

August 26, 2021

Steve Craig
Union Milling Company, LLC
P.O. Box 620490
Littleton, CO 80162



1313 Sherman Street, Room 215
Denver, CO 80203

RE: Leadville Mill, Permit No. M-1990-057, Objection to CN-01 Application

Mr. Craig:

On August 24, 2021 the Division of Reclamation, Mining and Safety (Division) received an objection to your conversion application (CN-01) from Welborn, Sullivan, Meck and Tooley, P.C. on behalf of Leadville Sanitation District. The objection is attached to this letter.

Please provide your response, to the jurisdictional issues presented in the objection, to the Division by September 24, 2021.

If you require additional information, or have questions or concerns, please contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Dustin Czapla'.

Dustin Czapla
Environmental Protection Specialist
Division of Reclamation, Mining and Safety
Phone: (303) 866-3567, ext. 8188





August 24, 2021

**Via First Class U.S. Mail and
Email (Dustin.Czapla@state.co.us)**

**DRMS RECEIVED:
8/24/2021**

Mr. Dustin Czapla
Division of Reclamation, Mining and Safety
1313 Sherman Street, Suite 215
Denver, Colorado 80203

Re: Objection to Application of Union Milling Company, LLC
Leadville Mill – File No. M-1990-057
Permit Conversion Application (CN-1)

Dear Mr. Czapla:

On behalf of the Leadville Sanitation District (“District”), I am writing to object to the Permit Conversion Application filed by Union Milling Contractors, LLC (“Applicant”) for the Leadville Mill owned by CJK Milling Company for the reasons set forth below.

The Applicant, which operates the Leadville Mill, plans to significantly increase the size, scope and impact of its current operations. Its proposal to convert its 110d permit to a 112d permit involves doubling the capacity of ore processed from 200 to 400 tons, expanding the Tailings Storage Facility (“TSF”), and adding cyanide vat leaching.

The Leadville Sanitation District owns and operates wastewater treatment facilities servicing Leadville and surrounding communities. The District’s facilities are located adjacent and immediately to the east of the Leadville Mill. The District has a sewer line that runs through the site of the Mill and a polishing pond that lies within 200 feet of it. Other District facilities are located nearby on the District’s property. The District is concerned about the impacts this permit conversion and expansion will have on its water treatment operations. A memorandum prepared by JVA Consulting Engineers (“JVA Memo”) explaining some of the District’s technical concerns is attached as **Exhibit A**.

Water Quality

The District’s Colorado Discharge Permit System (“CDPS”) permit from the Colorado Department of Public Health and Environment (“CDPHE”) requires the District to sample and {00907008.1}

analyze effluent for the following pollutants: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, zinc, cyanide, and phenols. The District spends significant amounts of time and money trying to comply with its discharge permit and cannot afford to have its operations jeopardized by any nearby activities that might impact its ability to meet CDPHE's strict permit limits.

The District is also operating under Cease and Desist Order No. DO-181109-1 dated November 9, 2018, issued by CDPHE and requiring the District to comply with permit effluent limitations, specifically for the 30-day average mercury limit of 0.077 µg/L. Low level mercury is present throughout Leadville in the soil, water, and air due to historic mining operations. The District is concerned that the Applicant's proposed increased operations will only make it more difficult to meet the CDPS permit limits and comply with CDPHE's Cease and Desist Order. *See JVA Memo.*

In addition, as noted in the JVA Memo, the Applicant proposes in Table 5-2 to report contaminants in mg/L. The District's permit limits are stated in µg/L. The Applicant's testing may miss reporting some contaminants that are not detected because the reporting limits are not as refined. The Applicant should also test and report in µg/L.

Cyanide

Although processing gold ore with cyanide may be standard in the industry, it is not without risk. The Material Safety Data Sheet ("MSDS") for sodium cyanide shows it to be identified with the following hazards: corrosive to metals, acute oral toxicity, acute dermal toxicity, acute inhalation toxicity, and specific target organ toxicity (single exposure). It is fatal if swallowed, in contact with skin, or inhaled. It is also "[v]ery toxic to aquatic life with long lasting effects." Application, Appendix 21-2. There have been a number of serious incidents around the world involving cyanide spills and leaks. The amount of sodium cyanide the Applicant proposes to use, 1,600 pounds per day, is not insignificant. Application, Exhibit D, Table 4-6. The mere fact of the next door neighbor using so much cyanide gives the District concern.

In addition, the District is concerned that the Applicant has not demonstrated that it has significant experience working and processing ore with cyanide. Showing a high level of expertise should be required before approving the permit conversion.

