



Environmental
Assessment Office

EAO's Assessment of an Application for Certificate Amendment

Mt. Milligan Copper-Gold Project

Amendment #6: Medium-Term Water Sources

Requested by:

Thompson Creek Metals Company Inc.

February 26, 2019

Pursuant to Section 19 of the Environmental Assessment Act, S.B.C. 2002, c.43



1. OVERVIEW OF PROPOSED AMENDMENT

On March 16, 2009, the Environmental Assessment Office (EAO) issued Terrane Metals Corp. Environmental Assessment Certificate #M09-01 (Certificate) under the *Environmental Assessment Act* (Act) for the Mt. Milligan Copper-Gold Project (Mt. Milligan or the Project). Mt. Milligan is an open pit copper-gold mine and mill, located approximately 90 kilometres (km) northeast of Fort St. James and 90 km west of Mackenzie.

Since March 2009, the EAO has issued five amendments to the Certificate. The Certificate was first amended on March 1, 2013 to relocate the ore concentrate rail load-out facility for Mt. Milligan to Mackenzie and to construct and operate a camp near the mine site to house workers during the operations phase of Mt. Milligan. The second amendment was completed on March 3, 2017 to change the name of the Holder of the Certificate from Terrane Metals Corp. to Thompson Creek Metals Company Inc. (TCMC).

In late 2016, it became apparent to TCMC that Mt. Milligan's water sources were insufficient to sustainably maintain milling operations. By late December 2017, Mt. Milligan's water shortage reached a point where mill processing operations were suspended. The third amendment was conducted under very tight timelines and the Certificate was amended on January 22, 2018, to allow additional surface water withdrawals not authorized in the original Certificate for one year. Milling operations resumed in early 2018.

Based on the tight timelines of Amendment #3 and the need for a clear plan to meet TCMC's need for additional water sources, a regulatory plan was collaboratively developed in 2018 between the EAO, the Ministry of Energy, Mines, and Petroleum Resources (EMPR)'s Major Mines Office (MMO), the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), Nak'azdli Whut'en (Nak'azdli), McLeod Lake Indian Band (MLIB), Takla Nation (Takla), and TCMC. The regulatory plan set out the timing for review of the immediate, medium, and long-term water sources that TCMC would propose to use, in a series of amendment applications. These became:

- Immediate Water Sources (Amendment #4, granted August 31, 2018) to quickly access additional water sources that were considered of low environmental risk by the collaborative parties, for one additional year;
- Medium-Term Water Sources (the subject of this Amendment) to bridge the gap between the short-term water sources and the implementation of a long-term water source plan, allowing time for a collaborative approach to the development of the long-term plan; and
- Long-Term Water Sources to provide water for the life of mine: TCMC plans to engage the Province of British Columbia (the Province) and Indigenous groups throughout 2019 on the development of the long-term water source plan and intends to submit the long-term Amendment Application in early 2020.

A fifth amendment was granted on January 23, 2019, to authorize fish passage improvements at the Meadows Creek water supply station in the Certified Project Description (CPD).

TCMC's Application for Amendment #6 (the subject of this Report) seeks authorization for the following changes (see Figure 1):

- Surface water withdrawals from Philip Lake 1, Meadows Creek, and Rainbow Creek for three years;
- Temporary water intake infrastructure at Rainbow Creek and a new above-ground 42-inch pipeline in the existing Philip Lake 1 pipeline corridor to transport water from Rainbow Creek to Pond 2 or the tailings storage facility (TSF);
- Use of existing water intake and transportation infrastructure for water withdrawals from Philip Lake 1 and Meadows Creek;
- Groundwater withdrawals from wells developed within six km of the mine lease boundary for remaining operating life of the mine; and
- Construction, operation and decommissioning of groundwater wells, surface water intakes, pumps, pipelines, and access roads needed to withdraw and transport the groundwater to the TSF and use of diesel generators at pump stations (locations to be determined at detailed permitting stage).

