

September 10, 2015

Jen Potten  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7th Floor – 4910 50th Avenue  
P.O. Box 2130  
Yellowknife, NT  
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Dear Ms. Potten,

**Re: North American Tungsten Corp. Ltd.  
Water Licence (Renewal) - MV2015L2-0003  
Information Request 1, 2 and 3  
2nd Round Information Requests  
Request for Comment**

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT) has reviewed the information requests at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, *Waters Act* and the *Wildlife Act* and provides the following comments and recommendations for the consideration of the Board.

**All Party IR #1:**

Please indicate whether your organization supports North American Tungsten Corp. Ltd.'s (NATCL) proposed approach to risk assessment and closure planning for the Flat River Tailings. Include rationale for your organization's position.

**GNWT Response:**

The rationale for the Qualitative and Quantitative Ecological Risk Assessment is provided in the December 12, 2008 Reasons for Decision for the renewal of MV2002L2-0019. The Reasons for Decision identify the Quantitative Ecological Risk Assessment as the first step in determining closure requirements for the Flat River Tailings. The Qualitative ERA was intended to provide the details and requirements

for proceeding with the Quantitative ERA, and was to be submitted for Board approval to satisfy the Board that NATCL had taken all the necessary actions prior to proceeding to the Detailed Quantitative Risk Assessment.

NATCL submitted the Qualitative ERA and proposed that, based on the report's conclusions, a Quantitative Risk Assessment was not required. At that time, technical reviewers (e.g. AANDC and DFO) identified deficiencies with the Qualitative ERA, and did not support the Qualitative ERA's findings. GNWT-ENR does not believe the deficiencies in the Qualitative ERA have been addressed to date.

GNWT-ENR is of the opinion that the information gathered through the planned Geochemical Load Balance will provide information that will be useful to the ERA process. However, there are additional requirements that are required for a satisfactory ERA. The 2008 Reasons for Decision references the CCME Guidance document entitled "A Framework for Ecological Risk Assessment" and this document is explicitly referenced in Water Licence MV2002L2-0019.

NATCL acknowledged that additional elements would need to be considered beyond the Geochemical Load Balance in order to address the reclamation of the Flat River Tailings. This is reflected in an exchange between Ms. Deborah Fleming of NATCL and Ms. Lyndsey Cymbalisky of the MVLWB at the June 17, 2015 Technical Session where, in response to a question from Ms. Cymbalisky about the Integrated Geochemical Risk Assessment and Load Balance superseding the Qualitative and Quantitative Risk Assessments, Ms. Fleming states:

*"...Yes, at this point in time that's what we would look to do, supercede with their geochemical risk assessment, but then per – there would need to be a further assessment that included the biological and ecological aspects on top of that going forward."* (MV2015L2-0003, Technical Session, June 17 Transcript, pp. 114 to 115)

Ms. Fleming further identifies in the transcript that this work would be completed as part of the research plans in the ICRP and that Section 4.4.3.1 of the April 2015 Draft ICRP includes reference to an Integrated Geochemical Load Balance and Risk Assessment Report that will be submitted to the MVLWB for review.

Including the Ecological Risk Assessment as a component of the Geochemical Load Balance is acceptable to GNWT-ENR, provided that the Ecological Risk Assessment is completed to an acceptable standard (i.e. CCME Framework). Technical reviewers identified deficiencies with the previous Qualitative Ecological Risk Assessment and provided comments to the Public Registry. These deficiencies should be addressed in any further Ecological Risk Assessments carried out for the Flat River Tailings.

GNWT-ENR recommends that the Board provide guidance on the requirements for the risk assessment such as is included in the current Water Licence and require that

the findings of the risk assessment must be reflected in the Closure and Reclamation Plan for the site.

**All Party IR #2:**

Please indicate whether toxicity testing should be required at this site. If recommending that it be required, specify whether it should form part of the Surveillance Network Program (SNP) or be incorporated into the Aquatic Effects Monitoring Program. If toxicity testing requirements should be set out in the SNP, describe what specific toxicity testing should be required for this site, what the sampling location should be, and how often this testing should be conducted. Include rationale for your organization's position.

**GNWT Response:**

As noted by NATCL, GNWT-ENR understands that sub-lethal toxicity is already being completed in the Flat River above and below SNP 4-20 under the *Metal Mining Effluent Regulations*. Specifically, as per NATCL's 2015 EEM Study Design, sub-lethal toxicity has been conducted in previous studies for fathead minnow, water flea, aquatic macrophyte and algae and GNWT-ENR understands that this requirement remains under the MMER-EEM program. The area of disagreement appears to be the location of sampling, as Environment Canada is suggesting that the outlet of Stinky Pond should be sampled (SNP Station 4-20) whereas NATCL are currently conducting sub-lethal toxicity work downstream:

"Sub-lethal toxicity testing has been completed on water samples in 2012 from water testing at station S4-28-1, the final discharge point for tailings exfiltration into the Flat River in compliance with the MMER. The testing results confirmed that the effluent was non-toxic to fathead minnow and water flea, and had minimal effect on aquatic macrophyte and algae." *Cantung Mine 2015 EEM Fourth Cycle Study Design*

GNWT-ENR notes that the sampling locations currently noted in the EEM program may be a remnant of historic exfiltration activities from the TPs prior to the installation of the Wastewater Treatment Facility. GNWT-ENR further notes that this should be discussed between Environment Canada and NATCL in the context of EEM regulated requirements. ENR supports Environment Canada's recommendation that the Stinky Pond culvert include sub-lethal toxicity and suggests that discussions amongst parties occur with respect to aligning EEM and Water Licence requirements, so duplication of effort is avoided.

Regarding specific toxicity testing to be done, ENR recommends that the type and duration of toxicity testing implemented should be similar to other operations within the NWT (e.g. diamond mines) which often consist of quarterly monitoring of a fish species and an invertebrate species. Considering fathead minnow and *Ceriodaphnia*

*dubia* have been tested under the EEM, GNWT-ENR believes that these species should remain for consistency and continuity. Also, GNWT-ENR recommends that the monitoring should occur within the SNP.

Regarding the AEMP, GNWT-ENR has previously recommended to NATCL, as a member of the AEMP Working Group, that the AEMP include action levels in the response framework section of the AEMP that relate to the results of the sub-lethal testing in the SNP.

**All Party IR #3:**

NATCL has requested a Water Licence term of 10 years. In its July 14, 2015 intervention, GNWT-ENR supported this proposal. Please make a recommendation regarding the term of the Water Licence.

**GNWT Response:**

GNWT-ENR has provided comments on this matter in the submitted written intervention. Our position on this matter has not changed.

Comments and recommendations were provided by ENR technical experts in the Water Resources Division and the Dehcho Region and were coordinated and collated by the Environmental Impact Assessment Section, Conservation, Assessment and Monitoring (CAM).

Should you have any questions please contact Patrick Clancy, Environmental Regulatory Analyst, at (867) 920-6118 or email [patrick\\_clancy@gov.nt.ca](mailto:patrick_clancy@gov.nt.ca).

Sincerely,



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Environmental Impact Assessment Section  
Conservation, Assessment and Monitoring Division  
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