Air Quality

The Applicant's expanded operations and handling of ore threaten to impact the District's wastewater treatment facility with airborne heavy metals and toxic particulates in the form of fugitive dust leaving the Applicant's property. To the District's knowledge, although the Leadville Mill may have been permitted to process 200 tons per day, it rarely ran continuously at anything

near that amount of throughput. The amount of particulates leaving the Mill property will be much higher than it ever was in the past.

Section 4.2.6 of the Application addresses dust control, but only within the Mill buildings. The Application also indicates that two ore stockpiles will be located immediately to the west of the District's polishing pond. Application, Exhibit C, Figure 3-3. The District is concerned that handling large amounts of ore outside will lead to dust blowing onto its polishing pond and aeration basin, potentially impacting its water quality and operations.

Dust from the road running next to the District's property boundary and polishing pond is also a concern. At a minimum, this road should be paved. The District is already hard pressed to meet compliance limits imposed by CDPHE. *See JVA Memo.*

Tailings Storage Facility

The Application indicates that the TSF will be completed in the spring of 2021. Was it? It will also be based on stability analysis performed by CTL Thompson a decade ago. Application, Exhibit D, Section 4.3, and Appendices 22-5 and 22-6. The District has concerns about whether the work was done according to plan and whether such old engineering is sufficient. Moreover, the technical specifications for the TSF, including its liner, are not as robust as those for solid waste facilities elsewhere that contain materials less hazardous than those the Applicant will be handling. The District is concerned that the TSF could fail, leading to leakage of contaminants into groundwater and the District's collection system. *See JVA Memo.*

The Application states that a leak detection system for the TSF will be installed in the spring of 2021. If cyanide leachate is detected in groundwater, then the groundwater will be pumped back into the impoundment and DRMS will be notified within 48 hours. Section 4.3.6 of the Application does not say anything, however, about stopping operations or fixing the leak.

The District also understands that there was a recent rain event that caused one of the Applicant's ponds partially to collapse. Such an incident concerns the District about the Applicant's ability to build and operate expanded milling in a way that will not affect the District's facilities.

Seismic Impacts

The District is also concerned about the potential damage to its facilities from the Applicant's seismic activity. The District's wastewater treatment facility consists of a headworks for screening and grit removal, two aeration basins, two covered clarifiers, a polishing pond, and a chlorine contact chamber for disinfection. The Applicant's operation of heavy crushing equipment next door to the District's infrastructure threatens to crack foundations and pipelines that the District needs to operate its water treatment facilities. The District is further concerned

that the new crusher facility and doubling the permitted crushing capacity on the Applicant's property could destabilize the Tailings Storage Facility. *See* JVA Memo.

As explained in the JVA Memo, the District is under a compliance schedule to reduce inflow and infiltration into its collection system. The increased seismic activity nearby could also affect the District's efforts to reduce inflow and infiltration. Damage to the collection system could result in seepage of wastewater into the ground.

Again, the most recent analysis on geotechnical stability dates from 2011, a decade ago and well before the Applicant's recent proposal to increase the size of its operations. Application, Appendices 22-5 and 22-6.

Access Agreement

The District understands that the Applicant does not have access to its property for the operations that it plans. As shown in Figures 3-1 and 3-2 in the Application, Al Phillips owns the strip of land between the Applicant's property and Highway 24. He previously gave permission orally to the Applicant's predecessor allowing access but told the Applicant that he would allow access across his land only for 200 tons of material (not 200 tons per day). The fact that the Applicant does not have legal access to its property for the expansion of operations is another reason the permit conversion should be denied.

In addition, the Applicant does not have permission from the Colorado Department of Transportation to truck 400 tons per day of ore into its property. For so much truck traffic it may be necessary to install a deceleration lane on Highway 24, which may have to be built on Mr. Phillips's land. He objects to the taking of his land for such construction.

Financial Warranty

Under Rule 1.11.2 of the Mined Land Reclamation Board, "[a]ll warranty and permit processing requirements shall apply as though the Conversion application were a new permit application." The Applicant has not demonstrated in its Application that the amount of the financial warranty will be sufficient to cover reclamation, especially if there is leakage or other problems at the facility.

Rule 4.2.3 provides that "[t]he conversion of any 110 Permit into any 112 Permit shall require a Financial Warranty in an amount equal to the estimated cost of reclamation." In Section 12.1 of the Application the Applicant estimates that reclamation will cost \$77,258, but in Appendix 12-1 it estimates the total reclamation cost to be \$85,636 and leaves a blank for the cost for cyanide and "OTHERS?" for monitoring wells. Regardless of which of these numbers is the one proposed, anything under \$100,000 seems wildly optimistic for reclaiming a major milling site and ensuring that the District and other neighbors will not be stuck with paying for any environmental damage

caused by the Mill. C.R.S. § 34-32-117(4) (financial warranty should cover water quality protection, treatment and monitoring).