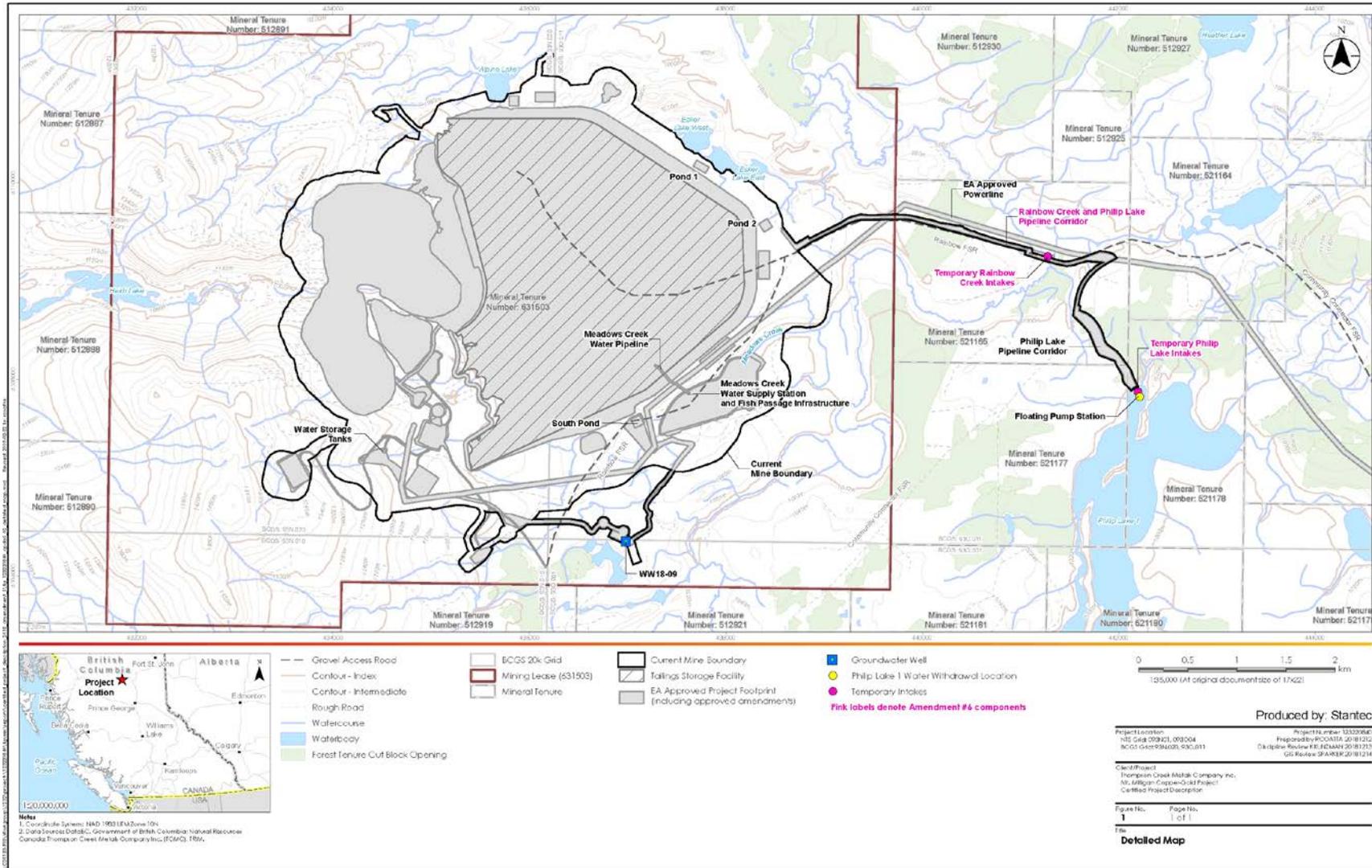


Figure 1. Detailed Map of Proposed Project Changes (Amendment #6)

2. AMENDMENT REVIEW PROCESS

The EAO determined that TCMC's Application to allow for the withdrawal of water from additional surface and ground sources was a "typical" amendment application type. A coordinated amendment review process between the EAO and MMO was established to ensure efficient use of resources, given the overlap of technical review and engagement for the proposed Amendment #6 and the associated permit applications for other provincial agencies. MMO established a Mine Review Committee (MRC) pursuant to Section 9 of the *Mines Act* and Part 10.3.1 of the Health and Safety and Reclamation Code for Mines in British Columbia. The MRC also served as the EAO's technical advisory Working Group (WG) for review of the Amendment Application. The WG/MRC included Nak'azdli, MLIB, Takla, local governments (Fort St. James, District of Mackenzie, and the Regional District of Bulkley-Nechako), Northern Health, Ministry of Environment and Climate Change Strategy (ENV), FLNRORD, and EMPR.

