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Reasons for Decision

Water Licence Application	
Reference/File Numbers	MV2015L2-0003
Applicant	North American Tungsten Corporation Ltd.
Project----	Cantung Mine, NT

Decision from Mackenzie Valley Land and Water Board meeting of

December 29, 2015

Issued pursuant to section 72.25 of the *Mackenzie Valley Resource Management Act*

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These Reasons for Decision set out the Mackenzie Valley Land and Water Board's (the Board or MVLWB) decision on an Application made by North American Tungsten Corporation Ltd. (NATCL) to the Board on April 21, 2015 for Water Licence (Licence) MV2015L2-0003. This Application was to "renew" NATCL's existing Licence MV2002L2-0019, which expires January 29, 2016, and to continue to operate the Cantung Mine for an additional ten (10) years. No changes to operations were proposed in the Application.

On June 9, 2015 the Board received notice that NATCL had been granted protection under the *Companies' Creditors Arrangement Act*,¹ (CCAA). As a result of the Order issued in a proceeding before the Supreme Court of British Columbia (the "cur"), creditors of NATCL, including the GNWT, were subject to a stay of proceedings, rights and remedies, until October 31, 2015.² The order has been extended twice, and CCAA protection will now be in place until March 31, 2016. It is not known whether further extensions will be granted.

This licensing proceeding was initially conducted in accordance with the requirements of the *Waters Act* and *Mackenzie Valley Resource Management Act* (MVRMA) which are applicable to non-federal lands. However, on November 18, 2015, the MVLWB received notification from Aboriginal Affairs and Northern Development Canada (AANDC) that:

1. The Cantung site is now considered a New Site Requiring Remediation under section 6.28 of the Northwest Territories Lands and Resources Devolution Agreement and is now a federal area under the MVRMA;
2. Canada has become responsible for the management of the Cantung site under subsection 53.1(1) of the MVRMA; and
3. Employees of North American Tungsten Corporation Ltd. will continue to manage the care and maintenance of the Cantung site under the oversight of a court appointed monitor with authorities under the Companies' Creditors Arrangement Act (CCAA).

Due to the change in the legal classification of the NATCL mine site described above, the Board must make its decision in accordance with the legislative requirements that apply to federal areas. These Reasons for Decision are therefore drafted to refer to the applicable legislation for federal lands, (i.e. the MVRMA). Where the *Waters Act* is referenced in these Reasons for Decision, it is simply in relation to an historical account of events, and that legislation has not had any bearing on the Board's decision itself.

A summary of the regulatory process for this Application is provided in Section 1 below. Sections 2 and 3 describe the Board's fulfillment of procedural requirements and Reasons for Decision on the Application.

1.0 Regulatory Process

On April 21, 2015, NATCL submitted an Application to renew Licence MV2002L2-0019, which expires January 29, 2016.³ NATCL also provided a work plan and timeline for the development of an Aquatic Effects Monitoring Program and updates to finalize the Interim Closure and Reclamation Plan.

¹ R.S.C. 1985, c.C-36.

² See Order entered June 9, 2015, Vancouver Registry, BCSC no. S154746.

³ See MV2015L2-0003 [Water Licence Application](#) and [Mining Industry Questionnaire](#), submitted to the MVLWB on April 21, 2015.

On April 27, 2015, the Application was deemed complete in accordance with section 34 of the *Waters Act* and a review commenced.⁴ The Board is satisfied that the Application was in the form and contained the information prescribed by the regulations in accordance with section 72.1 of the MVRMA. Notice of commencement of this review was provided to the parties and indicated that the Board had deemed the information supplied by NATCL to be sufficient, that the regulatory process would proceed, and that the legislated timelines defined in subsection 72.18(1) of the MVRMA and in subsection 47(1) of the *Waters Act* had commenced. All interested parties were given the opportunity to participate in this regulatory process.

By May 26, 2015, comments and recommendations regarding the Application had been submitted to the Board from the following parties: the Government of the Northwest Territories – Department of Environment and Natural Resources (GNWT-ENR), Environment Canada (EC), Department of Fisheries and Oceans Canada (DFO), Dehcho First Nations (DFN), Naha Dehe Dene Band (NDDDB), and Board staff.⁵ NATCL responded to the parties' comments and recommendations on June 10, 2015.⁶

Technical sessions were held on June 17, 2015, in Yellowknife, NT, to discuss and seek clarity on issues raised by parties and Board staff. The technical sessions were facilitated by Board staff and consultants, and were transcribed.⁷ Attendees included: NATCL; GNWT-ENR; GNWT-Justice; GNWT-Industry, Tourism and Investment (ITI); EC; and DFN.⁸ NATCL made one (1) presentation.⁹ Information requests (IR) resulting from these sessions were circulated to the distribution list on June 17, 2015.¹⁰ There were five (5) IRs: IR#1 was directed at GNWT-ENR, and IRs#2 through 5 were directed at NATCL. Responses to the IRs were submitted to the Board on June 25, 2015.¹¹

The week of June 22, 2015, the notice of the Application and public hearing was advertised in the *News North* newspaper in accordance with paragraphs 41(1)(a) and 43(2)(a) of the *Waters Act* (which also satisfies subsections 72.16(1) and 72.16(2) of the MVRMA), and indicated the hearing was scheduled to occur August 26 to 27, 2015, in Yellowknife, NT.¹²

The pre-hearing conference (PHC) was held on July 7, 2015 in Yellowknife, NT to discuss the conduct of the public hearing, written interventions and presentations, notices of intent to appear at the hearing, and to briefly outline the Board's Rules of Procedure.¹³ The pre-hearing conference was attended in-person by representatives from NATCL, GNWT-ENR and GNWT-Justice; DFN and EC participated by teleconference. Summary notes of the PHC were recorded and distributed on July 8, 2015.¹⁴

⁴ See [MVLWB Letter to NATCL – Application Complete](#), dated April 27, 2015.

⁵ See [Review Comment Summary Table - Application](#), June 10, 2015.

⁶ See [Review Comment Summary Table - Application](#), June 10, 2015.

⁷ See [Technical Session Transcripts](#), June 17, 2015.

⁸ See [Technical Session – Sign-in Sheet](#), dated June 17, 2015.

⁹ See [NATCL's Technical Session Presentation](#), submitted to the MVLWB on June 17, 2015.

¹⁰ See [Technical Session - Information Requests](#), dated June 17, 2015.

¹¹ See [GNWT-ENR's Response to Information Request 1](#) and [NATCL's Responses to Information Requests 2-5](#), submitted to the MVLWB on June 25, 2015.

¹² See [Notice of Public Hearing in News North](#), June 29, 2015.

¹³ See [Pre-hearing Conference – Agenda](#), distributed July 1, 2015.

¹⁴ See [Pre-hearing Conference Summary Notes](#), dated July 8, 2015.

On July 14, 2015, written interventions, including comments and recommendations on the draft Licence, were received from GNWT-ENR, EC, DFN, and NDDB.¹⁵ All parties indicated they did not wish to appear in-person before the Board. NATCL responded to written interventions on July 24, 2015; they agreed with the interveners that no public hearing was required.¹⁶

On July 16, 2015, the Board confirmed the Application was exempt from preliminary screening based on section 157.1 of the MVRMA.¹⁷

On August 17, 2015, the public hearing scheduled for August 26 and 27, 2015 was cancelled in accordance with paragraph 41(3)(a) of the *Waters Act* (which also satisfies paragraph 72.15(3)(a) of the MVRMA).¹⁸

On August 28, 2015, Board staff directed seven (7) additional IRs to all parties.¹⁹ By September 10, 2015 responses to the August 28, 2015 IRs were received from NATCL, GNWT-ENR, EC, DFO, DFN, and NDDB.²⁰

On September 9, 2015 the Board received notice that NATCL was temporarily shutting down operations at the end of October 2015. The notification stated that the last day of commercial operations would be October 27, 2015 and that a short period of clean-up, site deactivation and winterization would occur prior to initiating the Care and Maintenance period²¹. NATCL submitted a Care & Maintenance (C&M) Plan to the Board on October 1, 2015 (rev.2) and an updated version of the C&M Plan on October 12, 2015 (rev.3)²².

On September 22, 2015, a draft Licence and updated work plan were circulated to parties for review.²³ The following parties responded: GNWT-ENR, EC, DFN, and NDDB.²⁴ NATCL responded to all of the parties' comments and provided comments of their own on October 16, 2015.²⁵

¹⁵ See Interventions from [GNWT-ENR](#), [EC](#), [DFN](#), and [NDDB](#); submitted to the MVLWB on July 14, 2015.

¹⁶ See [NATCL's Response to Interventions](#), submitted to the MVLWB on July 24, 2015.

¹⁷ See [MVLWB Decision - Preliminary Screening Exemption Confirmation](#), dated July 16, 2015.

¹⁸ See [MVLWB Letter - Cancellation of Public Hearing and Updated Work Plan](#), dated August 17, 2015.

¹⁹ See [Second Round Information Requests](#), dated August 28, 2015.

²⁰ See [NATCL's Responses to Information Requests](#), submitted to the MVLWB on September 8, 2015; Responses to Information Requests from [GNWT-ENR](#), [EC](#), [DFO](#), [DFN](#) (Responses 11-13) and [NDDB](#), submitted to the MVLWB on September 10, 2015.

²¹ See [NATCL's Letter to the MVLWB – Temporary Shut-Down](#), submitted to the MVLWB on September 9, 2015.

²² See [NATCL's 2015 Care and Maintenance Plan - Revision 3](#), submitted to the MVLWB on October 12, 2015.

²³ See [MVLWB - Draft Water Licence and Updated Work Plan](#), dated September 22, 2015.

²⁴ See Comments on Draft Water Licence from [GNWT-ENR](#) and [EC](#), submitted to the MVLWB on October 7, 2015; Comments 14-18, [DFN's Comments on Draft Water Licence](#), submitted to the MVLWB on October 13, 2015; and Comments 1-6, [NDDB's Comments on Draft Water Licence](#), submitted to the MVLWB on October 9, 2015.

²⁵ See [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

On October 27, 2015, interveners submitted written closing arguments to the Board, and NATCL submitted their written closing arguments on November 3, 2015.²⁶ Parties had an opportunity, in their arguments, to update their position on issues raised during the regulatory proceeding and to summarize their final recommendations to the Board.

On November 12, 2015, Board staff requested that additional information be provided by NATCL, the GNWT, and AANDC to clarify statements made by NATCL in their closing arguments.²⁷ These IRs were later updated by Board staff in response to AANDC's November 18, 2015 letter notifying the Board that the Cantung site is now a federal area. The updated IRs were directed to NATCL and AANDC, and issued November 23, 2015.²⁸

On November 29, 2015, both NATCL and AANDC responded to the IRs.²⁹ These submissions were circulated to the distribution list on November 30, 2015 for parties to review and provide comments. GNWT-ENR was the only party which responded.³⁰ AANDC and NATCL were afforded the opportunity to reply to GNWT-ENR's December 7, 2015 submission; no responses were received, and the record for the proceeding was closed.

On December 29, 2015, the Board met to make decisions regarding the Application. Reasons for these decisions can be found in Sections 2 and 3 below.

2.0 Procedural Requirements

In conducting the review processes for the Application as described in Section 1.0 above, the Board has ensured that all applicable legal and procedural requirements have been satisfied, including:

- 1) Notice of the Licence Application was given in accordance with sections 63 and 64 of the MVRMA. The Board is satisfied that a reasonable period of notice was given to communities, First Nations and the public so that they could provide comments to the Board; and
- 2) A public hearing was scheduled for August 26 and 27, 2015 in accordance with subsection 72.15(2) of the MVRMA; however, all intervening parties and NATCL consented, in writing, to the disposition of the Application without a public hearing, and the Board did not receive notification that any person intended to appear regarding the Application ten (10) days prior to the scheduled hearing date. As such, the public hearing was cancelled August 17, 2015, in accordance with paragraph 72.15(3)(a) of the MVRMA.

