

Reviewer Comments and Proponent Responses

Project: Cantung Mine
 Board: Mackenzie Valley Land and Water Board
 Proponent: North American Tungsten (NATCL) - Cantung

File Number: MV2023L2-0006
 Review Comments Due: March 21, 2025
 Proponent Responses Due: April 4, 2025

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response	Board Decision
Fisheries and Oceans Canada (DFO) - Ms. Natalie Grishaber					
1	Fish and Fish Habitat	DFO reviewed the document in accordance with our mandate and has no comments at this time.	DFO has no comments or recommendations at this time.		
MVLWB - Kimberley Murray					
1	Erosion and Sediment Management of the TCAs	During the public review of updates to various NATCL Management Plans in early 2024 (see link to review table below), NBDB (comment 1) recommended that NATCL should provide a description of monitoring and response that specifically focused on wind-blown tailings from the TCAs in the Water Management and Mine-Site Erosion and Sediment Protection Plan (the Plan). In response, NATCL indicated that a discussion of TCAs management is in the TSF OMS Manual, and that it is NATCL's preference to deal with all aspects of tailings management in the TSF OMS Manual. As noted by the Board for this recommendation and response, the Plan is required by Licence MV2023L2-0006 and the TSF OMS Manual is not. Given that Schedule 4, condition 1 requires the Plan to include erosion and sediment control methodologies, monitoring activities, and responses to monitoring results, Board staff suggest that the TCAs management related to	NATCL to discuss if there is any reason why management of the TCAs with respect to erosion and sediment control cannot be included in the Water Management and Mine-Site Erosion and Sediment Protection Plan, given that this Plan is a Licence requirement and the TSF OMS Manual is not.	All aspects related to Tailings Containment Area (TCA) operations, maintenance and surveillance, including sediment and erosion control, fall under the purview of the Engineer of Record (EOR), and necessarily pursuant to the Dam Safety Guidelines, as stipulated in Part E Items 2 and 3. It is noted in Table 10 of the Tailings Storage Facility (TSF) Operations, Maintenance and Surveillance (OMS) Manual that erosion of tailings is considered a potential failure mode. Accordingly, including aspects related to TCA operations, maintenance and surveillance, such as sediment and erosion control (a known failure mode), in a separate management plan for the MVLWB to approve is duplicative, could lead to conflicting direction among the Board and the EOR, and accordingly undermine the professional reliance conferred on the Licensee by Part E Item 3.	The Board regulates the deposit of waste in accordance with the Mackenzie Valley Resource Management Act (MVRMA) and Mackenzie Valley Federal Areas Waters Regulations (MVFAWR). Therefore, any mitigation related to the TSF should also be included in the Water Management and Mine-Site Erosion and Sediment Protection Plan, which is a Board approved Plan. The Board's process is evidence based and would consider EOR's expert recommendations on sedimentation and erosion mitigation. According to the Board's Standard Water Licence Conditions Template (the Standard) a hypothetical Licence for a mine site with

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		<p>erosion and sedimentation should be included in the Board approved Plan.</p> <p>https://mvlwb.ca/Documents/MV2023L2-0006/NATCL%20-%20Water%20Management%20and%20Mine-site%20Erosion%20and%20Sediment%20Protection%20Plan%20V6%20-%20Review%20Comment%20Table%20-%20Mar11_24.pdf</p>			<p>a tailings facility could include Part E, Condition 2 and 3 (of Licence MV2023L2-0006 – see Part E, conditions 2 and 4 for similar conditions in the Standard) as well as a requirement for the submission of a Tailings Management Plan (depending on the evidence received during the proceeding).</p> <p>The Board suggests NATCL review the Water Management and Mine-Site Erosion and Sediment Protection Plan and include sediment and erosion control details of the TSF in the Plan, as required under Part B, Condition 6 of the Licence (i.e., during the annual review).</p>
2	Table 11: Summary of Inspection and Monitoring Requirements	Table 11 includes the frequency of various inspections of the TSF. It is indicated that routine inspections will occur "weekly when on site". The current situation of reduced site presence is not discussed in the Manual, nor is there a discussion of the network of remote cameras that NATCL has previously stated will provide real-time weather conditions and images of site conditions. Board staff understand that NATCL intend to include details related to reduced site presence in an updated Care and	NATCL to discuss: 1) if the remote camera weather data and images are able to indicate performance of the TCAs; 2) the frequency of the remote camera weather data and images; and 3) if the above information should be included in the TSF OMS Manual to provide clarity about TSF surveillance throughout the year	The revision made to this version of the plan was consulted with the EOR prior to issuance in 2024, including revisions to the inspection and monitoring frequency (Table 11). A written indication of EOR review and acceptance of the current version of the TSF OMS Manual is included in this submission. As indicated in prior responses to Party comments, NATCL has undertaken to voluntarily install remote cameras that allow for visual observations of the TCAs, the Flat River and surrounding areas, as well as a remote weather station to inform of storm events. These do not - nor are they	Noted. The Board notes that further details of the remote camera system are currently under review in the Care and Maintenance Plan.