The EAO used the following approach to WG/MRC review of the Application:

- A workplan and schedule for this Amendment was developed collaboratively by the Province, Nak'azdli, MLIB, Takla and TCMC, which reflected the review steps and timelines requested by the parties in order to complete their reviews within the time available given Mt. Milligan's acute water needs;
- Although a draft collaboration plan had been initiated by the Province between the EAO, MMO, Nak'azdli, MLIB, and Takla during Amendment #3, it was in the very early stages of development and did not result in fully agreed to wording. Nonetheless, the spirit and intent of this draft collaboration plan was followed;
- The WG/MRC reviewed and provided comments on the draft environmental assessment (EA) Amendment Application Information Requirements (dAAIR) and permit information requirements;
- The EAO and MMO held biweekly Collaboration Table conference calls as well as additional meetings with Nak'azdli, MLIB and Takla to discuss the amendment process, issues raised, and potential impacts to Aboriginal rights, including title, and treaty rights (Aboriginal Interests);
- The EAO worked in collaboration with Nak'azdli, MLIB and Takla to discuss project-specific issues and potential adverse effects on asserted or determined Aboriginal Interests, and to seek consensus on proposed conditions and recommendations to Decision Makers;
- The EAO notified West Moberly First Nations, Halfway River First Nation, and Yekooche First Nation of the Amendment Application and sought their comment on the potential impacts to their Aboriginal Interests (details provided in Section 4);
- The EAO and MMO invited two rounds of comments by the WG/MRC on the Application;
- The EAO and MMO held two in-person technical meetings and additional phone meetings with the WG/MRC to discuss technical matters and review comments;
- The EAO held a two-week public consultation period based on the proposal to install groundwater wells up to six km outside the mine lease boundary; and
- The EAO invited comment on the draft decision materials (including a draft of this report) from the WG/MRC, including Indigenous groups, and TCMC for comment, and revised the materials in consideration of their input.

The issues raised by Indigenous groups and the WG/MRC are discussed in Sections 3 and 4 of this report.

3. SUMMARY OF KEY ISSUES

WATER CONSERVATION

During Application Review, Takla and MLIB expressed that TCMC should only be authorized to withdraw as much water as would be required to operate the mine, and that the amount of water requested was not clearly commensurate with operational needs presented by TCMC. Takla and MLIB were concerned that clean water from surface water sources could be pumped to the TSF but then lost to some extent within the small cavities between tailings stored in the TSF or into the ground. Takla and MLIB asked for additional information to understand and clearly justify the need for additional water, steps TCMC would take to conserve water during operations, and how TCMC plans to minimize losses of stored water from the TSF. TCMC provided this information during pre-application discussions. Takla and MLIB requested that this information be required by the AAIR for the EA or related Water Licence applications, but the EAO did not include this requirement given the information previously provided by TCMC, which the EAO believed was sufficient. Nonetheless, the issue was considered further during Application Review.

The information provided by TCMC on water management in the TSF is summarized as follows: the mine operationally requires a net of 9-10 million cubic metres (Mm³) of water annually to process 60 000 tonnes of ore per day, and this water is stored in the TSF. Some of this water is lost to evaporation (~0.5 Mm³), tailings cavity space (~8.0 Mm³) and unrecovered seepage (0.5-1.0 Mm³). The rate of seepage is under further investigation and more detail will be provided in a water balance update required in 2019 as part of TCMC's *Mines Act* permit. TCMC also noted that it recovers water from seepage collection wells and groundwater wells below the TSF. TCMC expressed that all water withdrawals proposed are based on a percentage of flow that is protective of the environment, and that this rate would not be exceeded. TCMC also confirmed that the amount of water requested is needed to operate the mine at full capacity.

