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16 OTHER ABORIGINAL INTERESTS

16.1 Introduction and Approach

This section presents the interests identified by Aboriginal groups with respect to potential social, economic, environmental, heritage and health effects, and research that identified potential Project effects as they relate to Aboriginal interests. The section also provides an assessment of the potential for Aboriginal interests to be affected. Aboriginal rights, including effects assessments and potential mitigation and avoidance methods are addressed in **Section 15**.

Comments are organized by Aboriginal group in the order they appear in the section 11 Order. Each section includes a summary table of interests or comments provided by the Aboriginal groups and how these were identified. A table that describes how the interest relates to the Application for an Environmental Assessment Certificate/Environmental Impact Statement (Application) (if applicable), mitigation, and relevant sections in the EA is provided for each Aboriginal group. A brief summary of the resultant issues and how they are addressed follows each summary table.

New Gold Inc. (Proponent) has engaged with Aboriginal groups since early 2011. Detailed consultation activities for each Aboriginal group are presented in **Section 17**. The potential Aboriginal interests that could be affected by the proposed Blackwater Gold Project (the Project) have been identified from the following sources:

- Meetings with Chief and Council and other community representatives;
- Correspondence with Aboriginal groups including letters and emails;
- Community open houses;
- Telephone calls;
- Primary research involving interviews with community members;
- Publicly available information such as Aboriginal group and organization websites;
- Non-confidential information from studies completed by the Aboriginal group; and
- Comments provided to Crown regulators.

Aboriginal groups were involved in the development of the Application Information Requirements (AIR)/Environmental Impact Statement (EIS) Guidelines through participation in the British Columbia Environmental Assessment Office (BC EAO) Working Group process. Comments received from Aboriginal groups in the Working Group were considered and, to the extent possible, incorporated into the AIR/EIS Guidelines. The comments or interests provided in this section address comments relevant to the Application.

16.1.1 Definition of an Aboriginal Interest

In addition to asserted rights, Aboriginal groups have interests within the Project area. Aboriginal interests are inclusive of Aboriginal and treaty rights but also include any other concerns or comments that might be identified by Aboriginal people. Interests could be related to

environmental, economic, health, social, and heritage elements; however, might not necessarily be associated to a specifically identified Aboriginal or treaty right. This section addresses interests other than asserted Aboriginal rights (e.g., environmental, economic, health, social, and heritage elements) while **Section 15** specifically describes Aboriginal rights, potential effects on those rights, and mitigation to minimize or avoid potential effects. **Section 15** also identifies the Management Plans that have been developed to address potential effects, identifies the sections of the EA Application that describe effects assessments, and provides more details on mitigation.

16.1.2 Approach to Integration of Traditional Knowledge and Input from Aboriginal Groups

Traditional knowledge and traditional land use (TK/TLU) have been identified in meetings and through interviews and discussions with Aboriginal community members. Use of traditional resources was also identified through documentary research of ethnographic materials. Information collected on traditional resources and use through consultation is tracked in the Stakeholder and Issues Information Management System (SIIMS; refer to Section 3). Information is provided to those responsible for preparing the Environmental Assessment (EA) by subject and geographic region so that they consider Aboriginal rights and interests in their assessments and in formulating management plans that will consider Aboriginal traditional resources and concerns. First Nations participated in archaeological field studies and assisted in identifying cultural sites of concern. Where resources such as culturally modified or trail marker trees are identified, these resources are geo-referenced and will be managed in consultation with the Aboriginal groups in whose territory the resources are located.

The Proponent provided funding to Lhoosk'uz Dene Nation (LDN), Saik'uz First Nation (SFN), Stellat'en First Nation (StFN), Ulkatcho First Nation (UFN) and Skin Tyee Nation (STN) to complete TK/TLU studies. At the time of writing, the LDN and UFN had completed their studies and these assisted in the identification of Aboriginal rights, other interests, and current land and resources uses that have the potential to be affected by the Project. Information from ongoing TK/TLU studies, when completed, will be integrated into the Project design, execution, management plans, permitting and monitoring in subsequent stages of the Project development including the Application review phase, the permitting phase, and the Project construction, operations, closure, and post-closure phases as illustrated in **Figure 16.1-1**.