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		<p>Maintenance Plan. It would be helpful, however, if NATCL could discuss if the remote camera data and images are able to give an indication of TCA performance (e.g., considering the items in the Appendix C checklist), and the frequency of the images and weather data.</p>		<p>intended to - act as performance indicators. Weather data collection frequency is set to align with that required under the Surveillance Network Program (SNP). Image capture frequency varies throughout the year, with images being captured less frequently during periods of continuous site occupation. Currently, during winter months, when the site is unoccupied, remote cameras are capturing images daily. NATC is firmly of the belief that, unless otherwise indicated by the EOR in their recommendations in the Annual Geotechnical Inspection Report, the information voluntarily captured by the remote camera system, does not need to be included in the TSF OMS Manual as the surveillance program already in place is considered adequate. Further, NATC notes that the data captured by the remote weather station is already required by and reportable as per Annex A Part D of the water licence and accordingly, its inclusion in the TSF OMS Manual would be duplicative and is unnecessary.</p>	
3	Section 1.5 water licence terms and conditions	<p>Section 1.5 notes that this OMS Manual is "issued in accordance with water licence terms and conditions, and personnel responsible for implementing the Manual receive training on update aspects from the EOR."</p> <p>Board staff note that the TSF OMS Manual is not a requirement of the Water Licence. It is unclear what terms and conditions NATCL is referring to and the purpose of this statement.</p>	<p>Can NATCL clarify what terms and conditions this statement is referring to?</p> <p>Why has NATCL included this statement?</p>	<p>Further to Part E Item 2, NATC is required to comply with Dam Safety Guidelines which, as part of the management of dam safety, requires NATC to maintain a current TSF OMS Manual.</p> <p>Accordingly, NATC considers the requirement for the TSF OMS Manual to be linked to a condition in the water licence. However, NATC sees that this approach is not as explicit as the requirement for other documents pursuant to water licence, and offers to revise the wording in the TSF OMS Manual accordingly, should the Board direct it to do so, in the next required update to</p>	Noted. See Board Decision to MVLWB-1.

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				the TSF OMS Manual or annual plan review pursuant to Part B Item 6, whichever comes first.	
4	Data Loggers	<p>The 2023 Geotechnical Inspection Report indicates that "In August 2023, data loggers were installed on 14 active VWP for ongoing data collection. The 14 VWP with data loggers are highlighted in green in the following Table 2."</p> <p>Board staff note that this update has not been reflected in Version 7.1 of the TSF OMS Manual. Board staff are trying to understand whether the OMS Manul should reflect that NATCL has installed data loggers to collect ongoing data.</p>	Should the new information about the data loggers be included in the TSF OMS Manual?	<p>NATC notes that the addition of dataloggers does not change the instrumentation as outlined in Section 8.4 of the TSF OMS Manual, but rather supports efficient data retrieval. Accordingly, NATC sees no need to update the TSF OMS Manual to include dataloggers.</p> <p>NATC is of the belief that, unless otherwise indicated by the EOR in their recommendations in the Annual Geotechnical Inspection Report (which notably in 2023 and 2024 discussed the dataloggers), the instrumentation discussion in the TSF OMS Manual is considered adequate.</p>	Noted.
5	Organizational chart	<p>In the 2022 Dam Safety Review Report, it was recommended that NATCL "Develop an organizational chart showing the governance structure, including all parties with dam safety responsibilities, and include it in the OMS Manual."</p> <p>It is unclear whether this recommendation has been addressed in Version 7.1 of the TSF OMS Manual.</p>	Can NATCL clarify whether this recommendation has been addressed? If so, please provide the reference to the section of the TSF OMS Manual. If not, can NATCL discuss why the recommendation has not been implemented?	<p>In response to 2022DSR-16 submitted in May 2023, NATC's EOR indicated that roles and responsibilities are adequately addressed in section 2 of the revised TSF OMS Manual.</p> <p>At the time of updating the TSF OMS Manual, this aspect was further revisited with the EOR. The EOR indicated that while a roles and responsibilities matrix would be helpful, it is not considered essential at this time.</p> <p>Given this, NATC considers recommendation 2022DSR-16 to be satisfied.</p>	Noted.
6	Risk Assessment	In the 2022 Dam Safety Review Report, it was noted that a risk assessment summary was not included in the OMS Manual, and recommended that NATCL "Detail the risks associated with each TP based on their current	Can NATCL discuss if a summary of risk assessment has been included in Version 7.1 of the OMS Manual? Please provide a reference to the section. If not, can NATCL discuss why the summary has not been provided?	In response to 2022DSR-19 submitted in May 2023, NATC's EOR referred to applicable sections of both the TSF OMS Manual and TSF Emergency Response Plan. NATC notes that a corresponding table #	Noted.