In addition, the Application does not address how long the financial warranty will remain in place and what conditions must be met in order to release it. The Applicant should not be able to walk away from the site simply after capping the TSF. There should be ongoing monitoring of water quality for a long period of time after operations have ceased to ensure that residual cyanide leachate or other pollution is not affecting the District or surrounding community.

Further, Rule 6.4.19 applies because the Applicant's affected lands lie within 200 feet of a significant, valuable and permanent man-made structure, namely the District's polishing pond and sewage pipeline infrastructure. Rule 6.4.19 provides that the Applicant must do one of three things: (a) provide a notarized agreement between the Applicant and the person having an interest in the structure for compensation for any damage done; (b) where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation demonstrating that the structure will not be damaged by the Applicant's activities; or (c) where the structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, that the Applicant's activities will have "no negative effect" on the utility. First, there is no agreement between the Applicant and the District. Second, the Applicant has not provided any engineering evaluation referring to the District's polishing pond or sewage pipeline infrastructure. Third, the District does not agree that the Applicant's operation will have no negative effect and has not supplied any letter to that effect. The Application should be denied for failure to comply with Rule 6.4.19.

A further concern relates to the complicated and opaque corporate structure of the Applicant and the owner of the Leadville Mill, which also dictates that a sufficient financial warranty be posted for as long as it takes to assure there is no environmental damage.

Transparency of Communications

The Applicant has not been forthcoming or transparent about describing its plans for expansion. On November 19, 2020, the Applicant sent the District a letter asking the District to sign a Structure Agreement without any explanation about what the Applicant was planning to do. Instead of just signing the agreement, the District asked for information about the Applicant's plans for expanding its operations. The Applicant said that it would send information later, but the District received nothing. Instead, the District learned for the first time about the revised Application involving cyanide processing through a newspaper article in July 2021. To date the District still has not received current information about the Applicant's plans from the Applicant. Good neighbors talk to each other. The Applicant has not been a good neighbor.

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For the reasons set forth above and others yet to be determined, the Leadville Sanitation District requests that the Permit Conversion Application be denied.

Very truly yours,

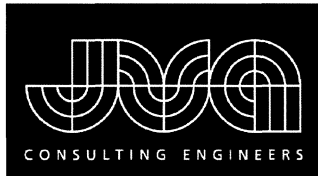
A handwritten signature in blue ink that reads "Stephen Bain". The signature is written in a cursive, flowing style.

Stephen A. Bain

Enclosure -- JVA Consulting Engineers Memorandum
cc: Joseph Fattor

EXHIBIT A

JVA Consulting Engineers Memo



www.jvajva.com

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970.404.3100

☐ **Denver**

1512 Larimer Street
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Denver, CO 80202
303.444.1951

M E M O

TO:	<u>District Board</u>	DATE:	<u>August 24, 2021</u>
FIRM:	<u>Leadville Sanitation District</u>	JOB NO.	<u>1119.2e</u>
ADDRESS:	<u>911 US-24</u>	PROJECT:	<u>Union Milling Permit M1990-057 (Version 4)</u>
	<u>Leadville, CO 80461</u>	SUBJECT:	<u>Objections</u>

Dear District Board,

JVA has reviewed the CJK Milling Company Leadville Mill (Mill) Permit M1990-057 dated March 2021 and developed a list of objections based on potential impacts and detrimental effects to the Leadville Sanitation District's (District) Wastewater Treatment Facility (WWTF) and sanitary sewer collection system. The Mill is located directly west of the District's WWTF and was constructed in 1989 and operated through 2000 as a stand-alone facility. The District's sanitary sewer collection system runs through the northern part of the property.

In review of the Mill permit, JVA understands the Mill will be reconfigured to use conventional agitated leaching, using sodium cyanide from low-grade vein dumps (RoM) located nearby. The Mill will truck in ore and process it onsite in a new crusher building. Three ore stockpiles, one topsoil stockpile and one Tailings Storage Facility (TSF) overburden stockpile will be constructed onsite. No mining operations onsite are planned and no explosives will be used. The new crushing building which will house the trommel/crusher will operate 8 hours per day. This operation and potential seismic activity represent a potential risk of damage and/or failure of the District's sewer collection system that runs through the property as well as multiple concrete structures located at the WWTF.