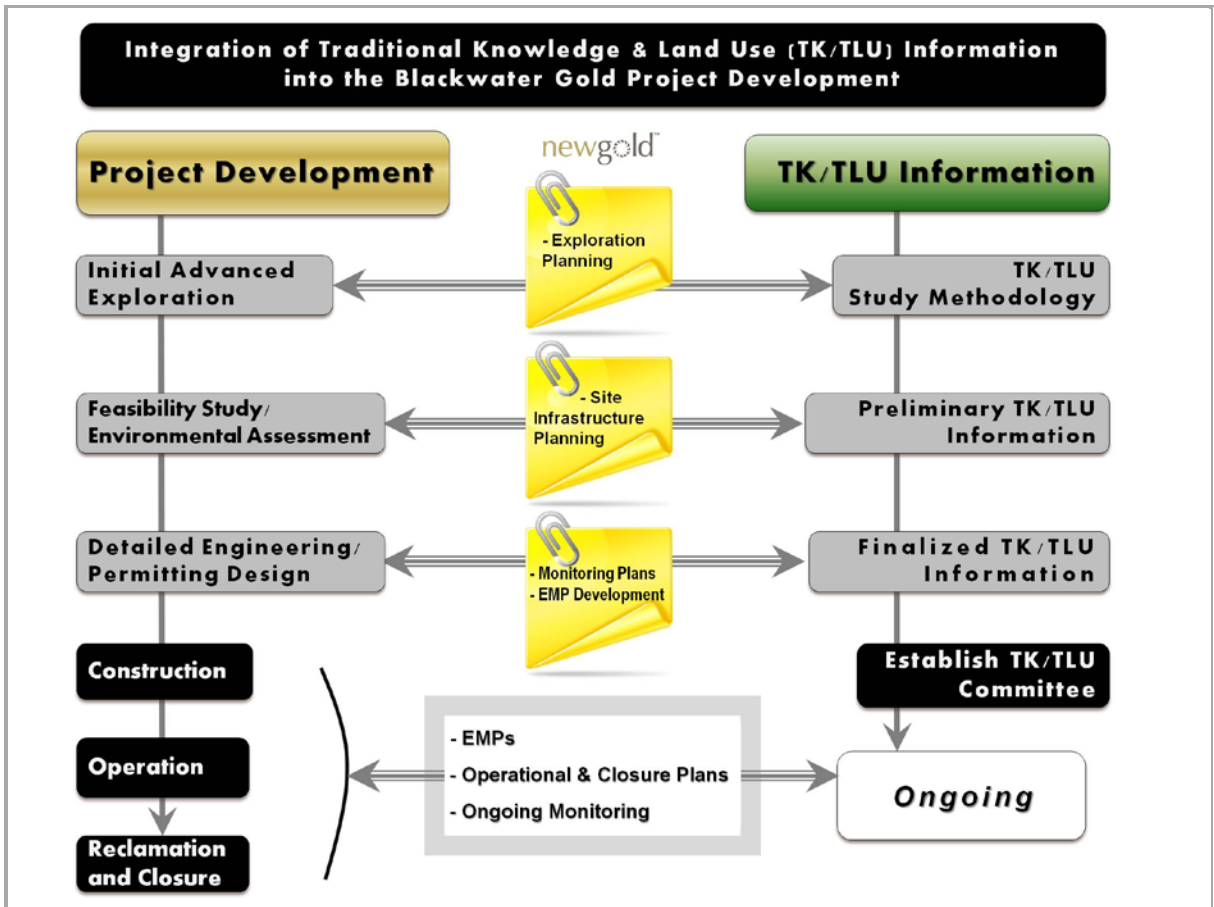


Figure 16.1-1: TK/TLU Integration into the Blackwater Gold Project

As part of the EA, the Proponent completed an assessment of potential effects on current land and resource use for traditional purposes (CLRUTP) (**Section 7.2.7**). There is a close linkage between the interests discussed in this section and the current uses assessed in **Section 7.2.7**.

The Proponent will continue to work with Aboriginal groups as necessary throughout the EA and Project implementation periods to identify resources and concerns and to address them within the EA and management processes. Information on Aboriginal interests as it becomes available will be incorporated in Project design, permits, management plans and monitoring to the extent practical.

16.1.3 Approach to Enhancing Aboriginal Economic Development Interests

Aboriginal groups have expressed interest in benefiting from potential economic opportunities of the Project including employment opportunities and business and procurement opportunities. The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The nature and extent of these opportunities is discussed in **Section 6** –

Assessment of Potential Economic Effects. The Proponent is committed to developing and hiring Aboriginal workers where qualifications and experience match requirements.

Since unemployment rates are high in some Aboriginal communities, there is interest in employment with the Project. Some Aboriginal workers lack necessary levels of education and/or skills training. Aboriginal groups have expressed concern that without proactive effort to ensure skills development and encourage employment it will be challenging for members to benefit from employment opportunities. The Proponent recognizes that proactive measures are needed to enhance employment of Aboriginal workers, and proposes various strategies to facilitate training, recruitment, and retention. The Proponent will work closely with regional training institutions to implement a training strategy for local residents. This may include partnering with the Aboriginal Mentoring and Training Association to provide training programs; collaborating with local contractors to provide apprenticeship programs; sourcing and training under-represented groups; and offering scholarships to encourage high school graduation.

An adverse economic effect is predicted at closure, although some employment and procurement opportunities associated with long-term environmental engineering, monitoring, and management are expected. Skills gained at the mine will likely be transferable, enabling workers to apply them at other mines or similar resource developments or heavy industrial projects in the region.

Effects management strategies include the development of a Recruitment, Training, and Employment Plan to encourage the hiring of local Aboriginal residents.

Aboriginal communities have also expressed interest in economic opportunities for Aboriginal businesses, and there have been concerns expressed regarding both the availability and equitable access to such opportunities. Barriers to Aboriginal participation in such opportunities may include limited equipment, scale, capacity, logistical capabilities or labour force to fulfill large contracting requirements. Access to business opportunities may also be a challenge, particularly if contacts with out-of-town businesses (who may maintain preferred supplier lists) are weak or non-existent. Project effects on Aboriginal-owned businesses will largely depend on actions taken by Aboriginal peoples to identify, grow, and/or develop service offerings. The Proponent commits to:

- Preferential hiring of local businesses including Aboriginal-owned business that meet employment and contracting requirements;
- Working with local Aboriginal employment organizations and regional training institutions to encourage local recruitment and contracting;
- Providing information on contracting opportunities and related required qualifications to local First Nation and Métis communities and advertise them in local Aboriginal newsletters;
- Encouraging major contractors during the construction and operations phases to sub-contract with local suppliers; and
- Developing a database of local and Aboriginal suppliers and developing communication protocols to ensure suppliers are made aware of opportunities.

It is expected that, with the implementation of mitigation described in other EA sections and the above measures, Aboriginal businesses will be better positioned to compete for Project employment and procurement opportunities. Aboriginal businesses may also experience indirect benefits from Project employment earnings spent on goods and services in the region.

16.2 Lhoosk'uz Dene Nation

A number of activities were undertaken with the LDN to identify other interests. The Proponent initiated discussions with the LDN in April 2011. Since that time, the Proponent has continued to meet with LDN representatives to gain insight into the interests and concerns of the LDN. Consultation activities between LDN and the Proponent have also included written communications, attendance at two community gatherings, and site tours. On 30 November 2011, the LDN and the Proponent signed an Exploration Agreement outlining how the two parties would cooperate on matters such as consultation protocols and the EA process. The Exploration Agreement also provides capacity funding to the LDN and to complete a TK/TLU study. Other more recent agreements include capacity funding for the EA process. More detailed information on consultation activities undertaken with the LDN is provided in **Section 17**.

LDN interests were identified primarily through meetings with LDN leadership. LDN expressed concern about water quality and contamination of the water system. In particular, they raised concerns about the use of cyanide in gold extraction and generally about water quality and the effects that potentially contaminated water may have on mammals and fish. LDN has expressed interest in training and employment opportunities with the Project and in opportunities for youth to be trained for future employment. **Table 16.2-1** provides a summary of issues, comments or concerns and associated interests identified by LDN through consultation activities. It also shows how and when the interest was identified.