The scope, definitions, and conditions set forth in the Licence have been developed in order to address the Board's statutory responsibilities, its ongoing role in the regulation of the Cantung Mine and the concerns raised during this regulatory process. The Reasons for Decision set out in Section 3.0 below focus on the major concerns raised by parties, including those that were the subject of substantive argument submitted by one or more parties. They also address

²⁶ See Closing Statements from [GNWT-ENR](#), [EC](#), [DFN](#), and [NDDB](#), submitted to the MVLWB on October 27, 2015; and [NATCL's Closing Statement](#), submitted to the MVLWB on November 3, 2015.

²⁷ See [MVLWB Information Request to NATCL, GNWT-ENR, and AANDC](#), dated November 12, 2015.

²⁸ See [Updated MVLWB Information Request to NATCL and AANDC](#), dated November 23, 2015.

²⁹ See [NATCL's Response to MVLWB's Information Requests](#), submitted to the MVLWB on November 29, 2015; and [AANDC's Response to MVLWB's Information Requests](#), submitted to the MVLWB on November 29, 2015.

³⁰ See [GNWT-ENR's Comments regarding AANDC's and NATCL's November 29, 2015 Responses to MVLWB's Information Requests](#), submitted to the MVLWB on December 7, 2015.

evidence which resulted in the inclusion of new or revised conditions that differ from those in the existing Licence MV2002L2-0019.

3.0 Decision

After reviewing the evidence and submissions from NATCL and the written comments and submissions from parties received by the Board, and having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA, the Board has determined that Licence MV2015L2-0003 should be issued, subject to the term and conditions contained therein. The Board's determinations and reasons for this decision are set out below.

3.1 Requirements of Subsection 72.03(5) of the MVRMA: Conditions for Issuance

3.1.1 Existing Licensees

After reviewing the submissions filed on the public registry, the Board is satisfied that, with respect to paragraph 72.03(5)(a) of the MVRMA, the granting of this Licence to the Applicant will not adversely affect, in a significant way, any existing Licensee, provided that Licence conditions are complied with. No other Licensees contacted the Board in the statutory period and there are no Applicants with precedence in the watershed.

3.1.2 Compensation

Paragraph 72.03(5)(b) of the MVRMA prohibits the issuance of a Licence unless the Board is satisfied that appropriate compensation has been or will be paid by the Applicant to people who were, at the time when the Applicant filed its Application with the Board, members of the classes of water users, depositors, owners, occupiers, or holders listed under paragraph 72.03(5)(b), who would be adversely affected by the use of waters, or deposit of waste proposed by the Applicant.

The Board received no claims for compensation from any person either during the prescribed period or afterwards. Provided that compliance with the Licence conditions takes place, the Board finds that there are no water users or persons listed in paragraph 72.03(5)(b) of the MVRMA who will be adversely affected by the use of Waters or the deposit of Waste proposed by the Applicant.

3.1.3 Water Quality Standards

With regards to subparagraph 72.03(5)(c)(i) of the MVRMA, the Board is satisfied that compliance with the Licence conditions will ensure that waste produced by the Applicant will be collected and disposed of in a manner which will maintain water quality consistent with applicable standards and the Board's *Water and Effluent Quality Management Policy*. These are discussed further in Section 3.2.8 of these Reasons (Part G of the Licence: Conditions Applying to Waste and Water Management).

3.1.4 Effluent Quality Standards

Consistent with subparagraph 72.03(5)(c)(ii) of the MVRMA, the Board is satisfied that the effluent quality standards set in the Licence are consistent with the Board's *Water and Effluent Quality Management Policy* and will protect the receiving waters and environment. These are further discussed in Section 3.2.8 of these Reasons (Part G of the Licence: Conditions Applying to Waste and Water Management).

3.1.5 Financial Responsibility of the Applicant

The Board must satisfy itself of the financial responsibility of the Applicant under paragraph 72.03(5)(d) of the MVRMA before it can issue the Licence.

The circumstances surrounding the financial responsibility of NATCL in relation to this renewal application are unusual and bear careful explanation. That explanation is set out below.

Before seeking this renewal of its Licence, NATCL had successfully applied for an amendment to the Licence in order to make operational changes, including important changes to the tailings management system for the mine, and the construction and operation of dry stack tailings facilities at the mine site. Ministerial approval for the amendments to MV2002L2-0019 was received by the MVLWB on June 12, 2015; the Board subsequently issued the amended Licence on June 16, 2015. These proposed amendments to the Licence resulted in an MVLWB reassessment of the security required for closure and reclamation of the site pursuant to the *Waters Act* and regulations. The total security requirement approved in the amended Licence was \$30.95M. The amended licence required that the security be posted within 90 days of the effective date of the Licence.

At the time of the decision for the Licence renewal (this proceeding), the additional security had not been posted. There is no evidence before the Board that additional security had been filed when the record in this proceeding was closed.

On June 9, 2015 NATCL secured court³¹ protection from its creditors pursuant to the CCAA on the grounds that the company had become insolvent. The British Columbia Supreme Court has extended that protection twice and the protection afforded by the current order extends until March 31, 2016. In the period after the initial CCAA order and before making a decision in this application the MVLWB issued several Information Requests seeking an explanation from either NATCL or the GNWT to indicate how the outstanding security requirements would be addressed.

Paragraph 72.03(5)(d) of the MVRMA indicates that the MVLWB is prohibited from issuing a licence unless the applicant can satisfy the Board that:

- (d) the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for
 - (i) the completion of the appurtenant undertaking,
 - (ii) any mitigative measures that may be required, and
 - (iii) the satisfactory maintenance and restoration of the site in the event of any future closing or abandonment of that undertaking.

The GNWT never provided an explanation to the MVLWB in respect of the security concerns affecting the renewal of the NATCL Licence. It appears, however, that they conducted their own review of the circumstances surrounding the NATCL CCAA protection and the financial prospects of NATCL. GNWT then exercised its option under the Devolution Agreement³², secured the Government of Canada's approval to invoke s.6.28 of the Devolution Agreement, and relinquished administration and control of the site to Canada. The site is now, as indicated in the introduction to these reasons, classified as a New Site Requiring Remediation.³³

³¹ See Order entered June 9, 2015, Vancouver Registry, BCSC no. S154746.

³² See Northwest Territories Land and Resources Devolution Agreement, June 25, 2013.

³³ See [AANDC's Letter to MVLWB](#), submitted to the MVLWB on November 18, 2015.

It is also to be noted that NATCL applied in September 2015 to place the mine in care and maintenance status. The most recent order of the British Columbia courts³⁴ in the ongoing CCAA proceeding provides that Canada as represented by the Department of Indian Affairs and Northern Development Canada (referred to as AANDC or “Canada” below) will fund NATCL’s care and maintenance costs for the period from November 18, 2015 until March 31, 2016. It is the Board’s understanding that if no arrangement for the mine to continue operating can be made by March 31, 2016 that AANDC will take control of the site and be responsible for future activities there, whether they be a continuance of the care and maintenance status of the site, or closure.

Thus, the evidence before the Board indicates that NATCL is insolvent and in court ordered protection from its creditors. Further, GNWT has exercised its option under the Devolution Agreement to return responsibility for the site to Canada. The care and maintenance status of the site is guaranteed only until March 31, 2016 after which, if no arrangement for a purchaser to take over can be made, AANDC will take over control of the mine site.

Against this factual backdrop, the Board requested that AANDC answer an Information Request (IR) and make submissions on the appropriate interpretation of paragraph 72.03(5)(d) of the MVRMA. Other parties to the proceeding were advised of the IR and also invited to make submissions. AANDC replied on November 29, 2015. Only NATCL through the CCAA Monitor and GNWT provided comments.

AANDC noted that the application before the Board is for the renewal of an existing licence for an historic undertaking. They argued that the Board has considerable discretion in the manner in which it interprets and applies paragraph 72.03(5)(d). This discretion AANDC argued is set out in subsection 72.12(2) of the MVRMA and arises specifically because this proceeding involves a licence renewal. The subsection’s language is below:

(2) Sections 72.03 to 72.11 apply, with any modifications that the circumstances require, in respect of a renewal of, or an amendment to, a licence. (emphasis added)

The Board’s ability to take the circumstances into consideration authorizes the exercise of a discretion AANDC argues and this should be linked to the mandate of the Board set out in section 101.1 of the MVRMA. That section ensures that the Board will apply its authorities in a way that takes “the optimum benefit of all Canadians and residents of the Mackenzie Valley into consideration”.

AANDC then argues that continued licensing of the NATCL undertaking is appropriate and necessary. They point out that the Monitor has retained key employees and that they are working on site to care for and maintain the mine and protect the environment. Renewal of the Licence will extend the security requirements and enhance the attractiveness of the site to any company considering an acquisition of the mine. AANDC has argued that it is in the public interest for the Board to interpret the MVRMA flexibly and in a way that allows for the renewal of the Licence.

The Monitor and GNWT both support the continued licensing of the mine and point out the benefits that the Licence will offer in terms of the management of the site in both the short and potentially longer term.

³⁴ See Order entered November 17, 2015, Vancouver Registry, BCSC no. S154746.

In the Board's view, there is merit in these submissions. The Monitor has advised that if no licence is issued it may not be able to continue overseeing the care and maintenance process at the site. In addition, the Monitor and AANDC state that if a purchaser is found section 72.14 of the MVRMA will require that adequate security be provided before an assignment of the Licence can take place. AANDC has guaranteed funding of the care and maintenance until March 31, 2016. If AANDC and the Monitor do not succeed in finding a purchaser then the site will eventually revert to Canada for closure and reclamation.

In these circumstances, it appears to the Board that the renewal of the Licence will ensure the continuation of the status quo during which time a solution could be found. If the Licence is not renewed, that opportunity is lost immediately. If the Licence is renewed there is little risk to the environment and public interest because the care and maintenance process is funded and must take place in conformity with the Licence. The Board thus concludes that risk to the public and environment is not increased by a Licence renewal.

The Board notes as well that the operations proposed in the renewal application have had no effect on the security requirements assessed and approved by the Minister of ENR at the time the amendment Licence was approved in June. No party in the renewal proceeding suggested that the renewal would affect security requirements or raised concerns about security.

Having considered all this information and the submissions of AANDC, GNWT and the Monitor on behalf of NATCL, the Board is persuaded that it should exercise its discretion in this case. Further it is the Board's view, based on the words in subsection 72.12(2) (see underlining above), that it has broad discretion to interpret the referenced provisions of the Act when renewing an historical Licence like the one held by NATCL. Finally, in the Board's view the best outcome in relation to the public interest is one where an arrangement can be made which will see a new operator take over the mine and deal with the liabilities at the site. While there is no indication that such an outcome will result, it is clear to the Board that refusing to issue a Licence eliminates this possibility entirely.

As a result and for the reasons set out above, the MVLWB rules that the financial capacity of the Applicant, in this case, is adequate and meets the requirements of paragraph 72.03(5)(d) in these unique circumstances.

3.2 Reasons for Decision on Term and Conditions of Licence MV2015L2-0003

It is the opinion of the Board that compliance with the conditions of this Licence, including adherence to effluent quality criteria and management plans, studies, reports, manuals, and programs, will ensure that any potential adverse effects on other water users, which might arise as a result of the issuance of this Licence, will be minimized as required by subsection 72.04(2) of the MVRMA.

The format of the Licence has been reorganized from the MV2002L2-0019 Licence, with minimal changes to the Licence content. These changes modernize the Licence and enhance its consistency with other licences for major mining undertakings in the Northwest Territories.³⁵

³⁵ For example: Water Licence MV2011L2-0004, amended for the Snap Lake Project on September 16, 2015; Water Licence MV2005L2-0015, issued for the Gahcho Kué Project on September 24, 2014; Water Licence W2012L2-0001 amended for the Ekati Diamond Mine on June 6, 2014; and Water Licence W2008L2-0004, issued on for the Nico Mine July 14, 2014.