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		<p>condition. The risks should be detailed and specific to each TP (e.g., the flood and toe erosion risks are most relevant to TP1, TP2 and TP4 and not so much TP3 or TP5). Relevant controls associated with each risk should be listed."</p> <p>It is unclear whether this recommendation has been addressed in Version 7.1 of the TSF OMS Manual.</p>		<p>may be incorrect, so provide the following clarification.</p> <p>Table 10 of the TSF OMS Manual outlines the failure mode, or risk, and the surveillance parameter, or risk control. Further, the Trigger Action Response Plan in Table 13 of the TSF OMS Manual identifies monitoring thresholds associated with instrumentation and is considered a risk control.</p> <p>Given this, NATC considers recommendation 2022DSR-19 to be satisfied.</p>	
Environment and Climate Change Canada (ECCC) - Jessica Kassar					
1		ECCC has reviewed this file in accordance with our mandate and has no comments at this time.	N/A	-	N/A
GNWT-ECC (Environment and Climate Change) - Environmental Regulatory Analyst					
1	No comment	The Department of Environment and Climate Change, Government of the Northwest Territories has reviewed the application at reference and has no comments or recommendations for the Mackenzie Valley Land and Water Board at this time.	Please contact GNWT_EA@gov.nt.ca with any general questions or concerns.	-	N/A
CIRNAC (Yellowknife) - Megan Larose					
1	Surveillance during periods of zero site presence	The Operation, Maintenance, and Surveillance Manual for the Tailings Storage Facility does not provide information regarding the activities that may be carried out during periods of zero site presence (approximately November through March). The surveillance procedures section (Section 8.3) states that special or event driven inspections may be	It is recommended that NATCL include applicable operations, maintenance and surveillance information for periods of zero site presence. Specifically, what (if any) surveillance activities are carried out, and how unusual events are monitored to determine the need for increased surveillance or inspection. If this information is provided elsewhere,	<p>TCA operations and maintenance do not occur when the site is unoccupied. Surveillance occurs in the form of voluntary periodic viewing of the remote cameras, and, in the instance of this spring, a mid-winter site visit was conducted.</p> <p>Periods of the year when the site is unoccupied coincide with winter months, wherein the risk of an unusual occurrence</p>	Noted. See Decision to MVLWB-2.

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		<p>required or surveillance increased following certain events such as major flooding, earthquakes, avalanche or other unusual observations. The manual does not indicate how conditions within or surrounding the tailings storage facility are monitored when there is zero site presence. Additionally, the manual does not describe how NATCL would know to increase surveillance or determine that a non-routine site investigation is required should an event occurs (e.g., avalanche or other usual occurrence) when there is zero site presence.</p>	<p>please provide reference to it in the manual.</p>	<p>resulting in a TCA emergency is diminished as freezing conditions prevail for much of this time; notably, the Flat River, which is the source of greatest risk to the TCAs, partially freezes.</p> <p>NATC notes that the Site Manager and EOR continue to be responsible for aspects of site safety related to the TCAs, year-round. Reliance on the surveillance parameters and schedule outlined in the TSF OMS Manual is adequate, and supplemented by voluntary periodic viewing of the remote cameras.</p> <p>NATC further notes that an unusual occurrence, such an avalanche or earthquake, does not necessarily pose a risk nor constitute an emergency. The TCAs and their risks are well understood and documented. The surveillance program in place is necessarily informed by this understanding.</p>	

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ECCC File: 5100 000 017/012
MVLWB File: MV2023L2-0006



March 21, 2025

via online review system

Angela Love & Kimberley Murray
Regulatory Specialists
Mackenzie Valley Land and Water Board
7th Floor, 4922 48th Street
P.O. Box 2130
Yellowknife, NT X1A 2P6

Dear Angela Love & Kimberley Murray:

RE: MV2023L2-0006 – North American Tungsten Corporation Ltd. – Cantung Mine – Tailings Storage Facility - Operations Maintenance and Surveillance Manual - Version 7.1

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Mackenzie Valley Land and Water Board (MVLWB) by North American Tungsten Corporation Ltd (“the Proponent”) regarding the above-mentioned Operations Maintenance and Surveillance Manual.

ECCC provides expert information and knowledge to project assessments on subjects within the department’s mandate, including climate change, air quality, water quality, biodiversity, environmental emergencies preparedness and responses. This work includes reviewing proponent characterization of environmental effects and proposed mitigation measures. We provide advice to decision-makers regarding a proponent’s characterization of environmental effects, the efficacy of their proposed mitigation activities, and may suggest additional mitigation measures. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

If you need more information, please contact Jessica Kassar at Jessica.Kassar@ec.gc.ca.

Sincerely,

Jessica Kassar
Environmental Assessment Officer

cc: Eva Walker, Head, Environmental Assessment North (NT and NU)