Table 16.2-1: Lhoosk'uz Dene Nation Interests

Interest	Issue/Concern/Comment	Date Raised	Manner Raised
Land Use	Interest expressed in compensation for impacts to the traplines	26/07/2013 07/31/2013	Phone Call Meeting
Economic Development	Training and skills development for youth	Multiple	Multiple Meetings
Economic Development	Interest in current and future job opportunities	Multiple	Multiple Meetings
Economic Development	Dependence on salaries earned at the mine	10/06/2013	Letter
Water Resources	Concerns highlighted regarding Project effects on water that include the potential effects of contamination of the water system, such as Tascha Lakes, and effects on Blackwater drainage system	22/08/2011	Meeting
Water Resources	Concern raised about the potential effects of tailings water on water discharge and area creeks	01/05/2013	Meeting
Water Resources	Concern about the creation of the tailings facility and dam and the effect to all the tributaries	06/18/2013	Site Visit
Water Resources	Effects on water flow of Chedakuz Creek that drains into Tatelkuz Lake	10/06/2013	Letter
Water Resources	Contamination of water at Tatelkus Lake Indian Reserve #28. Concern raised that seepage, dam failures, and spills could contaminate the lake	10/06/2013	Letter
Water Resources	Interest in protecting the water quality of nearby waterbodies including Tatelkuz Lake	02/04/2014	Meeting
Human Health	Concern raised about cyanide and its potential effects	22/08/2011 25/01/2012	Multiple Meetings
Heritage Resources	Effects on culturally modified trees on Mount Davidson	10/06/2013	Letter
Heritage Resources	Freshwater pipe from Tatelkuz Lake crosses the Messue Wagon Trail. Interest expressed to see a minimal amount of disturbance	10/06/2013	Letter
Non-traditional Land and Resource Use	Canoeing on Tatelkuz Lake	04/07/2013	Meeting
Community Well-being	Potential exacerbation of social problems and/or substance abuse from increases in disposable income	10/06/2013	Letter
Community Well-being	Increased need for social support and frontline workers as a result of in-migration of workers and increased disposable income	10/06/2013	Letter

16.2.1 Lhoosk'uz Dene Nation Interests Assessment

The interests of the LDN and how the Proponent addressed them in the EA are presented in **Table 16.2-2**.

16.2.2 Summary of Identified Aboriginal Interests

16.2.2.1 Land Use

During discussions with registered LDN trapline holders, the issue of compensation for the loss of trapping areas was raised. There are two LDN registered traplines overlapping the mine footprint: 0512T027 and 0512T014. Of these, the mine footprint intersects 10% of trapline 0512T027, and <1% of trapline 0512T014 ().

Registered traplines have historical connections to keyohs- keyohs are traditional land holdings of family groups that have stewardship and ownership rights. Keyohs were used for all traditional use activities, including hunting, trapping, fishing, and plant harvesting. The keyohs were inherited primarily through male descendants. In the early twentieth century the government began to record locations of keyohs and designate the areas as traplines.

The Project is within the historical Meshu family keyoh, which was inherited by the Jimmie family through marriage in the early twentieth century. The total area of the Mashu keyoh is larger than TR0512T014 (see **Section 7.2.7** and **Section 15.2**).

The Project also intersects with portions of the historic Baptiste keyoh, which was inherited by the Cassam family through marriage in the early twentieth century. Trapline TR0512T027 is in a portion of this historic keyoh (see **Section 7.2.7** and **Section 15.2**) but the trapline has not been used for the past 20 years (Trapline TR0512T027 pers. comm.).

The Project may create sensory and habitat disruption to furbearing animals during Project activities related to the clearing, construction, operation, decommissioning, and closure phases. In addition, emissions may affect trapping and there may be some loss of land base and habitat (particularly to trapping areas). This could potentially affect activities of trappers (e.g., relocation of traplines, inconvenience, and additional trapping effort, or access disruption). Other potential effects on trapping include damage to or encroachment on trail systems, staging areas, trapping sites (including traps and snares), parking sites, or cabins. Trapping in areas that overlap with the mine site could be inconvenienced, and traplines may require relocation.

Table 16.2-2 provides a summary of potential measures to mitigate Project-related effects on trapping.

Mitigation measures include:

- Establishing a group of affected Aboriginal groups r to discuss access management for the transmission line corridor and the mine site;
- Compensating affected registered trapline holders in accordance with industry and provincial protocols associated with proof of lost revenue;
- Informing holders of affected traplines of Project activities, schedules, and locations;
- Minimizing total footprint area and limiting disturbance to species that may be trapped;

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- Locating and maintaining breaks in the rollback to facilitate access to trapping trails during clearing;
- Disposing of wastes generated on site to limit the attraction of wildlife to the mine site;
- Implementing design and operational procedures to limit risks associated with malfunctions and accidents;
- Prohibiting mine employees from trapping, hunting or fishing on mine site property;
- Implementing Environmental Management Plans (EMPs) addressing air quality and emissions management; transportation and access management; landscape, soils, and vegetation management and restoration; and wildlife management; and
- Implementing a TK/TLU Committee with participation of the Aboriginal Groups on which territories the Project is located to monitor that commitments made by the Proponent in regards to TK/TLU are being complied with.

Overall, the Project is expected to have a low effect on registered trapline holders. The wildlife effects assessment for furbearers (**Section 5.4.13**) identifies that the residual effects of habitat loss and alteration, sensory, and change in furbearer population dynamics will not be significant. Effects on trapping due to a TSF dam failure or spills of hazardous materials are considered extremely rare and will be managed by design and operational standards (**Section 10**). The effects are limited to the mine site footprint and are reversible.

Refer to **Section 7.2.7** Current Land and Resource Use for Traditional Purposes and **Section 15** Aboriginal Rights for more information about potential effects on trapping for LDN.

Table 16.2-2: Summary of Lhoosk'uz Dene Nation Interests

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Land Use	Compensation for effects on traplines	Non-Traditional Land Use; Current Land and Resource Use for Traditional Purposes	Loss of trapping associated with the mine footprint, transmission line, water supply pipeline, access roads, and airstrip.	C; O; CL	<p>The Proponent will continue to discuss potential Project effects on trapping with affected Aboriginal communities throughout the life of the Project. Compensation for affected trapline holders in accordance with industry and provincial protocols associated with proof of lost revenue.</p> <p>Project site design that minimizes total footprint area. Establish a group including affected Aboriginal group representatives to discuss access management for the transmission line corridor and the mine site.</p> <p>Informing holders of affected trapline areas of Project activities, schedules, and locations</p> <p>Locating and maintaining breaks in the rollback to facilitate access to trapping trails during clearing.</p> <p>Disposing of wastes generated on site to limit the attraction of wildlife to the mine site (Industrial and Domestic Waste Management Plan).</p> <p>Implementing design and operational procedures to limit risks associated with malfunctions and accidents. Prohibiting mine employees from trapping, hunting or fishing on mine site property.</p> <p>Implementing Environmental Management Plans, addressing air quality and emissions management; transportation and access management; landscape, soils, and vegetation management and restoration; and wildlife management.</p> <p>Implementing a TK/TLU Committee with participation of the Aboriginal Groups on which territories the Project is located to monitor that commitments made by the Proponent in regards to TK/TLU are being complied with.</p>	Not expected	Not expected	<p>Section 12.2 Environmental Management Plans</p> <p>Section 7.1.2 Non-Traditional Land and Resource Use</p> <p>Section 7.2.7 Current Land and Resource Use for Traditional Purposes.</p>