3.2.1 Term of Licence

NATCL requested a ten (10) year term in the Application. The GNWT-ENR initially supported this proposal in its written intervention.³⁶ Following the cancellation of the hearing, Board staff distributed IRs; IR3 was directed to all parties requesting a recommendation for licence term.

The GNWT-ENR and EC both supported a ten (10) year term in their responses.³⁷ NDDB and DFN recommended a five (5) year term as this would be consistent with the previously granted Licence (for the dry stack facility amendment), it would allow for adaptive management, and it would enable legislative changes; whereas, “Longer license terms tend to result in increasing requirements for new submissions and review, increasing the onus on both the proponent and the company once renewal occurs”.³⁸

NATCL noted in their closing argument that a ten (10) year term would reflect the recent upgrading to wastewater and tailings management practices at the mine, and, “Would allow for a smooth transition from an operations license to a closure license while using the management plans and adaptive management to provide updates to operations and improved management practices”.³⁹ NATCL also explained,

If the MVLWB is concerned about granting a long-term license for the Cantung mine in the current market conditions, we would propose that the Board consider a shorter term license. This will allow NATCL to adequately carry out care & maintenance functions at the mine with a water license that is up to date and includes adaptive management and increased reporting. A short term license of 2 years would allow for an adequate care and maintenance period and re-establishing operations, before filing an amendment for a term extension for full operations.

The Board has decided to set the term of the Licence at 8 years. The Board was in consensus that a two-year term would not be in the public’s best interest as it would not support the potential continuation of the mine if the mine were to go back into production. Furthermore, a term of such short duration could interfere with the requirements for some management plans that require longer term monitoring and reporting. There was some hesitation about setting a ten year term due to the unusual circumstances the mine is currently in, and the unknowns associated with the future of the mine. The Board decided that a term of 8 years is a compromise between what was recommended by intervenors, and is sufficient in length to allow for ongoing operations and environmental management should the mine go back into production.

3.2.2 Part A: Scope and Definitions

Part A of the Licence contains the scope and definitions for terms used throughout.

Scope

The scope of the Licence ensures the Licensee is entitled to conduct activities which have been applied for. In setting out the scope of the Licence, the Board endeavoured to provide enough

³⁶ See page 2, [GNWT-ENR’s Intervention](#), submitted to the MVLWB on July 14, 2015.

³⁷ See page 4, [GNWT-ENR’s Response to Information Requests](#), submitted to the MVLWB September 10, 2015; and page 4, [EC’s Response to Information Requests](#), submitted to the MVLWB September 10, 2015.

³⁸ See page 3, [NDDB’s Response to Information Requests](#), submitted to the MVLWB September 10, 2015; and page 2, [DFN’s Closing Statement](#), submitted to the MVLWB October 27, 2015.

³⁹ See page 1, [NATCL’s Closing Statement](#), submitted to the MVLWB November 3, 2015.

detail to describe the authorized activities, but not so much detail that NATCL's activities would be unduly restricted. As a result, the Board included a list of authorized activities in the scope of the Licence and referenced submissions that further describe the authorized activities. This includes the reference to Amendment Applications and related documents. This change reflects recommendations made to the Board by GNWT-ENR.⁴⁰

The Board moved Part A, item 1(b) into this part of the Licence to be consistent with other Licences previously issued by the Board. This condition was formerly Part B, item 1 of Licence MV2002L2-0019.

Definitions

The Board updated and added defined terms used in the Licence in order to ensure a common understanding of conditions and to avoid future differences in interpretation. For the most part, the definitions use wording similar to that found in Licence MV2002L2-0019 and in Licences recently issued by the Board. Where appropriate, these updated or new definitions are described below:

- The following terms were defined to support the new requirement for an Aquatic Effects Monitoring Program (AEMP) in Part H: Action Level, AEMP, Response Framework, Response Plan, and Significance Threshold. The definitions used are consistent with recently issued Licences.
- The definition for Act was changed to the MVRMA to reflect the applicable legislation.
- The definition for Minister was updated to clarify the responsible Minister.
- The definition for Average Concentration was removed and replaced with Maximum Average Concentration in order to reflect the terminology actually used in both existing Licence MV2002L2-0019 and this renewed Licence MV2015L2-0003.
- A definition for Maximum Grab Concentration was added. This term was previously used in existing Licence MV2002L2-0019 without being defined. The definition added is consistent with recently issued Licences.
- New definitions were added to support the requirements for a Closure and Reclamation Plan (Part J), Engagement Plan (Part B), Spill Contingency Plan (Part I), and Waste Management Plan (Part G). These definitions are consistent with recently issued Licences.
- Definitions for Discharge, Engineered Structures, Groundwater, Metal Leaching, Project, Seepage, Tailings Containment Area, Traditional Knowledge, Unauthorized Discharge, Waste Rock, Wastewater Treatment Facilities, and Water Content were added, and are consistent with recently issued Licences.
- A definition for Wastewater was included in the draft Licence; however, this term was removed from the Licence because it was only used once. To be consistent, the term liquid waste is used throughout.
- ICP Metal Scan was removed from the definitions, and was more clearly and appropriately defined in the Surveillance Network Program (Annex A).
- Project was defined and then used consistently throughout the Licence to replace the various terms that were previously used (undertaking, mine, etc.) in existing Licence MV2002L2-0019.
- Definitions for Modification, Receiving Environment, Water Supply Facility, and Water Use Fee were updated to be consistent with recently issued Licences.

⁴⁰ See page 1, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

- Licensee was clarified to specifically identify NATCL. This is consistent with recently issued Licences and was clarified by NATCL and AANDC in their respective responses to the Board's information request.⁴¹
- Professional Engineer replaced the definition for Engineer, and Professional Geoscientist replaced the definition for Geoscientist; they were updated to be consistent with recently issued Licences.
- Waste Disposal Facilities was removed from the definitions because it was infrequently and inconsistently used in Licence MV2002L2-0019.

NATCL recommended that a definition for runoff be added to the Licence to clarify reporting requirements.⁴² This suggestion was in response to EC's recommendation to revise the definition of seepage to include water and waste from non-engineered structures (eg. waste rock piles), which NATCL did not agree with⁴³. The Board has not accepted either of these recommendations for the reasons set out below.

EC's initial recommendation regarding the definition for seepage was intended to prevent confusion over whether site runoff and water coming from structures are captured under the *Metal Mining Effluent Regulations* (MMER) definition of effluent, and EC did not agree that adding a definition for runoff, as suggested by NATCL, would provide any clarity in this regard.⁴⁴ While the Licensee is required to comply with all applicable legislation, the Board notes that the MMER are not within the Board's jurisdiction, and therefore, the Board does not have the authority to determine whether the MMER apply to any given water or waste stream. Further, the Licence does not actually provide specific direction on whether any runoff, seepage, or drainage from the Project is considered effluent or waste, so the Board concludes that the Licence does not contribute to confusion on what is considered effluent under the MMER.

As currently written, the definition for seepage is consistent with other licences recently issued by the Board and is not specific to engineered structures. Further, contrary to NATCL's comments on the draft Licence, 'drainage' is not used as an alternative within the Licence to refer to water coming from non-engineered structures.⁴⁵ Within the Licence, information and monitoring requirements regarding seepage are linked to specific structures and facilities, but general direction on managing seepage is not provided, so revising the definition to indicate what type of structures seepage could come from does not have any regulatory purpose.

With regard to clarifying reporting requirements, the term 'runoff' has been used in similar reporting requirements without being explicitly defined in other water licences recently issued by the Board, and having reviewed the use of this term in this Licence, the Board has not identified the need for an exception in this case. Like other licences, the reporting requirements for runoff are directly linked to relevant management plans, where runoff management and monitoring details must be detailed by the Licensee. Further, the Board notes that NATCL's proposed

⁴¹ See page 1, [NATCL's Response to MVLWB's Information Requests](#), submitted to the MVLWB on November 29, 2015; and page 1, [AANDC's Response to MVLWB's Information Requests](#), submitted to the MVLWB on November 29, 2015.

⁴² See page 2, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

⁴³ See page 5, [EC's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015; page 2, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

⁴⁴ See page 2, [EC's Closing Statement](#), submitted to the MVLWB on October 26, 2015.

⁴⁵ See page 2, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

definition does not actually describe what constitutes runoff, but merely identifies it by how it is managed on site. The Board concludes that adding a definition for runoff, particularly as proposed, does not provide additional clarity with regard to reporting requirements.

3.2.3 Part B: General Conditions and Schedule 1

Part B of the Licence applies to matters regarding compliance and conformity with the MVRMA, and is consistent with standard conditions found in previous Licences issued by the Board. This section addresses water use fees and conformity and compliance with plans, submission timelines for revisions and format, the Surveillance Network Program (SNP), and the Schedules which are annexed to and form part of the Licence. This section also addresses signage, measuring devices, public engagement requirements, and annual water licence reporting.

In Part B, item 3, the Board clarified that all references to policies, guidelines, codes of practice, statutes, regulations or other authorities shall be read as a reference to the most recent versions, unless otherwise denoted. This standard practice allows for flexibility in Licence conditions when documents are updated during the life of the Licence. As such, the previously used terminology “or amended editions” and “subsequent editions” was removed from several conditions throughout the Licence.

Schedule 1 details the requirements for the Annual Water Licence Report required by Part B, item 12 of the Licence. The following items were added as requirements for the Annual Water Licence Report:

- Item 1(a) to reflect the new requirement of an Engagement Plan in Part B of the Licence;
- Item 1(d) requires NATCL include a summary of any modifications undertaken in accordance with Part F of the Licence during the previous calendar year. This coincides with a similar, existing requirement regarding construction activities;
- Items 1(f)(xiii and xiv) require NATCL to include a summary and interpretation of any action level exceedances during the previous calendar year in accordance with the Water Management and Mine-site Erosion and Sediment Protection Plan;
- Items 1(g) through (i), (k), (l), and (m) require summaries of the annual activities conducted in accordance with various management plans and monitoring programs required in Parts G, I and J of the Licence;
- Item 1(o) for consistency with other licences and to demonstrate the proper use of meters and devices; and
- Items 1 (q) and (s) for consistency with other licences and to provide a snapshot of regulatory compliance during the year.

Part D, item 3 of existing Licence MV2002L2-0019 required pump specifications to be submitted annually to the Board. This requirement was removed from the Licence as these specifications are unlikely to change annually. The requirement to report monthly and annual qualities of water withdrawn from the Flat River was retained (Schedule 1, item 1(f)(i), for the Annual Water Licence Report).

Part B, items 13 and 14 are new conditions relating to the requirement of an Engagement Plan. The Plan describes proposed engagement activities during the life of the Project and shall be in accordance with the Board’s *Engagement and Consultation Policy* and the *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*. Reviewers were requested to recommend a deadline for the submission of this Plan during the review of the draft Licence.

During the initial review NATCL indicated they would submit the Engagement Plan at the technical session; however, this Plan was not received by the Board during the proceeding.⁴⁶ During the review of the draft licence both the NDDDB and DFN recommended the submission of the Engagement Plan within thirty (30) days of licence issuance.⁴⁷ NDDDB and DFN subsequently recommended the submission of a draft work plan for the Engagement Plan be required within thirty (30) days of issuance, followed by a ninety (90) day period to submit the Engagement Plan. This would allow for collaborative development amongst the stakeholders.⁴⁸

NATCL requested the submission of the Engagement Plan be within (90) days of licence issuance to allow for initial engagement and development of the Engagement Plan under new ownership, while recognizing the existing Impacts and Benefits Agreement with the NDDDB.⁴⁹ NATCL subsequently agreed in their closing argument that NDDDB's and DFN's proposals for the submission of a draft engagement plan within thirty (30) days of issuance, followed by submission of a final engagement plan within ninety (90) days of the draft is reasonable.⁵⁰ In response to these recommendations, the Board has required the submission of an Engagement Work Plan for Board approval (Part B, item 13) within thirty (30) days of issuance of this Licence; and the requirement of an Engagement Plan for Board approval (Part B, item 14) ninety (90) days following Board approval of the Engagement Work Plan.