Takla and MLIB requested additional details and review of the mine's water balance prior to the planned long-term water source amendment. MMO provided a letter of commitment that Takla will be included in the review of the 2019 water balance update and the 5 Year Mine Plan and Reclamation Program Update, which will incorporate the water balance model as required by TCMC's *Mines Act* permit. MMO will also invite MLIB and Nak'azdli to participate. In addition, TCMC provided a draft Terms of Reference (ToR) for the water balance model update which was collaboratively reviewed with Takla and MLIB. The EAO and MMO support ongoing collaboration between TCMC, Takla and MLIB on the water balance model update ToR. The information provided during the water balance model review will facilitate the review of the upcoming long-term water withdrawal amendment.

POTENTIAL FOR EFFECTS ON AQUATIC LIFE DUE TO SURFACE WATER FLOW REDUCTIONS

Takla and MLIB were concerned about the additional surface water withdrawals and the potential impact to habitat for fish, such as rainbow trout, mountain whitefish, and lake whitefish, and benthic invertebrates. TCMC proposed monitoring of water levels, flows, and fish populations as part of permit requirements, and committed to providing these monitoring results to Indigenous groups as well as using a

Site Wide Adaptive Monitoring and Management Plan (SWAMMP), developed in consultation with the WG/MRC. Takla and MLIB requested additional monitoring of biological response variables/indicators beyond fish population and habitat metrics and requested specifically that TCMC conduct fall spawning surveys for mountain whitefish and rainbow trout in Rainbow and Philip Creeks.

In response, TCMC committed to conduct fall spawning surveys in Rainbow and Philip Creeks over the duration of the medium-term water withdrawal period to determine the relative importance of reaches downstream of the point of diversion for fall spawning species. TCMC also committed to monitoring changes in substrate composition and distribution in reaches of suitable spawning habitat for mountain whitefish and rainbow trout in Philip Creek and Rainbow Creek for the duration of the medium-term water withdrawals. TCMC committed to submitting an updated SWAMMP for approval by the FLNRORD Water Manager as required by a condition of TCMC's Rainbow Creek and Philip Lake 1 Water Licences. TCMC committed to provide the updated SWAMMP three weeks prior to the start of pumping (if approvals are granted) and FLNRORD committed to providing the updated SWAMMP to the WG/MRC, including Indigenous groups, for review and comment. The monitoring results may also inform the future long-term amendment process.

SAFE STORAGE OF WATER IN THE TAILINGS STORAGE FACILITY

Concerns related to the safe management of water within the TSF were also raised by Takla and MLIB. These concerns revolved particularly around the amount of water being sought in this amendment, and the potential for too much water to be brought into the TSF, particularly if the mine were to temporarily close. Takla and MLIB expressed the view that surplus water could result in a potential emergency and unauthorized discharge from the TSF to the environment or, in the worst case, a TSF dam failure.

TCMC's response to these concerns included:

- Confirmation that the *Mines Act* Permit held by TCMC includes a condition to maintain a minimum of two metre freeboard¹ at all times;
- Provision of the TSF design information that indicates the current storage capacity of the TSF is approximately 15 Mm³ which is in excess of the maximum design operating level of 10 Mm³;
- Confirmation that Mt. Milligan maintains a negative water balance (that is, Mt. Milligan is in a water deficit and would need a substantial amount water to fill the TSF);
- Estimation that it would take two to three years to fill the TSF to the preferred operating capacity of 10 Mm³ given current water volume in the TSF, predicted precipitation and assuming withdrawal from medium term sources is authorized;
- Provision of a Water Management Trigger Action Response Plan (TARP) produced by the Engineer of Record for the Mt. Milligan TSF, which outlines procedures to manage water inflows to ensure dam safety (such as rerouting of site runoff and reduction/cessation of pumping from internal and/or external water sources);
- Provision of a Care and Maintenance Scenario Letter for changes in water management during temporary closures;

¹ Freeboard is defined as the vertical distance between a stated reservoir elevation and the crest of the dam

- Provision of Mt. Milligan’s TSF Operations, Maintenance, and Surveillance Manual (OMS Manual), which is reviewed annually as per the Health, Safety and Reclamation Code for Mines in BC. TCMC also committed to revise the OMS Manual in spring 2019 to include the TARP;
- Provision of the mine’s Emergency Response and Preparedness Plan (ERPP), which details emergency procedures to prevent dam failure and would be implemented should the two metre freeboard ever be exceeded; and
- Provision of a technical memo summarizing contingency plans in the event of a scenario of excess water inflows to the TSF.