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Training and skills development for youth	Regional and Local Employment and Businesses	Positive contribution to skills and training.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plan (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses
	Interest in current and future job opportunities	Regional and Local Employment and Businesses	Positive contribution to employment.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plan (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses
	Dependence on salaries earned at the mine	Regional and Local Employment and Businesses; Family and Community Well-being	Workers may become dependent on the mine for wages.	C; O; CL	The Proponent is committed to working with educational partners to provide training programs to develop a skilled pool of employees, providing long-term sustainable benefits to the community and its members. The Project will provide opportunities for on-the-job training through a variety of mandatory and elective training initiatives. This training and accumulated experience will provide residents with opportunities to pursue higher paying jobs elsewhere. Provide access to money management training Informing employees on mine life as part of their employment offer and orientation; If possible employees will be informed one year prior to mine closure; Severance information will be shared.	Not expected	Not expected	Section 12.2 Environmental Management Plans (Recruitment, Training and Employment, Closure Management) Section 6.2.5 Regional and Local Employment and Businesses Section 7.2.5 Family and Community Well-Being

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Concerns highlighted regarding project effects on water that include the potential effects of contamination of the water system, such as Tascha Lakes and effects on Blackwater drainage system	Surface Water Quality; Sediment Quality	No anticipated effects on Tascha Lakes or Blackwater drainage system.	C; O; CL; PC	On-site and off-site infrastructure was designed to avoid the Blackwater River drainage system.	Not expected	Not expected	Section 2.1 Project Description
Water Resources	Concern raised about the potential effects of tailings water on water discharge and area creeks	Surface Water Quality; Sediment Quality	Potential contamination from tailings on surrounding waterbodies.	C; O; CL	Mine will operate as a zero discharge facility; Surface water and sediment quality will meet applicable provincial and federal standards downstream; Monitor water on an ongoing basis throughout the life of the Project and post-closure; Implement erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, to protect erodible soils from entering waterbodies; Implement design and operational procedures to limit risks associated with malfunctions and accidents; No discharge from the tailings impoundment during operations; Seepage from the main dam captured by an environmental control dam downstream of Davidson Creek; Water storage reservoir planned for downstream of the environmental control dam to further intercept any seepage; On-site Project facilities exist entirely in the Davidson Creek and Creek 661 watersheds; Runoff and toe discharge from the east waste rock dump will contribute to surface flows in the upper extents of the Creek 661 Watershed after being	Not expected	Not expected	Section 12.2 Environmental Management Plans Section 5.3.3 Surface Water Quality Section 5.3.4 Sediment Quality

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
					directed through a sediment control pond; At closure the TSF will discharge via a spillway, discharge channel and plunge pool to Davidson Creek; Adaptive management; Implement EMPs addressing water quality and liquid discharges management and sediment and erosion control.			
Water Resources	Effects on water flow of Chedakuz Creek that drains into Tatelkuz Lake	Surface Water Flow	Proposed mining facilities (TSF, open pit and water management facilities) and related activities (water withdrawal and discharge) have the potential to affect natural streams, drainage areas, annual flows, seasonal distribution of flow, high and low flows and lake levels within Chedakuz, which includes Tatelkuz Lake.	C; O; CL; PC	Variations in Tatelkuz Lake levels caused by the Project are anticipated to fall within the range of natural and historic lake level fluctuations. Utilize water within the Project area to the maximum practicable extent by collecting and managing site runoff from disturbed areas, maximizing recycle of process water, and storing surplus water within the TSF; On-site Project facilities exist entirely in the Davidson Creek and Creek 661 watersheds; Runoff and toe discharge from the east waste rock dump will contribute to surface flows in the upper extents of the Creek 661 Watershed after being directed through a sediment control pond; At closure the TSF will discharge via a spillway, discharge channel, and plunge pool to Davidson Creek; Monitor surface quantity; Adaptive management. Implement EMPs addressing erosion and sediment control, water quality and liquid discharges management, and mine water management.	Decrease in mean and annual and low surface water flow in Chedakuz Creek. No expected effects on Tatelkuz lake	Not expected	Section 12.2 Environmental Management Plans (Erosion and Sediment Control Plan, Aquatic Resources Management Plan, Water Quality and Liquid Discharges Management Plan, Mine Water Management Plan) Section 5.3.2 Surface Water Flow

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Contamination of water at Tatelukus Lake Indian Reserve #28. Concern raised that seepage, dam failures and spills could contaminate the lake	Surface Water Quality; Sediment Quality	Potential contamination from tailings on surrounding waterbodies.	C; O; CL; PC	Mine will operate as a zero discharge facility; Implement design and operational procedures to limit risks associated with malfunctions and accidents; Surface water and sediment quality will meet applicable provincial and federal standards downstream; Monitor water on an ongoing basis throughout the life of the Project and post-closure; No discharge from the tailings impoundment during operations; Seepage from the main dam captured by an environmental control dam downstream of Davidson Creek; Water storage reservoir planned for downstream of the environmental control dam to further intercept any seepage; Limit sediment export during all phases of construction, operations, and closure; Adaptive management; Adhering to EMPs.	Not expected	Not expected	Section 12.2 Environmental Management Plans (Erosion and Sediment Control Plan, Aquatic Resources Management Plan, Water Quality and Liquid Discharges Management Plan, Mine Water Management Plan, Emergency and Spill Preparedness and Response, Cyanide Management, and Closure Management Plan) Section 5.3.3 Surface Water Quality Section 5.3.4 Sediment Quality Section 10 Accidents or Malfunctions
Human Health	Concern raised about cyanide and its potential effects.	Human Health	Potential effects from cyanide on wildlife, water, air and humans.	O; CL; PC	The mine site will aim to operate as a zero discharge facility. During post-closure water will meet applicable provincial and federal quality standards to avoid effects on aquatic life and other wildlife. The Project will not treat waste rock with cyanide. Waste rock from the open pit will be disposed of at the waste rock dumps located adjacent to the open pit. Only the ore will be subject to treatment using a whole ore leach process. The tailings residue of this process will be deposited in the TSF after a cyanide destruction process has been applied. Mitigation measures for storage of cyanide include: <ul style="list-style-type: none"> Use of ISOTainers that are designed for controlled dissolution upon delivery to the Project site; 	Not expected	Not expected	Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
					<ul style="list-style-type: none"> • Storage at the transload facility is designed to minimize contact of solid cyanide with water (e.g., under a roof, off the ground, in specially designed containers); • Adequate ventilation in the storage facility; • Containment systems in place should there be spilled cyanide materials; and • Warning signs to alert workers that cyanide is present. <p>Mitigation measures for the safe transport of cyanide include:</p> <ul style="list-style-type: none"> • Cyanide off-loading and storage facilities will be located away from surface waters and within fenced and access-controlled boundaries with locked security fencing; • Gas detectors in the off-loading and storage area; and • Signage for workers. <p>The Proponent will implement a Country Foods Monitoring Plan around the mine site to monitor species that represent potential pathways for metals concentrations in country foods. Metal concentrations in a set of indicator plants, mammals, and fish will be analyzed to assess levels against existing baseline levels. If metal concentrations increase to levels of concern, further consultation and planning to address necessary mitigation measures will be undertaken with regulators and First Nations</p>			<p>Section 9.2 Health Effects Assessment Section 10 Accidents or Malfunctions Appendix 9.2.2B Country Foods Monitoring Plan</p>