3.2.4 Part C: Conditions Applying to Security Requirements and Schedule 2

Part C and Schedule 2 of this Licence set the level of security to be maintained by the Licensee and set out requirements related to posting and updating security. As in other licences, the Board may request a security update from the proponent at any time, and may adjust the security amount at any time, based on available information. The conditions in this section are similar to those found in other Licences issued by the Board.

Part C, items 3 and 4 stipulate that the Board can revise the security deposit and requires the Licensee to post revised security amounts with the Minister within ninety (90) days of the Board giving notice of the revised amount. This condition pertains to both increases and reductions in security.

The purpose of these conditions is to implement the direction provided in AANDC's *Mine Site Reclamation Policy for the Northwest Territories*, chiefly, that "Adequate security should be provided to ensure the cost of reclamation, including shutdown, closure and post-closure, is born by the operator of the mine rather than the Crown". The Board is authorized to set the security deposit amount by section 72.11 of the MVRMA.

Part C, item 4 identifies the timeframe within which NATCL is required to follow-up on a Board decision to revise the amount of security amount required as per Part C, item 3. The GNWT-ENR commented in their review of the draft Licence that this condition appears to impose a timeline on their Minister.⁵¹ The Board is of the opinion that these conditions are binding on the

⁴⁶ See MVLWB 1, [Review Comment Summary Table - Application](#), June 10, 2015.

⁴⁷ See NDDDB 1 and DFN 14, [Review Comment Summary Table - Application](#), June 10, 2015.

⁴⁸ See page 2, [NDDDB's Closing Statement](#), submitted to the MVLWB on October 26, 2015; pages 2 and 3, [DFN's Closing Statement](#), submitted to the MVLWB on October 26, 2015.

⁴⁹ See pages 3-4, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

⁵⁰ See page 2, [NATCL's Closing Statement](#), submitted to the MVLWB on November 3, 2015.

⁵¹ See page 2, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

Licensee, not the Minister. Specifically, Part C, item 4 does not impose limits on the authorities granted to the Minister as per subsection 72.11(1) of the MVRMA regarding the form of security presented or the amount of time the Minister requires to decide on the acceptability of the security posted.

DFN argued in their closing statement that, “There should be no potential for unfunded reclamation liabilities.”⁵² Part C, items 2 and 3 puts the onus on NATCL to provide evidence of the security liabilities that exist on site. The *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories* state that, “The Boards also have the ability to increase or decrease the amount of security held for a particular project if sufficient evidence indicates that the total liability at the site has increased or decreased.”⁵³ Based on this approach, and as determined by evidence provided to the Board, it may be appropriate from time to time to reduce security required or request additional security to ensure sufficient funds are available to address the liabilities on site at any given time.

In the draft Licence that was circulated for review, the requirements from Schedule 2 in the existing Licence MV2002L2-0019 were moved into the body of the draft Licence. GNWT-ENR supported this change in its comments on the draft Licence for this Application.⁵⁴ The Board has decided to retain the details of the reclamation requirements in Schedule 2 because this allows for the flexibility in adjusting the security amounts, as allowed for under Part C item 3 of the Licence, without undergoing an amendment process. This has been the standard process for other water licences issued by the Board.

On June 16, 2015, the Board issued a decision on the dry stack tailings facility amendment to the existing Licence MV2002L2-0019. This amended Licence required NATCL to post additional reclamation security, totaling \$30,950,000.00 in 3 phased installments. This Application is to “renew” NATCL’s existing Licence MV2002L2-0019, and no changes to operations were proposed in the Application. For this reason, the amount of security required under this Licence did not change from that required under amended Licence MV2002L2-0019.

3.2.5 Part D: Conditions Applying to Water Use

Part D of the Licence contains standard conditions related to water use for the Project.

The maximum quantity of water that can be withdrawn from the Flat River each week was revised to 30,000 m³/week in Part D, item 2. In its Application, NATCL proposed to maintain the same water use limit set out in the previous Licence (45,000 m³/week); however, in the Mining Industry Questionnaire accompanying the Application, the average water usage was listed as 19,500 m³/week.⁵⁵ In its response to review comments, NATCL clarified that a limit of 30,000 m³/week would be adequate.⁵⁶ The Board did not receive any other comments on the water use limit and has accepted NATCL’s revised limit.

⁵² See page 3, [DFN’s Closing Statement](#), submitted to the MVLWB on October 26, 2015.

⁵³ See page 27, MVLWB and AANDC’s *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*, November 2013.

⁵⁴ See page 2, [GNWT-ENR’s Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

⁵⁵ See page 1, Application Form, [MV2015L2-0003 Water Licence Application](#), submitted to the MVLWB on April 21, 2015; pages 10-11, Mining Industry Questionnaire, [MV2015L2-0003 Water Licence Application](#), submitted to the MVLWB on April 21, 2015.

⁵⁶ See MVLWB 4, [Review Comment Summary Table - Application](#), June 10, 2015.

3.2.6 Part E: Conditions Applying to Construction and Schedule 3

Part E of the Licence contains conditions related to construction activities at the mine site. These conditions ensure that engineered structures are built to appropriate standards, and require the submission of design and engineering reports. Part E, items 1 through 5, and 13 are all new conditions that are consistent with recently issued Licences.

Board staff requested recommendations from reviewers regarding the enforceability of Part E, item 1. This condition requires that the Licensee, “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.” While this standard condition is reasonable for many of the existing and planned structures on site, the existing tailings containment area (Tailings Ponds 1-5) was designed to exfiltrate, and as such, does not actually minimize the escape of waste. EC was the only reviewer that addressed this concern, recognizing that an exemption for these existing facilities is required, but recommending that the condition be retained. EC did not suggest revisions to the wording of the condition. NATCL noted that Part E, item 1 is an appropriate condition, “Since the exfiltration ponds were not designed or intended to minimize the escape of water there is no non-compliance issue,” whereas the dry stack tailings facilities will be designed to meet Part E, item 1 as written.⁵⁷ The Board agrees with the rationale provided by NATCL and EC, and has decided to maintain the wording of Part E, item 1. For purposes of Licence implementation and enforcement, the Board accepts the explanation that the design purpose of Tailings Ponds 1-5 was not to contain or minimize the exfiltration of Waste.

Conditions requiring the installation of new groundwater monitoring wells near the Tailings Containment Area were removed (previously Part E, items 10 through 14 in Licence MV2002L2-0019), because this work has been completed, an installation report has been provided,⁵⁸ and these wells are included in on-going SNP monitoring. In its response to review comments, NATCL agreed that these conditions should be removed.⁵⁹ EC also agreed that this condition has been satisfied and should be removed.⁶⁰

3.2.7 Part F: Conditions Applying to Modifications

Part F of the Licence contains conditions applying to modification of structures and facilities associated with the Project.

Part F, item 1(d) was added to formalize the step of an Inspector authorizing proposed modifications. This update is consistent with previously issued Licences.

3.2.8 Part G: Conditions Applying to Waste and Water Management and Schedule 4

Part G and Schedule 4 of the Licence contain conditions applying to the management of waste and water for the Project.

Part G, item 1 is a new condition the Board added to the Licence; it describes the overall objectives of this portion of the Licence. Minor administrative changes were made throughout Part G and Schedule 4 to be consistent with recently issued Licence conditions and formats,

⁵⁷ See page 5, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

⁵⁸ See NATCL's [2009 Groundwater Monitoring Well Installation Report](#), submitted to the MVLWB on October 20, 2009.

⁵⁹ See MVLWB-9, [Review Comment Summary Table – Application](#), June 10, 2015.

⁶⁰ See page 2, [EC's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

and with updated definitions. These conditions mainly originated from Parts E and F of the previous Licence MV2002L2-0019. Where conditions have been revised or new conditions have been added, the Board's decisions are detailed in the following sections.

Management Plans and Monitoring Programs

The Board recognizes the recommendations and requests for clarification made by NDDDB, DFN, EC and NATCL regarding the Licence requirements for management plans, some of which have already been submitted and approved.⁶¹ To this end, the Board has summarized the submission status of the Licence conditions for submission required by Part G below. More detailed rationale for specific submission requirements is set out in the remainder of these reasons.

For new plans or reports, or where the evidence supports a specific revision date for a previously approved or submitted plan or report, the Board has set the submission date accordingly.

For those plans that have previously been submitted and approved, the Board has not removed the applicable conditions; these plans must be included in the Licence in order to apply Part B, item 5, which directs the Licensee to operate in accordance with approved management plans. The following plans have been approved under the existing Licence, MV2002L2-0019, and continue to apply to the Project:

- Waste Management Plan (Part G, item 2)
- Water Management and Mine-site Erosion and Sediment Protection Plan (Part G, item 3)
- Flat River Erosion and Sediment Protection Plan (Part G, item 4)
- Tailings Containment Area Monitoring Plan (Part G, item 10)
- Groundwater Pumping Contingency Plan (Part G, item 15)
- Tailings Containment Area and Dry Stack Tailings Storage Facilities Emergency Preparedness Plan (Part G, item 16)
- Flat River Hydrology Plan (Part G, item 18)
- Plume Delineation Study Design (Part G, item 19)
- Spill Contingency Plan (Part I, item 1)

For the above-listed plans, the Board has updated the Licence conditions to direct NATCL to adhere to the approved version of the plan. Under Part B, item 6, NATCL must review these plans annually and determine if revisions are necessary to reflect changes in operations. If revisions are required, updated plans must be submitted to the Board for approval sixty (60) days prior to implementing the proposed changes.

The Board also recognizes that the regulatory process is incomplete for the following plans and reports, which were previously submitted under the existing Licence, MV2002L2-0019:

- Tailings Containment Area Cover Design Study (Part E, item 8)
- Geochemical Risk Assessment Report and Load Balance Model (Part G, items 6 and 7)
- Information Gap Analysis Report (Part G, item 8)

⁶¹ See Comment 3, [NDDDB's Comments on Draft Water Licence](#), submitted to the MVLWB on October 9, 2015; page 4, [DFN's Closing Statement](#), submitted to the MVLWB on October 27, 2015; [EC's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015, and pages 7-8, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

- Research and Monitoring Plan for Dry Stack Tailings Storage Facility TSF4b (Part G, item 13)

For these documents, the Board has maintained the Licence requirements and has updated the submission dates to within ninety (90) days of Licence issuance. However, the Board notes that these documents have been received, and given the current status of the Project, the Board does not intend to continue with the regulatory processes for these submissions at this time. The Board will resume the regulatory processes for these submissions when operations re-commence, or as otherwise determined by the Board.

The Board notes that it may modify any of these submission dates if necessary under Part B, item 9.

Part G, item 3: Water Management and Mine-site Erosion and Sediment Protection Plan

In its July 14, 2015 intervention, EC recommended that the Water Management and Mine-site Erosion and Sediment Protection Plan be updated to reflect the installation of the wastewater treatment plant, the upcoming changes to tailings management, and current MMER requirements.⁶² NATCL replied that the required annual review of this Plan is already underway, and the Plan is being updated with current information but has not yet been submitted.⁶³ The Board notes that the wastewater treatment facilities are actually already included in the current version of this Plan. Since the approved changes to tailings management will not be implemented right away, and the Project is entering a period of temporary shutdown, the Board has accepted the version of this Plan currently approved under MV2002L2-0019. In the future, necessary revisions to this Plan can be captured through the annual reviews required under Part B, item 6, and the scheduled revision that must be completed prior to construction of the dry stack tailings storage facilities.

Part G, items 6, 7 and 9: Geochemical Load Balance and Risk Assessment

As noted earlier in these Reasons, the Geochemical Risk Assessment Report and Load Balance Model have been submitted as required under Part G, items 6 and 7. These requirements have been maintained, because the regulatory process has not yet been concluded for these documents. The Board will determine how to respond to these submissions when operations resume; however, as described in the Board's March 2, 2015 Reasons for Decision, the Board also notes that it may consider Part G, items 6 and 7 satisfied by the submission of the Integrated Geochemical Load Balance and Risk Assessment Report, required under Part G, item 9.⁶⁴

The requirement for an Integrated Geochemical Load Balance and Risk Assessment Report has not changed; however, the Board notes that Report should include an analysis and quantification of the geochemical consequences of physical failure, as recommended by EC and agreed to by NATCL.⁶⁵

⁶² See page 11, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015.

