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EC file: 5100 000 017
MV2015L2-0003

Jen Potten
Regulatory Officer
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Via email: jpotten@mvlwb.com

Attention: Ms. Potten

RE: MV2015L2-0003 - North American Tungsten Corporation Ltd. - Cantung Mine – Draft Type A Water Licence Renewal

Environment Canada (EC) has reviewed the above noted Draft Type A Water Licence MV2015L2-003 to renew Water Licence MV2002L2-0019 as prepared by the Mackenzie Valley Land and Water Board (MVLWB) and provides the following comments for your consideration.

EC's specialist advice is provided pursuant to the *Canadian Environmental Protection Act, 1999*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act, 1994*, and the *Species at Risk Act*.

Part A: 1. Scope

1. Under Section a) (pg. 2), replace “through” with “to” under items ii) & iv).

Part A: 2. Definitions

2. Under the definition of “Board” (pg. 4), retain the full name of the *Mackenzie Valley Resource Management Act* as opposed to the “Act” given the Act is defined as the territorial legislation “Waters Act” within the WL.
3. Under the definition of “Metal Leaching” (pg. 5), capitalize Water.
4. Under the definition “Professional Geoscientist” (pg. 6), italicize “*Engineering and Geoscience Professions Act*”.

5. Broaden the definition of “Seepage” (pg. 6) to include structures that are not engineered, such as waste rock piles.

Part B: General Conditions

6. Reduce redundancy between Items 5 & 6 (pg. 9).
7. Under Item 9 (pg. 9), use the following wording: “The Licensee shall comply with the Surveillance Network Program, which is annexed to and forms part of this Licence...”

Part E: Conditions Applying to Construction

8. Background: The Board staff has requested recommendations regarding the clause below (pg.13) on a new standard condition and its enforceability given that the existing tailings ponds were designed to exfiltrate. The Board has also requested that the recommendations should extend to consider future dry stack facilities.

“The Licensee shall ensure that all structures intended to contain, withhold, divert, or retain Water or Wastes are designed, constructed, and maintained to minimize the escape of Waste to the Receiving Environment”.

EC recognizes that the existing tailings ponds were designed to exfiltrate (not intended to retain the water), but intended to withhold the solids, allowing those facilities an exemption for the escape of water through exfiltration.

Retain the clause above within the Water Licence as it applies to the ability to hold water in Stinky pond if necessary, and in any collection ponds constructed in connection with the dry stack facilities.

9. As suggested by the Board, the removal of Item 11, the construction and installation of monitoring wells (pg. 14), is reasonable as the installation is completed and the required information is already submitted.

Part G: Conditions Applying to Waste and Water Management

Management Plans and Monitoring Programs

10. The wording of item 6 (pg. 16) should read as follows: “The Licensee shall submit to the Board by May 31, 2014, for approval, a Geochemical Risk Assessment Report. The Report shall detail the activities planned to assess the long-term geochemical risks of the Project to meet the objectives listed in Part G, item 1, and satisfy the requirements of Schedule 3, item 4”.
11. As the Wastewater Treatment Facilities, Operations, Maintenance, and Surveillance Manual was approved in January 2015, removal of item 18 (pg. 17) which states that “The Licensee shall submit to the Board by January 31, 2013, for approval, a Wastewater Treatment Facilities Operations, Maintenance and Surveillance Manual”, is

recommended. Amend Item 26 under Part G to reflect that this plan be updated as needed.

12. As the Flat River Hydrology Plan was approved in July 2015, removal of this reference pursuant to item 19 (pg. 17) is recommended. Amend Item 26 under Part G to reflect the plan be updated as needed.
13. As the Plume Delineation Study Report was approved in July 2014, the removal of items 20 & 21 (pg. 17) is recommended.
14. Background: The Board staff is seeking input on Item 24 (pg. 18) regarding whether the proposed revision to the timeline for the submission of the updated Phase II Environmental Site Assessment (ESA) Report is reasonable as per the Board's direction in its August 18, 2011 letter.

A 12 month timeline given that the proposed 6 month timeline may be impractical if sampling during open-water season is needed to inform the site assessment (recognizing that a Phase 1 ESA would be desktop, but a Phase 2 ESA requires some field data).