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Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Heritage Resources	Effects on CMTs on Mount Davidson	Archaeological sites; Historic Heritage Sites; Current Use of Land and Resources for Traditional Purposes	Potential loss of or damage to CMTs and archaeological sites from land alteration and grading of mine site area.	C; O	Implementation of Environmental Management Plans and mitigation, including: Design changes to avoid or minimize effects where possible; CMTs have been fully documented regardless of the age of the modification scar (including CMTs not protected under the <i>Heritage Conservation Act</i>); Sites were documented, recorded, photographed and where possible dated by dendrochronological dating (increment core).	Not expected	Negative/Positive	Section 12.2 Environmental Management Plans (Archaeology and Heritage Resources Management Plan) Section 8 Assessment of Heritage Effects Section 7.2.7 Current Land and Resource Use for Traditional Purposes
Heritage Resources	Disturbance to Messue Wagon Trail from the freshwater pipeline crossing into Tatelkuz Lake	Historic Heritage Sites; Archaeological sites; Current Land and Resource Use for Traditional Purposes	The proposed transmission line ROW would cross two historic trails, the Messue Wagon Road and the Cheslatta Trail. The Messue Wagon Road would also be crossed by a freshwater supply pipeline from Tatelkuz Lake to the proposed mine site.	C; O; CL	Implementation of Environmental Management Plans and mitigation; Minimal disturbance to the trail is anticipated; Potential effects on Messue Wagon and Cheslatta Trails will be minimized during construction and mitigated through reclamation programs; Data, including pictures and dating of heritage resources such as CMTs and cabins has already been completed; Archaeological monitoring. Include LDN members in archaeological surveillance and/or monitoring.	Not expected	Not expected	Section 12.2 Environmental Management Plans (Archaeology and Heritage Resources Management Plan) Section 8 Assessment of Heritage Effects Section 7.2.7 Current Land and Resource Use for Traditional Purposes
Land Use	Canoeing on Tatelkuz Lake	Non-traditional Land and Resource Use	Change in opportunity to canoe on Tatelkuz Lake.	C, O	Effects on the opportunity to canoe on Tatelkuz Lake are not expected.	Not expected	Not expected	Section 7.2.7 Current Land and Resource Use for Traditional Purposes Section 7.2.6 Non-Traditional Land and Resource Use. Section 7.2.8 Visual Effects Assessment

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Community Well-being	Potential exacerbation of social problems and/or substance abuse from increases to disposable income	Family and Community Well-being	Potential for negative well-being effects such as increases in crime, alcohol/drug abuse, or family dysfunction.	C; O	Strictly enforced no drugs and no alcohol policy Deposit workers' salaries directly to their bank accounts; Provide access to money management training; Facilitate communication between the operation workers and their families Offer recreational facilities and activities for workers at the Project site Offer counselling services to employees as well as cultural awareness training and harassment-free workplace environment; Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate Offer counselling services to employees.	Not expected	Not expected	Section 7.2 Social Effects Assessment Section 7.2.5 Family and Community Well-Being
	Increased need for social support and frontline workers as a result of in-migration and increased disposable income	Family and Community Well-being	Potential for negative well-being effects such as increases in crime, alcohol/drug abuse, or family dysfunction.	C; O; CL	Work with communities and other agencies to mitigate and manage Project related concerns about pressures on services Strictly enforced no drugs and no alcohol policy Deposit workers' salaries directly to their bank accounts and provide access to money management training Facilitate and maintain communication between the operation workers and their families Offer recreational facilities and activities for workers at the Project site Offer cultural awareness training and harassment-free workplace Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate Offer counselling services to employees.	Not expected	Not expected	Section 7.2 Social Effects Assessment Section 7.2.5 Family and Community Well-Being

Note: CMT = culturally modified trees; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.2.2.2 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers and businesses. Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

16.2.2.3 Water Resources

A number of concerns were raised regarding water quality and potential effects on the Tascha Lakes and Blackwater drainage system. As indicated in the table, effects are not anticipated in the Tascha Lakes system, which falls within the Blackwater River drainage system. The Blackwater River is a tributary of the Fraser River and because of its importance to Aboriginal groups in the area; on-site and off-site infrastructure was designed to avoid the Blackwater River drainage system.

One of the concerns raised by the LDN is the effects on water flow in Tatelkuz Lake. Variations in Tatelkuz Lake levels caused by the Project are anticipated to fall within the range of natural and historic lake level fluctuations; therefore, Tatelkuz Lake will experience negligible effects. It is anticipated that water withdrawal from Tatelkuz Lake will not cause significant adverse effects on lake habitat or aquatic life.

Another concern raised by the LDN is the effects on water quality in Tatelkuz Lake and other tributaries in the area. The Project will not discharge from the tailings impoundment during the operations and closure phase. An environmental control dam downstream of Davidson Creek will capture seepage from the main dam. A water storage reservoir is planned for downstream of the environmental control dam. Water will be monitored downstream of control structures and is expected to meet applicable provincial and federal standards to protect fish, furbearers and animals that use the water.

During the post closure phase, when there will be discharge from the tailings impoundment, water will meet applicable guidelines, before discharge, or be treated through additional wetlands or other means. Sediment control ponds will be developed during the construction phase to prevent sediment from entering Davidson Creek. At closure, a constructed wetland at the main tailings impoundment will trap suspended sediment to the concentrations applicable at that time (decades after mine closure). Any accidental spill will pass both the environmental control dam where dilution will occur, including an opportunity to pump the spill back to the tailings impoundment, and the water storage reservoir berm where further dilution will occur. There will be a second opportunity to pump any spill back to the tailings impoundment.