⁶³ See page 2, [NATCL's Response to Interventions](#), submitted to the MVLWB on July 23, 2015.

⁶⁴ See page 28, [MVLWB Reasons for Decision - MV2002L2-0019 Amendment Application](#), March 2, 2015.

⁶⁵ See page 12, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015; and page 3, [NATCL's Response to Information Requests](#), submitted to the MVLWB on September 8, 2015.

Part G, item 12: Historical Data and Interpretation Report

The Board recognizes that the Historical Data and Interpretation Report has been submitted under MV2002L2-0019. Data analysis in the report was conducted for a limited number of water quality parameters, which did not completely satisfy the requirements of the condition.⁶⁶ An updated Report with analysis of additional parameters is not required at this time; however, the requirement for this Report has been retained in the Licence as Part G, item 12 to allow the Board to request an update if needed in the future. The Board will provide direction on the submission date when requesting the update.

Part G, item 17 and Schedule 4, item 10: Wastewater Treatment Facilities OMS Manual

The information requirements listed in Schedule 4, item 10 were added to provide greater clarity on the Board's expectations for the Wastewater Treatment Facilities Operations, Maintenance, and Surveillance (OMS) Manual. These requirements are consistent with the information provided in the most recently-approved version of the OMS Manual, with the exception of the requirement for a response framework. The response framework was proposed by NATCL to address practical considerations with effluent quality, which are discussed further below with regard to Part G, items 35 to 37.

The Board recognizes that this Manual was submitted and approved under MV2002L2-0019, but because of the new requirement for a response framework, the approved version of the Manual no longer meets the Licence requirements, and a revision will be required. Given the current status of the Project, the Board recognizes that it is not imperative that this revision occur immediately; however, because timelines for resuming operations are unknown, the Board has updated this condition to require submission of this Manual within 90 days of Licence issuance. The Board notes that it can modify this submission date as necessary under Part B, item 9.

Part G, item 21 and Schedule 4, item 12: Nitrogen Response Plan

The requirement for an Evaluation Report for nitrite, fluoride, and selenium (previously Part F, item 25) has been removed and replaced by the requirement for a Nitrogen Response Plan, because the Board has determined that the requirement for the Evaluation Report has been satisfied, but that further investigation into nitrite levels is necessary. The Board's reasons for its determination on this requirement are described below; however, the Board's determinations regarding site-specific water quality objectives (SSWQOs) and EQC for each of these three parameters are described later in these Reasons, under Part G, item 34.

SNP Station 4-44 is a surface water station, located near the edge of the established mixing zone in the Flat River. Although the Board previously set SSWQOs for nitrite, fluoride, and selenium at this Station, calculated EQC associated with the SSWQOs for these parameters did not appear to be achievable. The Board recognized that calculated EQC were based on limited data and worst-case scenarios, and asked that NATCL submit an Evaluation Report demonstrating whether these SSWQOs are being met at SNP Station 4-44 under varying discharge conditions after collecting additional data. Based on this evaluation, NATCL was to provide recommendations for revised SSWQOs and an outline of possible mitigation measures, if needed.⁶⁷

⁶⁶ See [MVLWB Letter to NATCL - Historical Data and Interpretation Report](#), dated March 7, 2013.

⁶⁷ See page 14, [MVLWB Reasons for Decision – MV2002L2-0019 Amendment Application](#), April 2, 2014.

The Evaluation Report was submitted to the MVLWB on March 25, 2015, and was also included in the Application. Because the Evaluation Report was actually intended to be used by the Board during the Licence renewal process to determine whether EQC are needed for these three parameters, the Evaluation Report was not circulated separately for review.⁶⁸ Instead, reviewers were reminded to include comments on the Evaluation Report as part of their review of the Application.⁶⁹

In response to requests for further information regarding the high nitrite levels observed periodically in the wastewater treatment plant effluent since discharge began, NATCL initiated an investigation into the cause.⁷⁰ In reviewing the available data, NATCL noticed that the increases in nitrite coincide with the initial deposition of tailings and treated sewage into TP5 (in addition to on-going deposition of tailings wastewater), and in combination with progressively decreasing exfiltration from TP5, this appears to be the source of the increased nitrite.⁷¹ NATCL further stated that a full review of explosives management had already been conducted when the wastewater treatment plant was introduced, and that the results of this review indicate that mine water does not contribute to the observed variation in nitrite levels.⁷²

While nitrite would normally be converted to the less-toxic nitrate in the TP5 pond, preliminary results of the investigation suggest that the periodic increases in nitrite are due to a seasonal interruption in this natural conversion process when the pond is ice-covered and oxygen is limited.⁷³ Consequently, NATCL is considering using aeration to increase oxygen levels in TP5 during the winter months.⁷⁴ This approach was supported by EC⁷⁵; however, further investigation into the cause and the proposed mitigation is necessary before final determinations are made. NATCL proposed to collect one more year of data and conduct a trial oxygenation period prior to presenting the final results of the investigation.⁷⁶

Accordingly, the Board has set out the requirements for presenting the results of this investigation in a Nitrogen Response Plan. In order to provide adequate background on overall nitrogen loadings to the Flat River from the Project, the Plan must first identify the sources, describe the potential ecological impacts, and describe current mitigations for each form of nitrogen. The Plan must also present the findings of the nitrite investigation, and outline the proposed mitigation measures, including a discussion of how these mitigation measures will ensure that all nitrogen EQC are met. The Board has required the submission of the Nitrogen Response Plan by January 31, 2017.

⁶⁸ See page 14, [MVLWB Reasons for Decision – MV2002L2-0019 Amendment Application](#), April 2, 2014.

⁶⁹ See Item Description for Online Review System, [Review Comment Summary Table - Application](#), June 10, 2015.

⁷⁰ See DFN 4 and GNWT-ENR 4, [Review Comment Summary Table - Application](#), June 10, 2015.

⁷¹ See Attachment 2, [Review Comment Summary Table - Application](#), June 10, 2015; and pages 61-63, 68, and 70-71, [Technical Session Transcripts](#), June 17, 2015.

⁷² See pages 75-76, [Technical Session Transcripts](#), June 17, 2015.

⁷³ See Attachment 2, [Review Comment Summary Table - Application](#), June 10, 2015; pages 61-63 and 71-72, [Technical Session Transcripts](#), June 17, 2015; page 1 and Attachment IR2, [NATCL's Response to Technical Session Information Requests](#), submitted to the MVLWB on June 25, 2015.

⁷⁴ *Ibid.*

⁷⁵ See page 11, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015.

⁷⁶ See Attachment 2, [Review Comment Summary Table - Application](#), June 10, 2015; and pages 77-78, [Technical Session Transcripts](#), June 17, 2015.

Part G, item 22: Phase II Environmental Site Assessment Report

The Board has revised the submission date for the Phase II Environmental Site Assessment (ESA) Report, which must be updated prior to closure. A Phase I and II ESA Report for the site was already submitted to the Board on February 13, 2009; however, the Board did not approve the Report as submitted and provided specific direction on issues that required further consideration. The Board did not set a calendar date for the submission of an updated Report; instead, the Board recognized that the ESA would eventually need to be updated and expanded to inform final closure planning, and chose to link the resubmission date to the closure water licence application.⁷⁷

A closure water licence application must be submitted eighteen (18) months prior to commencing closure and reclamation activities, as per Part J, item 5, and a Final Closure and Reclamation Plan is required twenty-four (24) months prior to the end of commercial operations, as per Part J, item 4. Based on the Board's previous direction, the updated ESA would be due six (6) months prior to the submission of a closure licence application.

In their comments on the draft Licence, EC recommended that this be revised to a 12-month timeline, in order to accommodate seasonal sampling considerations, while GNWT-ENR simply recommended that the submission timeline allow inclusion of the ESA results in the closure licensing process.⁷⁸ Assuming that the ESA Report timeline would remain tied to the closure licence application, NATCL agreed with EC that the ESA Report should be submitted twelve (12) months in advance of the closure licence application, but noted that this is not related to timelines for fieldwork, since the submission timeline in the Licence does not specify when the work should commence. NATCL, however, also suggested that the ESA Report should be completed six (6) months in advance of the submission of the Final Closure and Reclamation Plan in order to include the ESA information in closure planning.⁷⁹

The Board concludes that, in this case, the submission date for the updated ESA Report should be tied to the Final Closure and Reclamation Plan, rather than the closure licence application. Accordingly, the Board requires that the updated ESA Report be submitted six (6) months prior to the submission of the Final Closure and Reclamation Plan.

Part G: Qualitative and Quantitative Ecological Risk Assessment Report for the Flat River Tailings

While the Board recognizes the need to update the Flat River Tailings risk assessment in order to determine the final closure option for these tailings, the Board finds that this requirement can be adequately addressed through the closure and reclamation planning process, and a separate report on this risk assessment is not required.

⁷⁷ See page 1, [MVLWB Decision Letter - Phase I and II Environmental Site Assessment Report](#), dated August 18, 2011.

⁷⁸ See page 3, [EC's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015; and page 3, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

⁷⁹ See page 8, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

On March 30, 2009, NATCL submitted a Qualitative Risk Assessment Report for the historic Flat River tailings as required under MV2002L2-0019. In this Report, NATCL compared the ecological risks associated with two closure options for the Flat River tailings: removal to an on-site tailings containment facility, and leaving the tailings in place. NATCL concluded that leaving the tailings in place was the most environmentally sound option. NATCL further stated that all quantitative data had been considered in this Report, and proposed that a more detailed quantitative risk assessment, also required under MV2002L2-0019, was not necessary.⁸⁰

The Report was circulated for review, with a final response to comments submitted on April 5, 2011. In general, NATCL and reviewers did not agree on some of the fundamental considerations and conclusions in the Report, including the scope of the options assessment.⁸¹ DFO, in particular, stated that “this report should not be used as a technical basis for making decisions regarding the management of historic mine tailings at the site.”⁸² The Board did not make a determination on the Report, and discussions regarding closure options for the Flat River tailings continued to some extent through the ICRP process.⁸³

In follow-up to discussions that took place during a closure and reclamation planning workshop in October, 2014 and to provide clarification for this Application process, Board staff requested that NATCL set out its position on the existing Report and outline its proposed approach for moving forward with an options analysis for the Flat River tailings.⁸⁴ In response, NATCL proposed to first include the Flat River tailings in the upcoming Integrated Geochemical Load Balance and Risk Assessment, and then build on this assessment by integrating available ecological and biological data to develop closure options.⁸⁵ In order to address some of the outstanding review comments, NATCL agreed to look at short and long-term impacts of each closure option, and consider the effects of flooding.⁸⁶ Any identified information gaps would then be addressed through reclamation research plans.⁸⁷

⁸⁰ See NATCL’s [Qualitative Risk Assessment Report](#), submitted to the MVLWB on March 30, 2009.

⁸¹ See NATCL’s [Response to Review Comments - Qualitative Risk Assessment Report](#), October 2, 2009; NATCL’s [Response to DFO Review Comments - Qualitative Risk Assessment Report](#), April 5, 2011.

⁸² See page 1, [DFO Letter to MVLWB - CanTung Mine Site Flat River Historic Tailings](#), submitted to the MVLWB on July 8, 2011.

⁸³ See Comments 24, 25 and 43, NATCL’s [Response to Review Comments - 2012 ICRP](#), submitted to the MVLWB on May 18, 2011; Comment 9, NATCL’s [Response to Review Comments - 2012 ICRP](#), submitted to the MVLWB on August 31, 2012; NATCL’s [Response to Review Comments - Closure Objectives - Flat River Tailings Component](#), submitted to the MVLWB on April 7, 2013; NATCL’s [Response to Review Comments - Closure Options - Flat River Tailings Component](#), submitted to the MVLWB on September 22, 2013; and pages 95-97, [NATCL Presentation for Closure Planning Workshop](#), October 15, 2014 .