Takla and MLIB’s inclusion in the review of the 2019 water balance update (described above) will provide an additional venue to address the concerns.

The EAO concludes that the above information and regulatory processes address many of the concerns raised. The EAO also proposes a condition (#4) requiring TCMC to submit monthly monitoring reports to the EAO and Indigenous groups, which would provide details on water withdrawal rates, results from monitoring, and water level in the TSF.

The EAO also considers it important to understand TCMC’s plans for water management in case of a temporary mine closure, as the Application requests enough water to potentially fill the TSF above the design operating level. Therefore, the EAO proposes a condition (#5) that would require TCMC to prepare a plan for water management during temporary closures in consultation with the EAO, EMPR, and Indigenous groups. This plan would describe the water management plans for the mine during Care and Maintenance periods, including the transition sequence while the mine returns to Operations following a Care and Maintenance period. EMPR also confirmed to Takla and MLIB that in the event the mine would cease production for longer than one year, TCMC would be required to apply for an amendment to their *Mines Act* Permit to revise their approved mine plan, which could include the need for additional mitigation measures and contingency planning.

TCMC is not currently authorized to discharge effluent to the environment under the original Certificate and its *Environmental Management Act* (EMA) authorizations. Any plans to discharge would require application for amendment of the Certificate, the *Mines Act* permit, and the current EMA effluent discharge permit. Nak’azdli, Takla, and MLIB would be invited to collaboratively participate in these review processes if they took place.

DURATION OF MEDIUM-TERM SURFACE WATER WITHDRAWALS

TCMC applied to withdraw water from medium-term surface water sources for three years. This was to provide adequate time for discussion and determination of long-term water sources through engagement with Indigenous groups; preparation and review of the Amendment Application and associated permits; and procurement, construction, and commissioning of the water withdrawal infrastructure, should the amendment be issued. TCMC provided a figure showing the proposed timeline for the long-term amendment, which has since been updated (discussed below) to Figure 2.

Phase	2018		2019				2020				2021				2022	End of life-of mine
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		
Long-term Water Supply Options Analysis																
Engagement																
Data Collection and Application Development																
Design																
Submission of Amendment and Permit Applications																
Amendment and permit application review																
Referrals																
Procurement																
Construction/ Commissioning (assuming two 25 km pipelines)																
Operations																

Figure 2. Revised Proposed Long-Term Water Sources Amendment Timeline

Takla and MLIB expressed concern about the proposed three-year duration of surface water withdrawals. TCMC responded with its understanding of needed lead times for the construction of long-term water source infrastructure. The proposed one year for construction considered the potential for up to two 25 km pipelines, construction timing windows (such as bird nesting window and limitations on in-stream work), road use restrictions related to procurement and logistics for getting materials to site during spring break up, potential weather and other seasonal delays. Construction would include vegetation clearing and grubbing, site preparation and access/pad construction, mobilization of construction equipment, construction of intakes, pumps and piping and support infrastructure (such as powerlines). TCMC committed that if construction could be completed more quickly, reliance on medium-term water sources would be reduced or eliminated earlier than the term authorized.

FLNRORD indicated that it accepted TCMC’s timeline as proposed. The EAO stated that it would like to see an appropriate duration for the medium-term amendment that allowed sufficient time for TCMC to develop a comprehensive and clear long-term plan developed with input by Indigenous groups and consideration of their interests. TCMC had proposed six months for Application Review, and the EAO and MMO recommended this be increased to nine months to allow for sufficient review time by the WG/MRC and collaboration with Nak’azdli, Takla, and MLIB. TCMC increased the review time to nine months, as indicated in Figure 2 above.