Tatelkuz Lake and other water resources will be monitored through the construction, operations, decommissioning/closure, and post-closure phases. The Project was designed to avoid negative effects on water quality in Tatelkuz Lake and other water bodies downstream of the Project area.

Mitigation measures to protect water quality include:

- Operate as a zero discharge facility during operation and closure;
- Project design that minimizes footprint;
- Monitor water on an ongoing basis throughout the life of the Project and post-closure.
- Collect all drainage from the mine by gravity into the Tailings Storage Facility (TSF) to simplify water management, spill control, and mine closure;
- Utilize sediment ponds to contain and treat site run-off and reduce concentration of suspended solids during the construction phase;
- Meet applicable provincial and federal standards for surface water and sediment quality downstream of the proposed mine site, to avoid effects on fish, furbearers, and animals that use those waters;
- Meet receiving environmental guidelines and site-specific water quality objectives for discharged water during post-closure;
- Construct wetlands and treat pit lake during post-closure;
- Pump TSF seepage to the TSF or pit lake, and continue monitoring during post-closure;
- Implement erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, to protect erodible soils from entering waterbodies;
- Implement design and operational procedures to limit risks associated with malfunctions and accidents; and
- Implement EMPs addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; and wetlands management.

Section 12.2 presents additional mitigation measures and **Section 10** provides additional information on responses to accidents or malfunctions.

No residual effects are expected on surface water elevations in Tatelkuz Lake. However, there will be a not significant residual effect due to loss of fish habitat quality and quantity in the upper one metre of the littoral zone of Tatelkuz Lake. Changes in flow will be mitigated. There may be effects on water quality, fish, and fish habitat and some residual water quality effects may result from diversion of Lake 1682LNRS into Creek 705 watershed. No effects are expected on sediment quality since sediments would be contained on-site and seepage from TSF would be pumped back into TSF and polished in an installed wetland.

16.2.2.4 Human Health

One of the concerns raised by the LDN is the potential effects related to cyanide use and transportation. The Proponent is a member of the International Cyanide Management Institute, adhering to the International Cyanide Management Code (the Code). The purpose of the Code is to improve the management of cyanide used in gold mining and assist in the protection of human health and the reduction of environmental impacts.

The Code is an industry voluntary program for gold mining companies. It focuses exclusively on the safe management of cyanide. Companies that adopt the Code must have their mining operations that use cyanide to recover gold audited by an independent third party to determine the status of Code implementation. Only those operations that meet the Code requirements are given certification. Audit results are made public to inform stakeholders of the status of cyanide management practices at the certified operation.

The Code addresses production, transport, storage, and use of cyanide and the decommissioning of cyanide facilities. It also includes requirements related to financial assurance, accident prevention, emergency response, training, public reporting, stakeholder involvement, and verification procedures.

The Project will not treat waste rock with cyanide. Waste rock from the open pit will be disposed of at the waste rock dumps located adjacent to the open pit. Only the ore will be subject to treatment using a whole ore leach process. The tailings residue of this process will be deposited in the TSF after a cyanide destruction process has been applied. Mitigation measures for storage of cyanide include:

- Use of ISOtainers (containers that are dedicated to cyanide transport) that are designed for controlled dissolution upon delivery to the site;
- Storage at the transload facility is designed to minimize contact of solid cyanide with water (e.g., under a roof, off the ground, in specially designed containers);
- Adequate ventilation in the storage facility;
- Containment systems in place should there be spilled cyanide materials; and
- Warning signs to alert workers that cyanide is present.

Mitigation measures for the safe transport of cyanide include:

- Cyanide off-loading and storage facilities will be located away from surface waters and within fenced and access-controlled boundaries with locked security fencing;
- Gas detectors in the off-loading and storage area; and
- Signage for workers.

Residual or cumulative effects are not anticipated.

Section 12.2 presents additional mitigation measures and **Section 10** provides additional information on responses to accidents or malfunctions.

16.2.2.5 Heritage Resources

Table 16.2-2 shows concerns were raised by LDN with respect to potential effects on culturally modified trees (CMTs) on Mount Davidson and other archaeological sites. There are CMTs within the mine site footprint; however, the modification dates are too recent to be protected under the *Heritage Conservation Act*. These sites were managed as non-protected CMTs and referred to as cultural heritage resources as per standard guidelines within the Vanderhoof Forest District. They have been fully documented, recorded, photographed, and where possible dated by dendrochronological (tree-ring) dating (increment core). Several are bark removal scars on lodgepole pine, and several are bent lodgepole pine trees inferred as either trail marker trees or territorial tree markers. Given the footprint of the mine, none can be preserved in place. **Section 8** provides additional detail.

CMTs were also found along the Messue Wagon Trail. The Messue Wagon Trail consists of a visible wagon road with wagon ruts. The proposed freshwater supply system was re-designed to avoid disturbance to the Messue Wagon Trail and the supply system is now aligned with the existing roadbed. If the freshwater supply system remains within the existing road right-of-way, then no Project effects are anticipated.

A post-1846 cabin was identified within the mine footprint. Data have been collected, including photographing cabin features and documenting information to determine the approximate date the cabin was constructed.

For both archaeological and historic sites, no residual effects are expected and cumulative effects may be both negative since sites may be affected resulting in a cumulative reduction in the finite number of archaeological sites and positive since new sites may be identified, recorded, mitigated, and potentially protected.

16.2.2.6 Community and Family Well-Being

Although employment opportunities available to local LDN residents may be beneficial due to a reduction in unemployment and higher incomes, the increased levels of disposable income could have some social consequences. Changes in financial circumstances can contribute to some negative social outcomes by providing additional means to participate in alcohol, substance, and gambling abuse with potential related adverse well-being effects.

Mitigation measures to reduce these effects will include:

- Strictly enforced no drugs and no alcohol policy;
- Deposit workers' salaries directly to their bank accounts;
- Provide access to money management training;

- Facilitate communication between the operation workers and their families;
- Provide recreational facilities and activities for workers at the Project site;
- Offer cultural awareness training and harassment-free workplace to employees;
- Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate; and
- Offer counselling services to employees.

LDN raised concerns about increased demand for social services on local Aboriginal and non-Aboriginal communities. This will depend largely on the number of LDN members who obtain mine employment and the number of LDN members who decide to move to (or back to) their communities due to work on the Project. The Social and Economic Effects Assessment predicts no in-migration to Quesnel or surrounding areas, based on the current Project design.

Mitigation measures, apart from those identified above, including working with communities and other agencies to mitigate and manage Project related concerns about pressures on services.