⁸⁴ See MVLWB 8, [Review Comment Summary Table - Application](#), June 10, 2015.

⁸⁵ See MVLWB 8, [Review Comment Summary Table - Application](#), June 10, 2015; pages 113-114, [Technical Session Transcripts](#), June 17, 2015; Information Request 1, [NATCL’s Response to Information Requests](#), submitted to the MVLWB on September 8, 2015; and pages 9-10, [NATCL’s Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

⁸⁶ See pages 113-114, [Technical Session Transcripts](#), June 17, 2015.

⁸⁷ See MVLWB 8, [Review Comment Summary Table - Application](#), June 10, 2015; pages 113-114, [Technical Session Transcripts](#), June 17, 2015; Information Request 1, [NATCL’s Response to Information Requests](#), submitted to the MVLWB on September 8, 2015; and pages 9-10, [NATCL’s Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

NATCL proposes to submit the results of the first stage of the risk assessment as part of the Integrated Geochemical Load Balance and Risk Assessment Report, which is due by January 31, 2016, and the further ecological risk assessment as part of the ICRP, due by March 31, 2016. NATCL expects to complete the risk assessment prior to the submission of the ICRP, and intends to provide progress updates in the Annual Water Licence Report. NATCL has also established an ICRP working group, and will be providing drafts of the ICRP to this working group for review prior to submitting the ICRP to the Board.⁸⁸ NATCL recommended that this approach replace the requirement for separate Qualitative and Quantitative Risk Assessments.⁸⁹

In response to an information request from the Board, EC and DFN supported NATCL's proposed approach; however, DFN later recommended that a quantitative risk assessment be submitted separately from the ICRP.⁹⁰ GNWT-ENR supported NATCL's approach, provided that previously identified deficiencies are addressed and the ecological component of the risk assessment is completed to an acceptable standard, such as the Canadian Council of Ministers of the Environment (CCME)'s *Framework for Ecological Risk Assessment*.⁹¹ EC also recommended that this risk assessment be consistent with this guidance.⁹²

NDDB questioned NATCL's proposed approach, stating that it did not specifically outline the process for presenting the information and for objectively identifying information gaps. NDDB expressed a lack of confidence in whether the proposed approach would really, "Equate to a risk assessment."⁹³

In the Board's opinion, NATCL has laid out a reasonable process for completing both the geochemical and ecological aspects of a risk assessment for the Flat River tailings. NATCL has described how the risk assessment will be integrated into closure and reclamation planning, and how information gaps will be addressed. The Board notes that reviewers will be able to provide feedback on the progress of the risk assessment and associated research plans through both the ICRP working group and reviews of the Annual Water Licence Report. Reviewers will also have the opportunity to provide feedback on the risk assessment conclusions and resulting closure options as part of the Board's review process once the ICRP is submitted.

The Board has accepted NATCL's proposed approach, and has not set out a formal requirement in the Licence for an ecological risk assessment of the Flat River tailings. A geochemical risk assessment of the Flat River tailings will be completed as part of the site-wide Integrated Geochemical Load Balance and Risk Assessment, which is due on January 31, 2016. The subsequent ecological risk assessment must be consistent with the CCME's

⁸⁸ See pages 9-10, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

⁸⁹ See page 115, [Technical Session Transcripts](#), June 17, 2015.

⁹⁰ See Information Request 1, [EC's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015; Information Request 1 (DFN 11), [DFN's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015; and Comment 15, [DFN's Comments on Draft Water Licence](#), submitted to the MVLWB on October 13, 2015.

⁹¹ See Information Request 1, [GNWT-ENR's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

⁹² See Information Request 1, [EC's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

⁹³ See Information Request 1, [NDDB's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

Framework for Ecological Risk Assessment, and must address the deficiencies previously identified in the Qualitative Risk Assessment Report submitted in 2009. Both risk assessments must be incorporated into the ICRP. Given the current status of the mine, the Board notes that the full risk assessment may not be complete for the upcoming ICRP submission (due March 31, 2016) and may need to be integrated into the next revision of the ICRP. In the interim, plans to address information gaps must be laid out in the upcoming ICRP submission, and progress reports on the risk assessment must be provided in the Annual Report.

Discharge Locations and Rates

Part G, item 31: Control Structure at Outlet of Stinky Pond

This existing condition directs the Licensee to install and maintain a control structure at the outlet of Stinky Pond, so that the outlet can be sealed to prevent discharge into the Flat River if the Inspector directs the Licensee to do so. The Board has determined that this condition should not be revised.

In its comments on the draft Licence, EC recommended that this condition be revised to direct the Licensee to seal the culvert “if warranted by an upset condition”, in addition to the existing requirement to seal the culvert if directed to do so by an Inspector.⁹⁴ The Board has not accepted this recommendation, because Stinky Pond and the associated channel to the Flat River have been identified by DFO as potential rearing and/or spawning habitat for bull trout, and sealing the culvert could affect this habitat, particularly at certain times of year. As previously discussed in the Board’s October 25, 2012 Reasons for Decision, in order to protect fish habitat, the Licensee should only seal the culvert if directed to do so by an Inspector, who may choose to obtain advice from DFO prior to providing this direction.⁹⁵ The Licensee maintains the ability to stop discharge to Stinky Pond at the outflow from the wastewater treatment facilities, which is considered to be the compliance point under this Licence for this discharge stream.

Effluent Quality Criteria

Part G, item 34: Effluent Quality Criteria

Part G, item 34 sets out EQC for discharge from the wastewater treatment facilities. As noted above with respect to Part G, item 21, NATCL submitted an Evaluation Report for fluoride, nitrite, and selenium as required under MV2002L2-0019. The Board considered this Evaluation Report as part of its review of the Application, and as a result, revised the SSWQOs and EQC as follows:

- The SSWQO for fluoride was increased from 0.12 mg/L to 1.03 mg/L. The corresponding maximum average concentration (MAC) and maximum grab concentration (MGC) were set at 4 and 7 mg/L, respectively;
- The SSWQOs and EQC for nickel, nitrite, aluminum, and chromium were maintained; and
- The SSWQO for selenium was maintained.

Further details on these determinations are provided below. All other SSWQOs and EQC established under MV2002L2-0019 were maintained.

⁹⁴ See page 3, [EC’s Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

⁹⁵ See pages 7 and 9, [MVLWB’s Reasons for Decision - MV2002L2-0019 Amendment Application](#), October 25, 2012.

Fluoride

The Board has increased the fluoride SSWQO to 1.03 mg/L from 0.12 mg/L to account for naturally-occurring fluoride concentrations in the receiving environment. Based on this revision to the SSWQO, the Board has also set out a new MAC and MGC for fluoride at 4 mg/L and 7 mg/L, respectively.

The Board previously set the SSWQO for fluoride at 0.12 mg/L, equivalent to the CCME guideline.⁹⁶ In the Evaluation Report, NATCL initially proposed to increase this SSWQO to 1.5 mg/L after identifying high natural fluoride sources in seeps, creeks and hot springs that drain into the Flat River near the Project. The proposed SSWQO was calculated using the hardness-dependent equation recommended by the British Columbia Ministry of Environment (BCMOE) for setting fluoride criteria for freshwater aquatic life. NATCL further noted that the maximum acceptable fluoride concentration in drinking water is also 1.5 mg/L, and concluded that the proposed SSWQO would be protective of aquatic life, drinking water and traditional uses in the Flat River.⁹⁷

In response to review comments regarding the influence of temperature and hardness on fluoride toxicity and the variability of these modifying factors in the Flat River, NATCL revised its proposal for the SSWQO to 1.22 mg/L to reflect worst-case scenario conditions.⁹⁸ At the technical session, GNWT-ENR observed that the highest recorded fluoride concentration in the Flat River to date was 0.5 mg/L, and suggested that the proposed SSWQO was too high.⁹⁹ GNWT-ENR cited the presence of bull trout in the Flat River as a key consideration in developing a fluoride SSWQO, and ultimately recommended a fluoride SSWQO of 1.03 mg/L, based on a recently published SSWQO that was calculated using the species-sensitivity distribution approach.¹⁰⁰ This recommendation was supported by DFN and agreed to by NATCL.¹⁰¹

Based on this SSWQO, the Board calculated EQC for fluoride under low-flow and high-flow conditions using the approach previously set out for MV2002L2-0019 in the Board's April 2, 2014 Reasons for Decisions.¹⁰² The calculated MAC and MGC were 4 mg/L and 7 mg/L under low-flow conditions, and 6 mg/L and 12 mg/L under high-flow conditions. In SNP Reports for Station 4-43 (the outflow from the wastewater treatment facilities), the highest fluoride concentration recorded was 4 mg/L, while the average concentration was 2.1 mg/L, therefore, the Board concludes that the calculated EQC for both low-flow and high-flow conditions are

⁹⁶ See Table 1, Appendix A, [MVLWB's Reasons for Decision - MV2002L2-0019 Amendment Application](#), April 2, 2014.

⁹⁷ See pages 13-17, [S4-44 Water Quality Assessment Report](#), submitted to the MVLWB on March 25, 2015.

⁹⁸ See Attachment 3, [Review Comment Summary Table - Application](#), June 10, 2015.

⁹⁹ See pages 44-53, [Technical Session Transcripts](#), June 17, 2015.

¹⁰⁰ See pages 44-53, [Technical Session Transcripts](#), June 17, 2015; [GNWT-ENR's Response to Technical Session Information Requests](#), submitted to the MVLWB on June 25, 2015; pages 2-3, [GNWT-ENR's Intervention](#), submitted to the MVLWB on June 25, 2015; and page 5, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

¹⁰¹ See page 3, [DFN's Closing Statement](#), submitted to the MVLWB on October 26, 2015; and page 11, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

¹⁰² See pages 6-7, Appendix A, [MVLWB's Reasons for Decision - MV2002L2-0019 Amendment Application](#), April 2, 2014.

achievable. Accordingly, the Board has adopted the more conservative EQC of 4 mg/L and 7 mg/L, which will apply under both low and high-flow conditions.

The Board recognizes that GNWT-ENR also recommended that a fluoride action level of 0.52 mg/L be set in the AEMP.¹⁰³ The Board has not provided specific direction within the Licence conditions regarding action levels (under the AEMP, or other monitoring or management plans). Determinations on AEMP action levels will be part of the Board's review and decision on the AEMP Design Plan, and the Board encourages all parties to discuss these action levels in the AEMP working group prior to the submission of the Design Plan.

Nickel

In its July 14, 2015 intervention, EC made a general recommendation to lower the EQC for nickel based on achievability.¹⁰⁴ In response to a subsequent information request from the Board, EC provided a summary of its review of the existing data and recommended that the MAC be set at 0.05 mg/L and the MGC be set at 0.1 mg/L, noting that this would be in line with nickel EQC in other licences.¹⁰⁵ NATCL did not address this recommendation in subsequent submissions, and in fact, in its comments on the Draft Licence, stated that EC had not made a specific recommendation for revised nickel EQC.¹⁰⁶

Although the Board agrees with EC that the proposed revision to the nickel EQC is achievable, the Board recognizes that NATCL and other parties had limited opportunity during this process to review EC's more detailed proposal, and further, that DFN has recommended that the Board undertake a process to revise this EQC.¹⁰⁷ The Board notes that EC has not recommended lowering the nickel SSWQO, and that this SSWQO is being and will continue to be met with the current EQC. The Board, therefore, concludes that it is not necessary to revise the nickel EQC immediately to protect the receiving environment, and that this EQC can be reviewed and discussed at a later date if necessary.

Selenium

In the Evaluation Report, NATCL observed that the average concentration of selenium at SNP Station 4-44 (at the edge of the mixing zone) was 0.0005 mg/L. NATCL concluded that the SSWQO of 0.001 mg/L is being met under all discharge conditions, and since this SSWQO is equivalent to the CCME guideline for the protection of aquatic life, no revisions to the SSWQO are necessary, and no additional mitigations are required.¹⁰⁸ The Board did not receive any comments or recommendations regarding selenium during this regulatory process, and agrees that no revisions to the SSWQO are necessary.