Takla and MLIB’s view is that TCMC had indicated that the TSF could fill within two to three years, and that TCMC had not demonstrated robust contingencies for managing any TSF water surplus. These views have led Takla and MLIB to perceive the risk of a dam failure as high. As a result, Takla and MLIB advocated for a duration shorter than three years, pending the review of the 2019 water balance update as described above. A shorter duration would reduce the possibility that the TSF could fill before the perceived information and contingency deficiencies could be addressed.

EMPR, which regulates Mt. Milligan through its *Mines Act* permit, emphasized to Takla and MLIB the high importance that EMPR places on water management on mine sites. EMPR stressed that TSFs are regulated throughout BC by the Health, Safety and Reclamation Code for Mines in British Columbia² sections

² Available online at: <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/health-safety/health-safety-and-reclamation-code-for-mines-in-british-columbia>

pertaining to emergency response (Section 3.7.1), TSF governance (Section 10.4.2), TSF operations, maintenance and surveillance (Section 10.5.2) and temporary closures (Section 10.6.2). EMPR also notified TCMC and the WG/MRC that it expects TCMC to revise the ERPP and OMS if the updated water balance model due March 31, 2019 indicates changes in the TSF design or operations used for either the OMS or ERPP.

In response to these concerns, the EAO proposes the following conditions:

- Condition #4, which would require TCMC to provide monthly monitoring reports on the water withdrawals and water levels in the TSF, to Indigenous groups;
- Condition #5, which would require that a Qualified Professional develop a Water Management during Care and Maintenance Periods Plan to provide details on water management plans during temporary closures; and
- Condition #7, which would require TCMC to hold quarterly meetings with the EAO, EMPR, FLNRORD, and Indigenous groups to discuss the monitoring reports described in Condition #4, including TSF water levels, the implementation of mitigation measures and monitoring required by this amendment, the status of the long-term plan, and the status of the water balance model update.

Takla and MLIB indicated that these conditions and regulatory requirements do not mitigate the risks they perceive in the absence of an updated water balance model. However, Takla indicated that the quarterly meetings required by proposed Condition #7 would provide opportunities for additional discussion with TCMC.

After further discussion and evaluation, and considering that any outstanding risks associated with water conservation, storage or effects on fish would increase as a function of surface water withdrawal duration, the EAO, MMO, and Nak'azdli agreed that the duration of three years as per the agreed upon regulatory plan, ending on November 30, 2021 (described in Condition #3), would be appropriate. Because the surface water withdrawals are proposed to begin at spring freshet 2019, this is effectively 2.7 years, including three spring freshet periods. Although the consequence of a dam failure at any time would be high, the EAO concludes that the proposed conditions, regulatory context, EMPR's oversight, and Mt. Milligan's OMS Manual, ERPP and TARP would effectively mitigate the risks associated with a potential water surplus. The EAO is also of the view that the proposed conditions target the specific area of uncertainty arising from the delay in updated water balance information, by ensuring that close attention is being paid to how much water is being stored, so that pre-planned actions can be taken as needed if surplus water accumulates.

IMPACTS OF PIPELINE ON WILDLIFE

Takla and MLIB expressed concerns with the potential impact to wildlife crossings over the above-ground pipeline from Rainbow Creek. TCMC's Application initially applied for 12 to 14 12-inch lay-flat hoses along existing pipeline and road corridors to convey water from Rainbow Creek, which could create an impediment to wildlife movement. On January 14, 2019, TCMC changed its Application to one 42-inch high-density polyethylene (HDPE) aboveground pipe, still along the existing corridor, as TCMC's risk

assessment indicated that there would be a potential for erosion, sloughing, and puncture damage with the lay-flat hoses. This HDPE pipe would have the potential for less movement and erosion and would be placed in more stable soil areas of the pipeline corridor. TCMC described the environmental benefits to this change, including:

- Improvements for wildlife movement, including a smaller footprint and stiffer material which would allow the pipeline to be raised in areas to allow movement of small animals under the pipe;
- A single pipe, which would result in lower carbon emissions, maintenance requirements, noise, risk of spills/leaks/abrasion/sediment erosion, and fewer potential safety issues; and
- The potential to recycle the pipe at the end of withdrawals into other mine activities.