Due to the complexity of these social and economic interactions, it is difficult to predict whether Project effects will be positive, negative, or both. The presence of additional wage income could have both positive and negative effects on LDN people. Those working at the Project may have greater economic ability to engage in negative social behaviour. However, the availability of cash income may also facilitate enhancement of the quality of life (e.g., household and lifestyle improvements, sports, hunting, fishing, and ski-doing). Over the longer-term, communities may adapt to higher incomes and disruptive spending tends to decline, while positive spending increases. In addition, increased income for Aboriginal workers may support traditional activities providing income to purchase better equipment (e.g., boats, ski-doo) and make participation more accessible (e.g., purchase of fuel) however, there may be less time to spend in these pursuits with full time, shift employment and thus, enhance quality of life (North Slave Métis Alliance, 2000).

Despite the uncertainty in estimating potential effects, the Proponent has identified mitigation measures that would help prevent and/or manage any negative effects of this nature should they occur.

16.3 Nadleh Whut'en First Nation

A number of activities were undertaken with the Nadleh Whut'en First Nation (NWFN) to identify other interests. The Proponent initiated discussions with the NWFN in September 2012. Since that time, the Proponent has continued to make efforts to meet with NWFN leadership to discuss interests and concerns. A number of approaches were used to gather information on NWFN interests as they relate to the Project. The Proponent conducted in-person meetings with NWFN

representatives. In addition, there are ongoing written communications between the Proponent and the NWFN.

The NWFN and the Proponent have had some discussion around NWFN participation in aspects of the EA. These included discussions on consultation, socioeconomics, and the draft AIR. In May 2013, the Proponent offered NWFN capacity funding to participate in the EA. These discussions are ongoing and initial capacity funding for a review by experts retained by NWFN was provided by the Proponent. More detailed information on consultation activities undertaken with the NWFN is provided in **Section 17** and **Table 16.3-1**.

A number of approaches were used to gather information on NWFN interests as they relate to the Project. The Proponent conducted in-person meetings with NWFN representatives. In addition, there are ongoing written communications between the Proponent and the NWFN.

The NWFN and the Proponent have had some discussion around NWFN participation in aspects of the EA. These included discussions on consultation, socioeconomics, and the draft AIR. In May 2013, the Proponent offered NWFN capacity funding to participate in the EA. These discussions are ongoing. More detailed information on consultation activities undertaken with the NWFN is provided in **Section 17**.

Table 16.3-1: Summary of Nadleh Whut'en First Nation Interests

Interest	Issue/Concern/Comment	Date Raised	Manner Raised
Water Resources	Potential effects from the mine to the Nechako watershed	13 Feb 2012 13 Feb 2013 11 Jul 2013	Meetings
Economic Development	Business Opportunities	13 Feb 2013 11 Jul 2013	Meetings
Economic Development	Employment opportunities	13 Feb 2013 11 Jul 2013	Meetings

16.3.1 Nadleh Whut'en First Nation Interests Assessment

Table 16.3-2 presents the interests of the NWFN and how the Proponent addressed them in the EA and the Application.

16.3.2 Summary of Identified Aboriginal Interests

16.3.2.1 Water Resources

A number of concerns were raised regarding water quality, contamination, and water flow effects on the Nechako River. As indicated in **Table 16.3-2**, effects are not anticipated in the Nechako River system. The Nechako Reservoir is far downstream of Davidson Creek and is not expected to be contaminated given zero surface discharge during operations and closure, extremely limited seepage bypassing the water management system (2 L/s), and the expectation that when water is discharged from the TSF at post closure it will meet applicable federal and provincial guidelines

to protect fish, furbearers and animals that use the water, or be treated. Potential Project effects of construction and maintenance of the transmission line where it crosses the Nechako River will be mitigated. Mitigation measures include:

- Water will be monitored on an ongoing basis throughout the life of the Project and post-closure;
- Surface water and sediment quality will meet applicable provincial and federal standards;
- Erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, will be used to protect erodible soils from entering the water;
- Silt fencing will be used to limit sediments reaching fish-bearing streams;
- Grader operations will follow guidelines to prevent sediment deposition;
- Instream works will be avoided or minimized;
- Implementing design and operational procedures to limit risks associated with malfunctions and accidents;
- Implementation of the Project Environmental Management Plans addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; fish habitat compensation; and wetlands management.
- No residual effects on water quality or water flow in the Nechako River are expected.

16.3.2.2 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers. Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to address those effects. Effects are expected to be positive so residual and cumulative effects are not applicable.

Table 16.3-2: Nadleh Whut'en First Nation Interests

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Protection of the Nechako River	Surface water flow; Surface Water Quality; Sediment Quality	Effects on the Nechako River from the transmission line crossing	C, O, CL	<p>Surface water and sediment quality will meet applicable provincial and federal standards downstream; Water will be monitored on an ongoing basis throughout the life of the Project and post-closure; Erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, will be used to protect erodible soils from entering the water; Silt fencing will be used to limit sediments reaching fish-bearing streams; Grader operations will follow guidelines to prevent sediment deposition; Instream works will be avoided or minimized; Implementing design and operational procedures to limit risks associated with malfunctions and accidents; Implementing EMPs addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; and wetlands management.</p>	Not expected	Not expected	<p>Section 12.2 Environmental Management Plans Section 5.3.2 Surface Water Flow Section 5.3.3 Surface Water Quality Section 5.3.4 Sediment Quality</p>

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Business Opportunities	Regional and Local Employment and Businesses	Positive contribution to businesses.	C; O: CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 6.2 Economic Effects Assessment Section 6.2.5 Regional Employment and Businesses
	Employment	Regional and Local Employment and Businesses	Positive contribution to employment.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	12.2 Environmental Management Plan (Recruitment, Training, and Employment, and Closure Management Plan) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.4 Saik'uz First Nation

A range of activities has been undertaken to understand SFN interests in the Project. The Proponent initiated discussions with the SFN in February 2012. Since that time, the Proponent has continued to meet with SFN representatives to gain insight into the interests and concerns of the SFN. A number of approaches have been used to gather information on SFN interests as they relate to the Project. The Proponent has conducted a number of in-person meetings with SFN representatives to discuss interests and concerns. The Proponent regularly delivers Project presentations and updates to leadership, and has hosted a Community Meeting about the Project at the Stony Creek Reserve. SFN has also participated in a number of socioeconomic interviews related to the Project.

In addition, the Proponent has conducted site visits for SFN leaders of the Project site. The Proponent has also signed a Capacity Agreement with the SFN to facilitate the SFN participation in the EA process. The Proponent has kept the community informed through notices of work and requested information via letter, email, and telephone about any concerns/interests with respect to Project changes or scheduling of work. Detailed information on consultation activities undertaken with the SFN is provided in **Section 17, Table 16.4-1**).

