portion of the water line that is owned by Leadville Sanitation District." As discussed above, the Leadville Sanitation District has denied use of its water line.

The EPP states that "remaining process chemicals will be disposed offsite in a federally licensed facility. Other disposal management activities, if required, will be subject to a CDRMS Technical Revision (TR) prior to implementation" (EPP, 21.6). This conflicts with the

Reclamation Plan, which states that at least some of the remaining process chemicals will be dumped in the ECS.

During closure, the EPP states the processed MDM as well as residual MDM (200 tons maximum) in the MDM bunker will be placed in the FTD. The hazardous constituent content of the remaining MDM is not discussed. The EPP also relies on the "non-hazardous" findings of the lab analysis of Penn Mine Dump samples (with no further explanation on sampling technique or methodology).

A potentially significant gap is in the EPP "Other Permits" section, there is no discussion of the permitting or necessary approvals for actually excavating within the Penn Mine Dump site or other locations. The Application mentions that another permit for that activity will be necessary, but provides no other insight into that permit or the permitting process.

7. Rule 6. 5 : Geotechnical Stability

Rule 6.5 requires permit applicants to "provide engineering stability analyses for proposed final reclaimed slopes, highwalls, waste piles, embankments, and ore leach facilities" and "where there is the potential for off-site impacts due to failure of any geologic structure or constructed earthen facility, which may be caused by mining or reclamation activities, the Applicant shall demonstrate through appropriate geotechnical and stability analyses that off-site areas will be protected with appropriate factors of safety incorporated into the analysis." 2 C.C.R.. § 407-1:6 (6.5). CJK has not yet provided a geotechnical study of the FTD and milling area, nor demonstrated the stability of the FTD slopes after reclamation.

Relatedly, the Mining Plan states the filter cake "is anticipated" to have a hydraulic conductivity of 1x10-5cm/sec to 1x10-6cm/sec, which will prevent infiltration of snowmelt and precipitation into the FTD. CJK should be required to demonstrate the hydraulic conductivity and overall stability of the materials stored in the FTD to prove that the FTD will remain stable after the reclamation phase and that there is no chance of slope failure that could impact nearby properties. Moreover, CJK should be required to demonstrate actual hydraulic conductivity of the FTD as materials are deposited and upon closure of the site.

The Application should not be considered complete without CJK's submittal of the geotechnical stability report required by Rule 6.5.

8. Other Comments and Objections

CC4LC may further assert any comment or objection submitted by others and may assert additional comments or objections as new information is developed or produced.

Conclusion

This is the third time this applicant has submitted an application to restart operations at the Leadville Mill. The comments provided above demonstrate that the Application is inadequate to assure safe operation of the proposed cyanide leach mill. The continued inadequacies across all versions of the Application strongly suggest the proposed cyanide leaching operation is wholly incompatible with the numerous nearby residential properties. Due to the material threat posed by the proposed operation, we strongly urge the Division to reject the Application. The Applicant should not be allowed to proceed with a cyanide leach milling operation next door to residential properties. If the Division declines to deny the Application, we request that the Division require submission and further consideration of additional materials intended to address the comments provided above.

We thank the Division for consideration of the comments provided in this letter. Please feel free to contact me with any questions about these comments.

Sincerely,

Burns, Figa & Will, P.C.

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Peter D. Jaacks, Esq.