TCMC also identified the potential risk of impeding movement of larger animals over the pipe, such as moose, bear and deer. To mitigate this risk, TCMC proposed to build earthen ramps at regular intervals over the pipe (at locations determined by a qualified professional) and proposed that the pipeline would be dismantled and removed at the end of pumping season each year near wildlife habitat.

Nak'azdli requested additional details on the timing of pipeline construction to prevent soil erosion. TCMC responded that the pipeline would be put into the streams prior to freshet and would be removed during lower flow periods. The pipeline would be placed in the corridor when the ground is frozen to minimize any disturbances on silty areas. Removal of the pipeline would not be performed during storm periods or when silts are prone to disturbance and subsequent movement.

In response to concerns from the WG/MRC, the EAO proposes a condition (#6) requiring TCMC to build the above-ground pipeline to Rainbow Creek in a manner that facilitates wildlife movement, including building crossing structures and pipeline raise structures, removing sections of the pipeline near wildlife habitat in the winter, and preventing erosion during installation.

4. INDIGENOUS COLLABORATION

The Province assessed that the proposed amendment had the potential to adversely impact the Aboriginal Interests of Nak'azdli, MLIB, and Takla. The EAO, MMO and FLNRORD engaged in a collaborative process with Nak'azdli, MLIB and Takla in the review of the proposed amendment. This involved working together to design the original regulatory process by which the series of water amendments has proceeded, as well as establishing agreed-upon timelines for proposed amendments and proposed conditions. Nak'azdli, MLIB and Takla were active participants in the WG/MRC and made important contributions to the technical review and discussion, the development of this report and the proposed conditions.

Nak'azdli stated that its community members and Keyoh holders³ are continuing their current use of the land base near the mine site and would be directly impacted by any changes to the mine. Nak'azdli raised concerns about overlapping claims from Takla and stated that Nak'azdli had the primary claim. Due to this position, Nak'azdli's agreement to participate in collaboration discussions for Amendment #6 was without prejudice. While Nak'azdli's concerns regarding overlapping interests were not resolved during the review

³ Territory holders.

of the proposed Amendment, the Province – through the Ministry of Indigenous Relations and Reconciliation – is continuing discussions with Nak’azdli that seek to clarify the historic and current roles and ongoing presence of Nak’azdli relating to Mt. Milligan, and this will further inform the EAO’s consideration of Nak’azdli’s Aboriginal Interests for future amendments, including TCMC’s proposal for long term water sources. Nak’azdli confirmed that it did not have any concerns with the proposed medium-term amendment and proposed conditions.

The EAO and MMO understand that Takla and MLIB’s concerns around water balance modelling relate to the understanding of the potential for TCMC to collect too much water in the TSF during the three-year medium-term water withdrawals. The EAO and MMO conclude that the concerns raised by Takla and MLIB have been addressed through the following:

- The Health, Safety and Reclamation Code for Mines in British Columbia and permits issued under the *Mines Act* provide regulatory oversight by EMPR on TSFs and water management;
- MMO, TCMC and EMPR have committed to consulting with Nak’azdli, Takla, and MLIB during the upcoming review of the water balance, and TCMC has committed that this review will consider the potential for dam failure and excess water in the TSF;
- TCMC has engaged with Takla and MLIB regarding the development of a ToR for the 2019 water balance model update and has committed to continuing efforts to engage with Takla and MLIB on the water balance model update through development of such ToR or other means;
- The water balance model results will be incorporated into the discussions and analysis for the long-term water source amendment to support the assessment of risks, effects and impacts to Aboriginal Interests. Consideration will be given as to how this information will be included in that AAIR, effects assessment and determination of mitigations, as appropriate;
- Condition #4 would require TCMC to provide monthly monitoring reports on the water withdrawals and water levels in the TSF to Indigenous groups;
- Condition #5 would require that a Qualified Professional develop a Water Management during Care and Maintenance Periods Plan to provide details on water management plans during temporary closures;
- Condition #7 would require TCMC to hold quarterly meetings with the EAO, EMPR, FLNRORD, and Indigenous groups to discuss the monitoring reports described in Condition #4, including TSF water levels, the implementation of mitigation measures and monitoring required by this amendment, the status of the long-term plan, and the status of the water balance model update;
- MMO and FLNRORD have committed to continuing the collaborative process with Nak’azdli, Takla, and MLIB throughout the permitting reviews subsequent to the EA Amendment decision (should the Amendment be approved);
- The issue resolution discussion between Takla Nation and the EAO’s acting Associate Deputy Minister on February 22, 2019 regarding the outstanding concerns of Takla Nation (including the duration of this Amendment and the need for an updated water balance model to fully assess the Application); and
- Any outstanding issues will be dealt with through the following future processes which will involve collaboration with Nak’azdli, Takla, and MLIB:
 - Updated site-wide water balance model review – due March 31, 2019;