15. Background: The Board staff is seeking input on Item 25 (pg. 18) regarding the timeline for an updated ecological risk assessment should the Board determine that an updated assessment be submitted separately (rather than being incorporated into the closure and reclamation planning process).

A reasonable timeframe can be determined in conjunction with the Proponent's consultant(s).

Inspections of Structures and Facilities

16. The wording of item 29 (pg. 19) should read as follows: "Provide written notification to an Inspector **within** a minimum of two (2) weeks prior to the Professional Engineer's annual inspections".

Discharge Locations and Rates

17. The wording of item 33 (pg. 20) should specify that "The Licensee shall direct all **treated** Sewage..." (as per Section 4.4 of the Combined Water Management Plan which indicates an average of 160 cubic metres/day goes from the treatment plant to TP5).
18. The wording of item 35 (pg. 20) which states that "The Licensee shall only seal the culvert if directed to do so by an Inspector" should include "or if warranted by an upset condition".

Effluent Quality Criteria

19. Ammonia should be specified as Ammonia-Nitrogen and Nitrate-Nitrogen in the Table: Wastewater Treatment Facilities Effluent Quality Criteria (EQC), item 38, p12.
20. In SNP Station 4-47 Footnote Table (pg. 62), the reference to Total Ammonia should stay as "Total Ammonia as N" which means ionized plus unionized forms (NH₄ plus NH₃).

The measurement would include the hydrogen weight and lab results are in NH₃-N. This is consistent with how it is regulated in other licences.

21. Within item 45 (pg. 22), replace reference to Item 42 with Item 44.

Part I: Conditions Applying to Contingency Planning

22. As the Spill Contingency Plan was approved in November 2014, remove item 1 which states that “Within sixty (60) days following issuance of this Licence, the Licensee shall submit to the Board for approval, a Spill Contingency Plan. The Licensee shall not commence construction or Drawdown until the Board has approved the Plan”.

Part J: Conditions Applying to Closure and Reclamation

23. Item 1 (pg. 25) states that “Within twenty four (24) months following issuance of this Licence, the Licensee shall submit to the Board, for approval, an Interim Closure and Reclamation Plan”. The plan was submitted April 2015 and is not yet approved. This clause may need to be re-worded as it could imply as written, the need to re-submit the plan.

Schedule 1 – Part B, Annual Water Licence Report

Management Plans and Activities

24. Insert “treated Sewage” in item 1.f) vii) (pg28) which states that “Monthly and annual quantities in cubic metres (m³) of Sewage discharged to the Tailings Containment Area.

Schedule 2 – Part E, Construction

25. Report on an annual basis requirements specified in Item 1.h) ii) (pg33) which states that “Operations and maintenance requirements for the facility, including but not limited to the following...ii) Expected volumes of contaminated soil and snow”.

Schedule 3 – Part G – Waste and Water Management

26. Item 9 (pg. 40) states that “The Flat River Hydrology Plan referred to in Part G, Item 19 of this Licence shall include, but not be limited to, the following information...”. Modify item 9 to include: address any required updates.
27. Review the order of Item numbering on page 40.
28. Change the wording under “sampling parameters” to total ammonia (NH₃) as nitrogen...
29. In SNP Station 4-47 Footnote Table (pg. 62), Total Ammonia should be referenced as “Total Ammonia as N” which means ionized plus unionized forms (NH₄ plus NH₃). The measurement would include the hydrogen weight and lab results would be in NH₃-N. Note this is consistent with how it is regulated in other licences.

Annex A – Surveillance Network Program (SNP), referred to in Part B, Item 11 of Water Licence MV2015L2-0003

Part D: Meteorological Monitoring Requirements

30. Under Item 1 (pg. 63), include field conditions at the time of sampling under the list of data requirements.

Should you require further information, please do not hesitate to contact Ms. Lisa Lowman at 204-984-0668 or via email at lisa.lowman@ec.gc.ca.

Sincerely,



Sarah-Lacey McMillan
A/Head, Environmental Assessment North, EC

Cc: Lisa Lowman (Senior EA Coordinator, Environmental Assessment – EA South, EC)
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EC Internal Distribution