There were no EQC for selenium in MV2002L2-0019. EQC calculated from the SSWQO set out above would be 0.0008 mg/L and 0.0016 mg/L, as maximum average and grab concentrations,

¹⁰³ See pages 2-3, [GNWT-ENR's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹⁰⁴ See page 12, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹⁰⁵ See Information Request 4, [EC's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

¹⁰⁶ See page 11, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

¹⁰⁷ See page 3, [DFN's Closing Statement](#), submitted to the MVLWB on October 26, 2015.

¹⁰⁸ See pages 19-21, [S4-44 Water Quality Assessment Report](#), submitted to the MVLWB on March 25, 2015.

respectively. The average and maximum concentrations observed under the SNP at the outlet of the wastewater treatment facilities to date are 0.0003 mg/L and 0.0008 mg/L - less than half of the calculated EQC. Beyond considering the SSWQO, parties did not discuss the need for selenium EQC during this process, and the Board concludes that selenium EQC are not required at this time.

Other Parameters

In addition to fluoride, nitrite, and selenium, NATCL also reviewed other monitored parameters at SNP Station 4-44 to determine whether SSWQOs are being met. For aluminum, chromium, and zinc, NATCL noted one exceedance of each SSWQO, but attributed these events to natural variations.¹⁰⁹ EQC exceedances were not observed.

For zinc, the exceedance does not appear to be related to mine discharges, and observed spikes in chromium concentrations were later linked to variations in detection limits rather than actual variation in measured water quality.¹¹⁰

With respect to aluminum, however, DFN and GNWT-ENR requested additional information to support the suspected link to natural sources.¹¹¹ On further review of the data, NATCL concluded that while the concentration at the edge of the mixing zone does appear to be directly correlated to the effluent concentration, concentrations further downstream appear to be better correlated to upstream concentrations.¹¹² NATCL highlighted a seasonal trend in aluminum at all Flat River stations, suggesting that increases observed during the summer months are at least partially due to natural variability. NATCL was not able to discern whether or not an overall trend is present downstream due to the short time frame during which data has been collected.¹¹³

Aluminum is not increasing in mine water or at the intake point to the wastewater treatment facilities, but concentrations in the final effluent are variable.¹¹⁴ After noting that the most recent increase in the effluent concentration was larger than previously observed, NATCL identified the coagulant used in the wastewater treatment facilities as a potential source of metals in the effluent, and indicated that it intends to return to the liquid form of the wastewater treatment coagulant, because it is more consistent in chemical composition.¹¹⁵ The Board notes that the coagulant assay results demonstrate that the liquid form actually contains higher aluminum concentrations than the dry form, so it is unclear whether this approach will be effective for aluminum in particular.¹¹⁶

¹⁰⁹ See page 23, [S4-44 Water Quality Assessment Report](#), submitted to the MVLWB on March 25, 2015.

¹¹⁰ See page 99, [Technical Session Transcripts](#), June 17, 2015; and page 2, [NATCL's Response to Technical Session Information Requests](#), submitted to the MVLWB on June 25, 2015.

¹¹¹ See DFN 9, and GNWT-ENR 8, [Review Comment Summary Table - Application](#), June 10, 2015.

¹¹² See page 2, [NATCL's Response to Technical Session Information Requests](#), submitted to the MVLWB on June 25, 2015.

¹¹³ See page 2, [NATCL's Response to Technical Session Information Request](#), submitted to the MVLWB on June 25, 2015; and pages 80-81, [Technical Session Transcripts](#), June 17, 2015.

¹¹⁴ See page 2, [NATCL's Response to Technical Session Information Requests](#), submitted to the MVLWB on June 25, 2015.

¹¹⁵ See pages 80-81, [Technical Session Transcripts](#), June 17, 2015; and page 2, [NATCL's Response to Technical Session Information Requests](#), submitted to the MVLWB on June 25, 2015.

¹¹⁶ See Attachment IR4 - Coagulant Assay, [NATCL's Response to Technical Session Information Request](#), submitted to the MVLWB on June 25, 2015.

The Board has determined that there is insufficient evidence to evaluate the appropriateness of the aluminum SSWQO and EQC, or the need for additional mitigation measures at this time. As discussed during the technical session, further data should be collected through the SNP and, potentially the AEMP, to determine whether the existing objective is appropriate and reflects natural variability.¹¹⁷ The aluminum EQC based on the existing SSWQO will continue to apply until such time as additional evidence is provided to the Board.

Finally, the Board notes that EC requested clarity regarding the SSWQO for total iron, which is higher than that set out in the *CCME Water Quality Guidelines for the Protection of Aquatic Life*.¹¹⁸ The rationale for this SSWQO is available in the Board's October 25, 2012 Reasons for Decision.¹¹⁹ No evidence was provided during this Application process to indicate that this SSWQO should be reviewed.

Part G, items 35-37

Part G, item 35 directs NATCL to divert effluent from the wastewater treatment facilities back to the tailings containment area if EQC are not met. As per Part G, items 36 and 37, following a non-compliance event or a period of mine shutdown or closure, NATCL may not resume discharge to the receiving environment until water quality results demonstrate compliance, and the Inspector has authorized the discharge.

In its comments on the Draft Licence, NATCL described practical considerations related to the implementation of these conditions, because of the time lag between the collection of water samples and the receipt of lab results. To address this concern, NATCL proposed that these conditions only apply to the EQC for pH and total suspended solids (TSS), which are monitored regularly on site via in-line meters.¹²⁰ NATCL identified TSS as a suitable indicator for metals concentrations at this site, and referred reviewers to past MV2002L2-0019 amendment processes for evidence of the correlation between TSS and metals concentrations.¹²¹

While DFN and NDDDB were not convinced that the evidence adequately supports TSS as a proxy for metals, both parties agreed with NATCL that linking these parameters to a response framework would be an effective approach to preventing non-compliance events.¹²² As suggested by NATCL, this would entail the development of action levels and associated management responses, including a shutdown requirement for the wastewater treatment facilities particular when action levels were reached. This response framework would form part of the Operations, Maintenance, and Surveillance Manual for the wastewater treatment facilities, required under Part G, item 17.¹²³

¹¹⁷ See pages 88-94, [Technical Session Transcripts](#), June 17, 2015.

¹¹⁸ See page 12, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹¹⁹ See Appendix A, [MVLWB's Reasons for Decision - MV2002L2-0019 Amendment Application](#), October 25, 2012.

¹²⁰ See pages 12-13, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015.

¹²¹ See pages 1-2, [NATCL's Closing Statement](#), submitted to the MVLWB on November 3, 2015.

¹²² See page 5, [DFN's Closing Statement](#), submitted to the MVLWB on October 26, 2015; and page 3, [NDDDB's Closing Statement](#), submitted to the MVLWB on October 27, 2015.

¹²³ See pages 12-13, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015; and pages 1-2, [NATCL's Closing Statement](#), submitted to the MVLWB on November 3, 2015.

The Board agrees with NDDB that this recommendation was made too late in the regulatory process to allow parties sufficient opportunities to ask questions or request additional information, and has not accepted NATCL's proposed revisions to Part G, items 35-37.¹²⁴ The Board does recognise NATCL's concerns, however, and finds that the development of a response framework based on on-site measurements of pH and TSS could address these concerns without requiring a revision to these Licence conditions. By implementing such a response framework, NATCL may be able to identify potential water quality issues and take corrective action prior to exceeding EQC, potentially preventing the delays identified by NATCL. The Board has updated the OMS information requirements in Schedule 4, item 10 to include the requirement for the response framework.

3.2.9 Part H: Conditions Applying to Aquatic Effects Monitoring and Schedule 5

Part H and Schedule 5 of the Licence contain new conditions applying to the Aquatic Effects Monitoring Program (AEMP) for the Project. In Part H, the Board has set out the standard conditions for the submission of an AEMP Design Plan, an AEMP Annual Report, a periodic Re-evaluation Report, and, as needed, AEMP Response Plans. More detailed information requirements for each item are set out in Schedule 5.

The development of an AEMP was discussed during the most recent amendment processes for MV2002L2-0019; however, on each occasion, the Board determined that it would be more appropriate to postpone detailed discussions about an AEMP to the upcoming application process for a new Licence. In the interim, the Board encouraged NATCL to begin independently developing an AEMP design and to form an external working group to facilitate discussions with interested parties prior to formally submitting an AEMP design to the Board.¹²⁵ NATCL has acted on both of these recommendations, and in its Application, NATCL submitted a workplan outlining the steps leading up to the formal submission of an AEMP Design Plan.¹²⁶

All parties that participated in the Application process agreed that an AEMP should be required.¹²⁷ DFN specifically recommended that the AEMP be designed to detect impacts from all stages and components of the Project on the Flat River, and that if negative impacts are detected, adaptive management protocols be in place to address these impacts.¹²⁸ EC similarly recommended that the AEMP include "a management response component to link monitoring results to threshold-based actions."¹²⁹ The Board is of the opinion that the standard conditions included in this Licence directly address these recommendations. The Board did not receive any comments on the content of Part H and Schedule 5 during the review of the draft Licence and has accepted these conditions as developed by Board staff. The Board also recognizes the interest expressed by GNWT-ENR in aligning the AEMP with the existing Environmental Effects

¹²⁴ See page 3, [NDDB's Closing Statement](#), submitted to the MVLWB on October 27, 2015.

¹²⁵ See pages 13-14, [MVLWB's Reasons for Decision - MV2002L2-0019 Amendment Application](#), October 25, 2012; page 15, [MVLWB's Reasons for Decision - MV2002L2-0019 Amendment Application](#), April 2, 2014; pages 33-34, [MVLWB's Reasons for Decision - MV2002L2-0019 Amendment Application](#), March 2, 2015.

¹²⁶ See cover page, pages 2-3, and Appendix E, [MV2015L2-0003 Water Licence Application](#), submitted to the MVLWB on April 21, 2015.

¹²⁷ See DFN 1, [Review Comment Summary Table - Application](#), June 10, 2015; page 4, [GNWT-ENR's Intervention](#), submitted to the MVLWB on July 14, 2015; page 10, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015; page 1, [DFN's Intervention](#), submitted to the MVLWB on July 13, 2015; and pages 1-2, [NDDB's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹²⁸ See page 1, [DFN's Intervention](#), submitted to the MVLWB on July 13, 2015.

¹²⁹ See page 10, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015.

Monitoring that is required under the Metal Mining Effluent Regulations,¹³⁰ and encourages the working group to take this into account in developing and reviewing the AEMP Design Plan.

The preliminary schedule submitted with the Application proposed a submission date of January 20, 2016 for the AEMP Design Plan;¹³¹ however, due to delays, NATCL most recently proposed a due date of March 31, 2016, which is in line with GNWT-ENR's intervention recommendation.¹³² While DFN stated that proceeding on schedule with the AEMP is a priority,¹³³ and NDDDB suggested that the AEMP should be completed prior to Licence issuance,¹³⁴ the Board did not receive any other specific recommendations on the submission date. The Board notes that it cannot impose a submission date that pre-dates issuance of the Licence, and has accepted March 31, 2016 as a reasonable submission date.

Board staff then sought input from reviewers regarding the timeline for the first AEMP Re-evaluation Report, which is typically submitted every three years in order to include adequate data for analysis. While NDDDB recommended March 1, 2019 to allow enough time to review and incorporate any changes into the AEMP Design Plan prior to the next field season,¹³⁵ both GNWT-ENR and NATCL recommended May 1, 2019, which would ensure that the data from the previous field season can be considered.¹³⁶ The Board agrees with GNWT-ENR and NATCL and has set the submission date as May 1, 2019.