The District collects and treats wastewater from downtown Leadville as well as developments located west of Leadville. Wastewater flows by gravity through the collection system to the WWTF. Figure 1 below shows the District's existing sanitary sewer line that could be directly impacted by the new crushing facility.

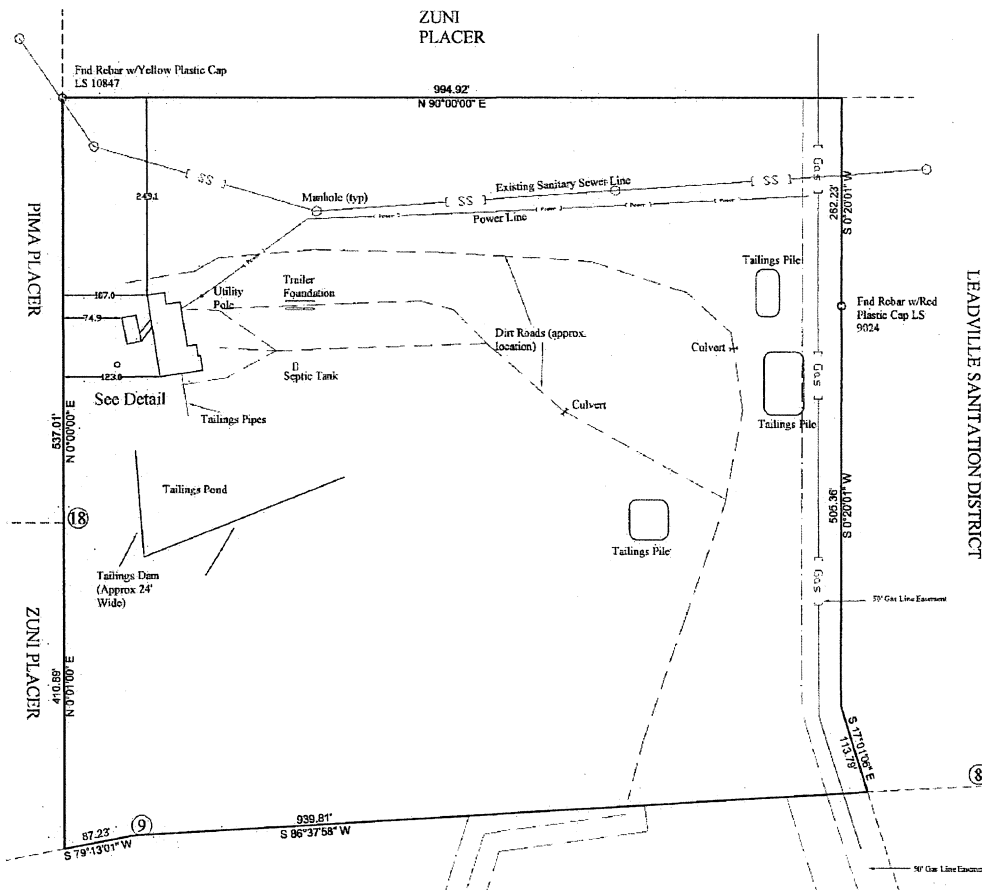
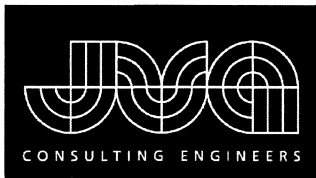
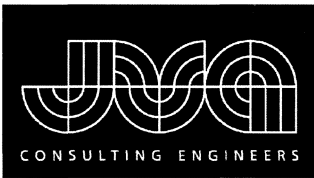


Figure 1. Existing Sanitary Sewer line.

The District is currently under a compliance schedule to reduce inflow and infiltration into the collection system. Inflow is water, other than wastewater, that enters a sewer system from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross sections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters or other drainage. Inflow does not include, and is distinguished from, infiltration. Infiltration is water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

The new crushing facility could impact the collection system by disturbing the manholes, pipes and service lines resulting in an increase in the infiltration of groundwater into the collection system. This increase in infiltration is in direct conflict with the CDPHE compliance schedule to reduce inflow and infiltration into the collection system. Damage to the collection system could also result in exfiltration or seepage of wastewater into the ground.

The District is also under the Colorado Department of Public Health and Environment (CDPHE/Division), Water Quality Control Division Notice of Violation / Cease and Desist Order, Number: DO-181109-1 (NOV/CDO) dated November 9, 2018. The NOV/CDO cited a failure to comply with permit effluent limitations, specifically for the 30-day average mercury limit of 0.077 ug/L. The District is required to follow a compliance schedule to identify sources of



mercury to the WWTF and implement strategies to control sources so that compliance with the total mercury effluent limitation could be attained.

