

## Kimberley Murray

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**From:** Mining Coordinator <miningcoordinator@liidliikue.com>  
**Sent:** Tuesday, September 26, 2023 7:50 PM  
**To:** Kimberley Murray; exdir@liidliikue.com  
**Cc:** chief@apitipi.ca; miningcoordinator@liidliikue.com; Sam.kennedy@canada.ca; sam.kennedy@rcaanc-cirnac.gc.ca; Chan, Vicki  
**Subject:** LKFN written submission on MV2023L2-0006 Type A Water License Renewal Application for the Cantung Mine  
**Attachments:** LKFN-MVLWB-Sept-26-2023.pdf; LKFN\_Cantung\_DSR\_TechnicalReview\_2023.07.05.pdf

Kim,

Please see the attached submission from Łíídlıı Kúé First Nation (LKFN) on Type A Water License Renewal Application MV2023L2-0006 for the Cantung Mine.

Please note that with this submission LKFN is not requesting a public hearing on the License Renewal Application.

Regards,

Andrew Bubar  
Mining Coordinator  
Łíídlıı Kúé First Nation  
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Lı́ıdlıı Kúé First Nation

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September 26, 2023

Kimberley Murray  
Regulatory Specialist  
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**Re: Lı́ıdlıı Kúé First Nation Written Intervention on MV2023L2-0006 Type A Water License Renewal Application for the Cantung Mine**

Lı́ıdlıı Kúé First Nation (LKFN) is writing to recommend the renewal of Type A water license MV2015L2-0003 for the Cantung Mine which is currently under review under file number MV2023L2-0006. LKFN recognizes that this renewal is primarily an administrative process while North American Tungsten Ltd. (NATC) advances the application for a new Type A water license for the Cantung Mine (Cantung) to replace this permit.

LKFN also wishes to express our interest in NATC completing final closure and remediation of Cantung as soon as possible. The existing site is a significant environmental liability that continues to impact our members' ability to exercise their rights, and can foster a more serious environmental disaster if not closed properly. While we are concerned with all the unremediated mine features on site, we note our concern with the mine tailings stored on the banks of the Flat River.

LKFN recently submitted a review of the 2022 Dam Safety Report for Cantung which we have included with this submission. We have included this review to point to the importance of focussing on the final closure of the site rather than on this license renewal and request that the Board facilitate all parties focussing on final closure of the site through renewal of type A water license MV2015L2-0003.

Mahsi,

Dieter Cazon  
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# Líidlii Kúé First Nation

July 5, 2023

Sam Kennedy  
Project Officer  
Crown-Indigenous Relations and Northern Affairs Canada  
Sam.kennedy@canada.ca

**Re: Líidlii Kúé First Nation Review of North American Tungsten Corporations Ltd.  
Cantung Mine Tailings Storage Facilities 2022 Dam Safety Review**

Dear Mr. Kennedy,

North American Tungsten Corp Ltd. and their court appointed monitor Alvarez & Marsal Canada Inc. (collectively referred to as NATC) recently issued the 2022 Dam Safety Review (DSR) for the Cantung Mine Tailings Storage Facilities (TSF). The DSR is a requirement of Part G Item 26 of Water License MV2015L2-0003, which states that a DSR must be undertaken once every five years by an independent qualified engineer. NATC retained SRK Consulting as the independent engineer to undertake the dam safety review.

The TSFs at the Cantung Mine are amongst the most concerning aspects of the Cantung Mine for Líidlii Kúé First Nation (LKFN). Our community is downstream of the TSFs and the Cantung Mine itself is within our Traditional Territory, the Dehcho territory and in an area where LKFN members exercise our Treaty and Aboriginal rights. The proper, safe and permanent closure of the Cantung Mine, especially the TSFs, is important for our Nation. We require the final closure of the TSFs to be done in a manner that provides our members with confidence that our ability to exercise our rights will be protected indefinitely.

The DSR is a valuable document that builds on our previous comments on the other documents for the Cantung Mine, such as the Failure Modes and Effects Analysis (FMEA). LKFN has reviewed the DSR with our previous comments in mind, with a lens of long-term protection of our rights and interests, and to inform our future engagement on the Cantung Mine as NATC advances the project towards final closure.