Board staff also sought input on the submission date for the AEMP Annual Report. NDDDB and DFN did not provide a specific calendar date, but recommended that the Report be due as early in the year as possible, to allow time for review and discussion, and for the incorporation of changes in the next field season.¹³⁷ GNWT-ENR recommended that the submission date be in line with other Type A Licences¹³⁸ - typically March 31 - but NATCL proposed June 1, which would allow the AEMP Annual Report to build on the Annual Water Licence Report, which is due on March 31.¹³⁹ The Board notes that changes to the AEMP design must take place through a revision to the AEMP Design Plan, not through a review of the AEMP Annual Report, and agrees that the submission date should be consistent with other licences. Accordingly, the Board has set the submission date as March 31.

¹³⁰ See pages 104-105, [Technical Session Transcripts](#), June 17, 2015.

¹³¹ See Appendix E, [MV2015L2-0003 Water Licence Application](#), submitted to the MVLWB on April 21, 2015.

¹³² See page 4, [GNWT-ENR's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹³³ See page 1, [DFN's Intervention](#), submitted to the MVLWB on July 13, 2015.

¹³⁴ See pages 1-2, [NDDDB's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹³⁵ See Comment 5, [NDDDB's Comments on Draft Water Licence](#), submitted to the MVLWB on October 9, 2015.

¹³⁶ See page 4, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

¹³⁷ See Comment 6, [NDDDB's Comments on Draft Water Licence](#), submitted to the MVLWB on October 9, 2015; Comment 17, [DFN's Comments on Draft Water Licence](#), submitted to the MVLWB on October 13, 2015.

¹³⁸ See page 4, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

¹³⁹ See page 14, [NATCL's Comments on Draft Water Licence](#), submitted to the MVLWB on October 16, 2015

3.2.10 Part I: Conditions Applying to Contingency Planning

Part I of the Licence contains conditions applying to spills, unauthorized discharges, and emergency response for the Project. It is a new portion of the Licence. The previous Licence MV2002L2-0019 contained only one condition (Part E, item 15) for the reporting of spills. As noted earlier in these Reasons, Part I, item 1 directs the Licensee to adhere to the existing Spill Contingency Plan previously approved under MV2002L2-0019, with annual reviews and necessary updates to the Plan as per Part B, item 6. This is consistent with the requirements for other submissions within the Licence and with recently issued Licences.

3.2.11 Part J: Conditions Applying to Closure and Reclamation

Part J contains conditions related to the submission of Closure and Reclamation Plans (Interim and Final) for the mine site. The Board notes that all Closure and Reclamation Plans (including Interim and Final) shall be in accordance with the Mackenzie Valley Land and Water Board and Aboriginal Affairs and Northern Development Canada's November 2013 *Guidelines for the Closure and Reclamation of Advances Mineral Exploration and Mine Sites in the Northwest Territories* (Closure Guidelines). Some of these conditions were present in Part H of the previous Licence MV2002L2-0019 and have been updated to be consistent with other Licences issued by the Board. New conditions were developed by the Board where necessary.

The conditions establish a planning process for the continuation of the of the project, beginning with the revised Interim Closure and Reclamation Plan (ICRP) required by March 31, 2016 (Part J, item 1), followed by revisions every three (3) years or upon request of the Board (Part J, item 2), and ending with a Final Closure and Reclamation Plan required two (2) years prior to the end of commercial operations (Part J, item 4).

A schedule for the development of a revised ICRP was submitted with the Licence Application.¹⁴⁰ NATCL subsequently proposed a specific submission date of March 31, 2016 in response the GNWT-ENRs intervention.¹⁴¹

The Board acknowledges that NATCL has established a working group to assist with the development of the ICRP, and that NATCL intends to conduct reviews external to the MVLWB during the development of the revised ICRP.¹⁴² The Board also acknowledges that at the time of issuance of this Licence, the mine had suspended operations and was in Care and Maintenance. To this extent, the Board has agreed to set the submission date for the revised ICRP for March 31, 2016, for Board approval.

A section of the ICRP, as defined in the Closure Guidelines, shall include a section that addresses Temporary Closure. As part of the ICRP submission, the Board will require NATCL to submit additional information to supplement the existing Care and Maintenance Plan (Rev.3) including the following information:

- Details on any stabilization and remediation activities planned for Tailings Ponds 3 and 4 during the current care and maintenance period;
- Triggers for implementing stabilization and remediation activities; and
- Timelines, where appropriate.

¹⁴⁰ See Appendix D, [MV2015L2-0003 Water Licence Application](#), submitted to the MVLWB on April 21, 2015.

¹⁴¹ See page 2, [NATCL's Response to Written Interventions](#), submitted to the MVLWB on July 24, 2015.

¹⁴² See MVLWB 2, [Review Comment Summary Table - Application](#), June 10, 2015.

This submission will allow reviewers to review and comment on the Temporary Closure section of the ICRP that addresses stabilization of the site in its current state, and would provide the Board with more details on how Tailings Ponds 3 and 4 will be safeguarded.

Given the term of the Licence, the Board has also added the condition requiring the revision and submission of the ICRP every three (3) years following the date the initial Plan is approved by the Board, or as directed by the Board. This condition enables the Board to require an update of the ICRP if and when they deem such an update necessary, such as with a change in the operation status of the mine.

The Board has included the requirement for the Licensee to submit a Final Closure and Reclamation Plan a minimum of twenty four (24) months prior to the end of commercial operations, for Board approval, to allow for sufficient time to conduct a review of the plan.

The Board has included a condition in the Licence requiring the submission of an Application for final closure and reclamation activities a minimum of eighteen (18) months prior to the commencement of such activities (Part J, item 5). The Board expects that this will allow sufficient time for the regulatory process to conclude prior to the start of closure and reclamation activities. GNWT-ENR supported this timeframe in its review of the draft Licence.¹⁴³

3.2.12 Annex A: Surveillance Network Program

Annex A of the Licence contains conditions applying to the Surveillance Network Program (SNP).

The Board has included the coordinates for SNP stations which NATCL provided in response to second round IR5.¹⁴⁴ The Board further added Part A, item 2(e), a new condition consistent with recently issued Licences, in which coordinates of any new SNP stations shall be provided in the monthly SNP reports following the month they were established.

The requirement for analysis of total cyanide has been maintained in this Licence for monitoring wells down-gradient of the existing Tailings Containment Area, because cyanide was used in processing for a short time during the early stages of the Project and may be present in some of the older tailings. The Board has not included this parameter in the monitoring requirements for monitoring wells associated with the future Dry Stack Tailings Storage Facilities, because cyanide is no longer used on-site.¹⁴⁵

The Board has added a new requirement for annual toxicity testing at SNP Station 4-20, where the outflow from Stinky Pond discharges into the Flat River. This is not a new SNP station: Stinky Pond has historically been a collection point for runoff from the site, and for treated effluent from the wastewater treatment facilities since 2013. Although it is common for toxicity testing to be conducted at effluent discharge points under other Licences issued by the Board, toxicity testing at this Project was not raised as a concern when NATCL initially applied to discharge wastewater treatment plant effluent to Stinky Pond, or in subsequent amendment processes. EC first recommended that sub-lethal toxicity testing be required at this location in its

¹⁴³ See page 4, [GNWT-ENR's Comments on Draft Water Licence](#), submitted to the MVLWB on October 7, 2015.

¹⁴⁴ See page 2, [NATCL's Response to Information Requests](#), submitted to the MVLWB on September 8, 2015.

¹⁴⁵ See page 4, [NATCL's Response to Interventions](#), submitted to the MVLWB on July 23, 2015.

July 14, 2015 intervention.¹⁴⁶ After NATCL responded that it already conducts toxicity testing under the MMER,¹⁴⁷ EC specified that any toxicity testing required under the Licence should be consistent with the testing that NATCL is already conducting under the MMER, which would prevent duplication of effort, but ensure that the results were reported to the Board.¹⁴⁸ GNWT-ENR and DFN agreed that the toxicity testing should align with MMER requirements.¹⁴⁹

The Board notes that SNP Station 4-20 is not the point of compliance for EQC under the Licence, which is where toxicity testing for effluent is typically required under other Licences issued by the Board; however, as noted by NATCL and EC, this is the location at which NATCL already conducts toxicity testing as required under the MMER.¹⁵⁰ As such, setting the toxicity testing requirements at this location is consistent with recommendations to align the testing with MMER requirements.

The Board recognizes that GNWT-ENR, NDDDB, and DFN recommended that parties be given the opportunity to discuss toxicity testing details further, and that some parties recommended that toxicity testing be included in the SNP, while others recommended that it be included in the AEMP.¹⁵¹ The toxicity testing that the Board has set out in the SNP is consistent with the testing that NATCL already conducts under the MMER (as described by EC in its September 10, 2015 Response to IRs), which ensures that discharge from this location is monitored for toxicity without placing additional burden on the Licensee, and that the results are reported to the Board. Any need for additional toxicity testing should be discussed within the AEMP working group or the Board's anticipated review process for the AEMP Design Plan. Action levels associated with toxicity testing should also be considered in the AEMP, as noted by GNWT-ENR.¹⁵²

NATCL clarified in comments on the draft Licence that the monitoring well MV12-01 at SNP Station 4-27-23 had been damaged and recommended replacing this with MW12-02.¹⁵³ The Board has included a note regarding this in this Station's requirements.

NATCL recommended the Board only require total metals for samples collected at SNP Station 4-30, because it is not possible to filter the slurry sample as required to conduct the test for dissolved metals.¹⁵⁴ The Board has made this change in the Licence.

¹⁴⁶ See page 12, [EC's Intervention](#), submitted to the MVLWB on July 14, 2015.

¹⁴⁷ See pages 4-5, [NATCL's Response to Interventions](#), submitted to the MVLWB on July 23, 2015.

¹⁴⁸ See pages 2-4, [EC's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

¹⁴⁹ See pages 2-3, [GNWT-ENR's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015; Information Request 2 (DFN 12), [DFN's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

¹⁵⁰ See page 4-5, [NATCL's Response to Interventions](#), submitted to the MVLWB on July 23, 2015; pages 2-4, [EC's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

¹⁵¹ See pages 2-4, [EC's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015; pages 2-3, [GNWT-ENR's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015; Information Request 2, [DFN's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015; Information Request 2 (DFN 12), [NDDDB's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

¹⁵² See page 3, [GNWT-ENR's Response to Information Requests](#), submitted to the MVLWB on September 10, 2015.

¹⁵³ See page 19, [NATCL's Comments on Draft Water Licence](#), October 16, 2015.

¹⁵⁴ *Ibid.*

The water quality objectives that must be met at SNP Station 4-43 were updated to reflect the Board's decision regarding the fluoride SSWQO, which is described in these Reasons with regard to Part G, item 34.

Meteorological monitoring requirements were added to Part D of Annex A. These requirements are consistent with NATCL's description of their existing monitoring program¹⁵⁵ and similar to those included in recently issued Licences.

3.2.13 Annex B: Table of Items Requiring Submission

Annex B of the Licence contains a table that summarizes the information NATCL is required to submit as required by Licence conditions.

3.2.14 Annex C: Table of Revision History

Annex C of the Licence contains a table that identifies updates and tracks changes made to the Licence. This table is currently blank because this is a new Licence, but it will be updated throughout the life of the Licence.

4.0 Conclusion

Subject to the terms and conditions set out in the Licence, and for the reasons expressed herein, the MVLWB is of the opinion that the licenced undertaking for water use and waste disposal associated with the Cantung Mine can be completed by NATCL while providing for the conservation, development, and utilization of waters in a manner that will provide the optimum benefit for all Canadians and in particular for the residents of the Mackenzie Valley.

Water Licence MV2015L2-0003 contains provisions that the Board deems necessary to ensure and monitor compliance with the MVRMA and the Regulations made thereunder, and to provide appropriate safeguards in respect of the Applicant's use of the water affected by the Licence.

SIGNATURE

Signed on behalf of the Mackenzie Valley Land and Water Board



A/Chair



Witness

¹⁵⁵ See page 3 and attachment 2, [NATCL's Response to Information Requests](#), submitted to the MVLWB on September 8, 2015.