Low level mercury is present throughout Leadville in the soil, water and air due to historic mining operations. The potential for increased infiltration into the sewer collection system as previously stated from the new crushing facility could increase mercury concentrations to the WWTF resulting in effluent compliance issues for low level mercury.

The District's WWTF consists of a headworks for screening and grit removal, two aeration basins, two covered clarifiers, a polishing pond, and a chlorine contact chamber for disinfection. Nearby seismic activity from the proposed Mill could have detrimental effects to the existing WWTF structures that are required for wastewater treatment and permit compliance.

The WWTF operates under the Colorado Discharge Permit System Permit Number CO0021164. The District's permit establishes effluent limits for potentially dissolved copper and cadmium ranging from 1.1 to 1.6 ug/L depending on time of year. The permit limit for total mercury is 0.077 ug/L. The permit also establishes limits for potentially dissolved zinc ranging from 2658 to 480 ug/L depending on time of year.

The permit also requires the District to report effluent limits for an extensive list of pollutants including arsenic, chromium, copper, cyanide, iron, lead, manganese, molybdenum, nickel, selenium, silver, uranium, sulfide, nonylphenol, cesium, radium, strontium, thorium, BTEX and benzene. The permit requires only reporting for the previously listed metals so that the Division can review the data and develop potential discharge limits on future discharge permit renewals.

Since the Mill is located directly adjacent to the District's WWTF, the wind transport of metals from trucks entering and leaving the facility as well as ore, topsoil and overburden stockpiles and dust from the crushing facility could have detrimental effects and possibly contaminate the open air basins at the WWTF. Effects could be seen immediately or could occur over a period of time since the District has extremely low level metals limits in ug/L and is required to monitor metals on a frequent basis in the wastewater effluent and report this information to CDPHE.

Also, it's important to note that the tailings detection limits per Table 5-2 below are in mg/L for the metals listed while the District's permit limits are in ug/L. If the Mill is only required to test the tailings to mg/L, they could be reporting non detectable values because of the test methods utilized are not capable of measure to low level ug/L limits. It's recommending the testing and reporting of all metals for the Mill be changed to ug/L.

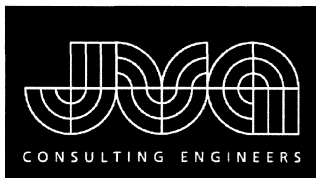


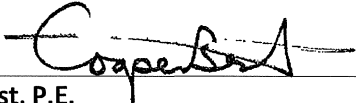
TABLE 5-2: ANALYTE REPORT (FORM)

Analyte	Detection Limit ¹ (mg/L)	Observed Value ² (mg/L)	XRF Baseline ³ (ppm)
Antimony (Sb)		ND	ND
Aluminum (Al)		ND	ND
Arsenic (As)		ND	ND
Barium (Ba)		ND	ND
Beryllium (Be)		ND	ND
Boron (B)		ND	ND
Cadmium (Cd)		ND	ND
Chromium (Cr)		ND	ND
Cobalt (Co)		ND	ND
Copper (Cu)		ND	ND
Cyanide [Free] (CN)		ND	ND
Fluoride (F)		ND	ND
Iron (Fe)		ND	ND
Lead (Pb)		ND	ND
Lithium (Li)		ND	ND
Mercury (Hg)		ND	ND
Manganese (Mn)		ND	ND
Molybdenum (Mo)		ND	ND
Nickel (Ni)		ND	ND
Total Nitrate+Nitrite		ND	ND
Selenium (Se)		ND	ND
Silver (Ag)		ND	ND
Zinc (Zn)		ND	ND

The Mill proposes a new lined Tailings Storage Facility (TSF). If the TSF fails, which has been seen at other facilities, metals could be leaked into the groundwater and into the collection system resulting in significant issues with wastewater effluent compliance for the District.

Lastly, the Mill is proposing to use a lift station for the sanitary sewer waste. This is in direct conflict with the District Rules and Regulations as the District does not allow lift stations. Another concern is low level metals from employees washing their hands as this wastewater would enter the District's sanitary sewer collection system and flow to the WWTF.

This summarizes our review of the Mill permit and objections based on our understanding of the proposed Mill and operations.

Signed: 
Cooper Best, P.E.
Senior Project Manager

Copies to: Steve Bain – Welborn Sullivan Meck & Tooley, P.C.

Joseph Fattor – District Attorney