LKFN requests that NATC provide a written response to this memo that can be addressed to Dieter Cazon ([resources@liidliikue.com](mailto:resources@liidliikue.com)) and Andrew Bubar ([miningcoordinator@liidliikue.com](mailto:miningcoordinator@liidliikue.com)).

## Summary of Key findings

- There are five TSFs at the Cantung site. These include TSF1 and TSF2 constructed in the 1960s, TSF3 and TSF4 in the 1970s, and TSF5 in 2013. The two historic tailings (TSF1 and TSF2) are located near the Flat river and covered with 1-3m of fill. TSF3, TSF4, and TSF5 are all uncovered.
- A site visit was conducted by SRK (a consulting company) from September 14 to 16, 2022 to evaluate the performance of the TSF and associated water management infrastructure. The evaluation was focused on compliance and identifying deficiencies/opportunities for improvement.
- Site inspections found erosion gullies from rain and snowmelt on all TSFs except TSF5. There is also wind erosion blowing tailings out of TSF3 and TSF4.
- The key hazards identified in the report are snowmelt, precipitation, flooding, wind, climate change, and earthquakes. Potential failure modes for the TSFs are:
  - Risk of failure during an earthquake (TSF1 – TSF4)
  - Inadequate flood storage (TSF3 – TSF5)
  - Washout of the dam during flooding of the Flat River, leading to dam collapse (TSF1 – TSF4).
- Based on the deficiencies identified SRK has made several recommendations in the report.
- SRK has also recommended that the dam consequence classifications (DCC) for the Cantung mine be raised from ‘Significant’ to ‘High’ to reflect the increased cultural and societal concerns that have been raised in the last 5 years.

## Comments and Recommendations for NATC

#	Reference	Comment	Recommendation
1.	General Comment	<p>As noted in previous comments made by LKFN (see Appendix A), we are highly concerned about the risks to TSFs 1 – 4 associated with scouring and erosion of the embankments caused by the Flat River. In our view, this is the most likely failure mode given the annual flooding during freshet. This flooding is only expected to increase with climate change, increased precipitation, and faster spring melt.</p> <p>Furthermore, as occurs in most rivers, the Flat River is subject to evolution of the channel form within the floodplain. Over time</p>	<p>LKFN requests that a detailed fluvial geomorphological study on the Flat River be conducted to identify the rate and range of lateral migration in the channel. This information can be used to better understand the potential risks associated with scouring of the tailings embankments and support development of appropriate mitigation measures.</p>

		this will cause the channel to migrate throughout the floodplain, eroding materials and creating additional risk to the tailings dam embankments.	
2.	Table 7-1	The deficiencies noted by SRK represent potential risks if not adequately remediated. LKFN wishes to ensure that these deficiencies are dealt with appropriately and that our community is informed of progress.	<p>a) LKFN requests annual updates on the progress made for recommendations in table 7-1. These updates can occur through the already established Cantung Communities Working Group</p> <p>b) LKFN requests NATC commit to completing all recommendations that SRK be completed within 12 months within the timeline proposed by SRK.</p>
3.	Table 7-1, item 2022DSR-09	SRK has recommended that an updated review of a TSF breach on environmental, health, socioeconomic, and cultural values be completed. LKFN agrees with this recommendation but notes that this review should be led by the potentially affected communities rather than by NATC.	LKFN requests that NATC provide funding to the affected communities so that an updated review of the effects of a TSF breach can be completed.
4.	Table 7-1	As part of the recommendations made by SRK, there are several small-scale construction projects. These include grading the crests of TSF embankments (2022DSR-24), constructing safety berms (2022DSR-27), relocating stockpiled tailings in TSF3 (2022DSR-34), clearing vegetation (2022DSR-23) etc. These are all opportunities that may be suitable for LKFN's development corp, Nogha Enterprises Ltd., to undertake.	LKFN requests that NATC work with Nogha Enterprises Ltd. to identify any scopes of work that may be suitable for them to undertake through sole source contracting.
5.	Executive Summary	SRK has recommended that the dam consequence classifications for the Cantung mine be raised	a) LKFN strongly recommends that NATC adopt the dam consequence classification