- Updated water quality model review – due June 30, 2019;
- Five-year mine plan and reclamation program update review – due October 31, 2019; and
- Long term water source applications review – anticipated submission in early 2020.

The EAO notified West Moberly First Nations, Halfway River First Nation, and Yekooche First Nation of the Amendment Application. The Province assessed that the Amendment Application was not anticipated to adversely impact the Aboriginal Interests of these Indigenous groups, and that consultation at the notification level was appropriate. No comments were received from West Moberly First Nations, Halfway River First Nation, or Yekooche First Nation on the Amendment Application.

5. PUBLIC CONSULTATION

For public consultation, a two-week public comment period was carried out from February 6-19, 2019, to allow public input to this amendment request. This period was determined based on potential public interest in areas located outside the mine lease boundary. The public comment period was advertised in two local newspapers (located in Fort St. James and Vanderhoof) for one week prior to the comment period. The EAO received no comments from the public during the public comment period.

A public comment period also was carried out during Amendment #3⁴ during which 15 public comments were received. The comments were focused on protecting the natural environment, criticizing that TCMC allowed a water shortage to develop, and supporting the application for additional water sources due to the importance of Mt. Milligan to the local economy.

6. CONCLUSIONS

The EAO's conclusions are based on:

- The information contained in the Amendment Application and supplemental information provided during the Amendment Application Review;
- Comments on the Amendment Application by Nak'azdli Whut'en, McLeod Lake Indian Band, Takla Nation, and provincial government agencies as members of the WG/MRC, and TCMC's responses to these comments;
- The fact that Mt. Milligan Copper-Gold Mine is subject to subsequent permitting approvals under the *Water Sustainability Act* and the *Forest and Range Practices Act*, ongoing five-year mine plan reviews, review of the water balance model and review of the water quality model through the *Mines Act*;
- Lack of public comments on the Amendment Application;
- The proposed conditions and amendments to the CPD; and
- The engagement of Nak'azdli Whut'en, McLeod Lake Indian Band, and Takla Nation, following the intent and spirit of the draft Collaboration Plan during the Amendment process.

⁴ This report is available online: <https://projects.eao.gov.bc.ca/api/document/5a676f9fe9158700192e2ec3/fetch>

The EAO is satisfied that:

- The Amendment Application and supplemental information adequately identified and assessed the potential adverse changes to the environmental, economic, social, heritage and health effects of Mt. Milligan resulting from the proposed amendment;
- Issues identified during review of the Amendment Application that were within the scope of the assessment of the proposed EA Amendment were adequately and reasonably addressed by TCMC or the EAO's proposed conditions;
- Practical means have been identified to prevent or reduce any potential adverse environmental, economic, social, heritage and health effects of the proposed amendment such that no significant adverse effect is predicted or expected as a result of this proposed Amendment;
- The potential for adverse effects on asserted or established Aboriginal Interests has been avoided, minimized or otherwise accommodated to an acceptable level;
- Consultation at the notification level of West Moberly First Nations, Halfway River First Nation, and Yekooche First Nation about the proposed amendment has been adequately carried out by the EAO and fulfills the Provincial Crown's obligations for consultation and accommodation; and
- The Provincial Crown has fulfilled its obligations for consultation and accommodation of Nak'azdli Whut'en, McLeod Lake Indian Band, and Takla Nation relating to the issuance of this amendment to EA Certificate #M09-01.

The EAO recommends that Certificate #M09-01 for the Mt. Milligan Copper-Gold Project be amended under Section 19 of the *Environmental Assessment Act*, to allow access to groundwater and additional surface water, as described in this report.

Addendum: Amended Certificate