		<p>from ‘Significant’ to ‘High’. LKFN strongly supports this change and would like NATC to adopt this change as soon as possible.</p>	<p>change proposed by SRK in the DSR, and that NATC modify all monitoring and maintenance activities on site in accordance with the requirements of a dam with a High DCC.</p> <p>b) LKFN requests that NATC facilitates the participation of our LKFN guardians in future dam safety inspections.</p>
6.	Table 5-1	<p>SRK noted substantial volumes of windblown from TSF3 and TSF4. At the most recent CWG meeting NATC mentioned that they intend to apply SoilTAC to control the windblown tailings in the short term. It is unclear how NATC intends to manage windblown tailing prior to initiating final closure of the mine, especially given the plans for a reduced presence on site. LKFN notes that the total volume of windblown tailings is likely hard to assess as it is easily observed on the embankments and much more difficult to observe in vegetated areas further from the TSFs. Given that it will likely be a number of years before final closure of the TSFs, it would be prudent for NATC to develop a strategy for managing windblown tailings during the interim period.</p>	<p>a) LKFN requests that NATC clarify what their interim solution for managing windblown tailings will be prior to initiating final closure of the TSFs.</p> <p>b) LKFN requests that NATC clarify what their plans are, if any, to clean up the windblown tailings.</p> <p>c) LKFN requests that NATC confirm whether the windblown tailings has any impact on the stability of the tailings dams.</p> <p>d) LKFN request that NATC confirm the distance that windblown tailings have blown and the volume of tailings that have blown into vegetated areas further from the dams.</p>
7.	Section 6.6.1	<p>In Section 6.6.1 of the DSR, SRK has recommended a number of consequential updates to the OMS manual for the TSFs. LKFN understands the value and importance of these updates and wish to see them implemented as soon as</p>	<p>a) LKFN requests that NATC update the OMS manual within the next 12 months.</p> <p>b) LKFN requests that NATC provide the updated OMS manual to SRK for immediate review to ensure conformity</p>

	<p>possible. LKFN also lacks the qualifications to confirm that the updates NATC make to the OMS satisfy the recommendations of SRK, and that confirming that the OMS has been updated properly must be done much sooner than the next DSR.</p>	<p>with their recommendations in the DSR.</p>
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## **Appendix A: LKFN comment on the FMEA related to the Long-Term Stability of Tailings Containment Facilities**

LKFN is concerned that the assessment of dam stability is overly optimistic in terms of the long-term stability of the TCFs. For example, TCFs 1-4 all employ the upstream dam raise for some or all of the dam raises. Upstream tailings dams are understood to be less stable than downstream or centreline dams, especially in seismically active areas such as the Cantung Mine. Furthermore, tailings embankment slopes for TCFs 1-4 vary between 1.3H:1V and 1.5H:1V, which are either below or just barely meeting the minimum factor of safety for dam embankments as defined in the Canadian Dam Association guidelines. The geotechnical assessment of TCF 1 and 2 also found that both are underlain by potentially liquefiable soils which would also indicate that the dams may not be stable for the long term, especially following significant seismic events.

It is of concern to LKFN that despite these variables indicating that the stability of the dams adjacent to the Flat River may be negatively impacted by these factors that the dams have been found to meet CDA guidelines and are considered to be geotechnically stable.

LKFN requests that either NATC or LKFN hire a third-party geotechnical engineer to formally review the findings of the geotechnical assessment undertaken by Tetra Tech in 2021 to validate and confirm the findings.

LKFN also notes that the long-term stability of the TCFs are a key consideration for our Nation related to the Cantung Mine. As such, the final closure design and plans for the TCFs will be an important focus of future discussions related to final closure. LKFN requests that NATC, CIRNAC and the Mackenzie Valley Environmental Impact Review Board clarify the regulatory processes through which the final closure design and plans for the TCFs will be determined.