A number of approaches have been used to gather information on SFN interests as they relate to the Project. The Proponent and SFN leadership have participated in ongoing discussions about SFN interests and concerns. The Proponent regularly delivers Project presentations and updates, and hosted a Community Meeting about the Project at the Stony Creek Reserve in 2012. SFN has also participated in a number of socioeconomic interviews related to the Project and in July 2014 a Traditional Knowledge Protocol Agreement was signed with SFN.

Table 16.4-1: Summary of Saik'uz First Nation Interests

Interest	Issue/Concern/Comment	Date	Manner Raised
Human Health	Concern raised about effects from the mine design including use of cyanide	13 Aug 2012	Meeting
Water Resources	Effects on water flow	07 May 2013	Meeting
Water Resources	Effects on water quality	14 Nov 2013	Meeting
Cumulative Effects	Increase in number of projects in SFN territory	27 May 2013	Meeting
Family and Community Well-being	Potential exacerbation and/or creation of violence against women and increased trafficking and prostitution	13 Feb 2012, 13 Jun 2013	Meetings
Family and Community Well-being	Potential exacerbation of alcohol and drug use and sale of drugs	13 Jun 2013 30 Apr 2013	Working Group Meeting, Meetings
Family and Community Well-being	Increased need for social support and frontline workers as a result of in-migration	30 Apr 2013	Working Group Meeting
Economic Development	Interest in increased employment and contracting opportunities	Multiple	Community Meeting, Meetings, Emails

16.4.1 Saik'uz First Nation Interests Assessment

Table 16.4-2 presents the interests of the SFN and how these have been assessed in the EA.

16.4.2 Summary of Identified Aboriginal Interests

16.4.2.1 Human Health

Potential effects related to cyanide use and transportation was raised as a concern by SFN. The Proponent is a member of the International Cyanide Management Institute, adhering to the International Cyanide Management Code (the Code). The purpose of the Code is to improve the management of cyanide used in gold mining and assist in the protection of human health and the reduction of environmental impacts.

The Code is an industry voluntary program for gold mining companies. It focuses exclusively on the safe management of cyanide. Companies that adopt the Code must have their mining operations that use cyanide to recover gold audited by an independent third party to determine the status of Code implementation. Only those operations that meet the Code requirements are given certification. Audit results are made public to inform stakeholders of the status of cyanide management practices at the certified operation.

The Code addresses production, transport, storage, and use of cyanide and the decommissioning of cyanide facilities. It also includes requirements related to financial assurance, accident prevention, emergency response, training, public reporting, stakeholder involvement, and verification procedures.

The Project will not treat waste rock with cyanide. Waste rock from the open pit will be disposed of at the waste rock dumps located adjacent to the open pit. Only the ore will be subject to treatment using a whole ore leach process. The tailings residue of this process will be deposited in the TSF after a cyanide destruction process has been applied.

Mitigation measures for storage of cyanide include:

- Use of ISOtainers (containers dedicated to cyanide transport) designed for controlled dissolution upon delivery to the site;
- Storage at the transload facility is designed to minimize contact of solid cyanide with water (e.g., under a roof, off the ground, in specially designed containers);
- Adequate ventilation in the storage facility;
- Containment systems in place should there be spilled cyanide materials; and
- Warning signs to alert workers that cyanide is present.

Mitigation measures for the safe transport of cyanide include:

- Cyanide off-loading and storage facilities will be located away from surface waters and within fenced and access-controlled boundaries with locked security fencing;
- Gas detectors in the off-loading and storage area; and
- Signage for workers.

No residual or cumulative effects are expected.

Section 12.2 presents additional mitigation measures and **Section 10** provides additional information on responses to accidents or malfunctions.

16.4.2.2 Water Resources

Effects on water flow were raised as a concern but specific waterbodies were not identified. Tatelkuz Lake (outside of SFN Territory although is noted to be a location of past use by SFN people) is expected to experience negligible effects. Variations to levels caused by the Project are anticipated to fall within the range of natural and historic lake level fluctuations. It is anticipated that water withdrawal from Tatelkuz Lake will not cause significant adverse effects on lake habitat or aquatic life.

Concerns were raised regarding water quality although specific waterbodies were not identified. The SFN Traditional Territory is to the north and east of the mine site and mine activities are not expected to affect water quality within SFN territory. Potential Project effects may be related to construction and maintenance of the transmission line where it crosses the Nechako River, but these effects will be mitigated. Mitigation measures include:

BLACKWATER GOLD PROJECT

APPLICATION FOR AN
ENVIRONMENTAL ASSESSMENT CERTIFICATE /
ENVIRONMENTAL IMPACT STATEMENT
OTHER ABORIGINAL INTERESTS



- Water will be monitored on an ongoing basis throughout the life of the Project and post-closure;
- Surface water and sediment quality will meet applicable provincial and federal standards;
- Erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, will be used to protect erodible soils from entering the water;
- Silt fencing will be used to limit sediments reaching fish-bearing streams;
- Grader operations will follow guidelines to prevent sediment deposition;
- Instream works will be avoided or minimized;
- Clear-span bridges or open bottom culverts will be installed at all new fish bearing stream crossings;
- Implementing design and operational procedures to limit risks associated with malfunctions and accidents;
- Implementation of the Project Environmental Management Plans addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; fish habitat compensation; and wetlands management.
- No residual effects on water quality or water flow in the Nechako River are expected. The Nechako Reservoir is far downstream of Davidson Creek and is not expected to be contaminated given zero surface discharge during operations and closure, extremely limited seepage bypassing the water management system (2 L/s), and the expectation that when water is discharged from the TSF at post closure it will meet applicable federal and provincial guidelines to protect fish, furbearers and animals that use the water or be treated.

The Project will not discharge from the tailings impoundment during operations and closure. An environmental control dam downstream of Davidson Creek will capture seepage from the main dam. A water storage reservoir is planned for downstream of the environmental control dam that would further intercept any seepage that might pass below the environmental control dam. Water quality will be monitored downstream from the water storage reservoir and is forecast to meet applicable provincial and federal standards for surface water and sediment quality downstream of the proposed mine site, to avoid effects on fish, furbearers, and animals that use those waters.

During the post closure phase, when there will be discharge from the tailings impoundment, water is forecast to meet receiving environment guidelines and site-specific water quality objectives for discharged water. Sediment control ponds will be developed during the construction phase to prevent sediment from entering Davidson Creek. At closure, a constructed wetland at the main tailings impoundment will trap suspended sediment to the concentrations applicable at that time (decades after mine closure). Any accidental spill will pass both the environmental control dam where dilution will occur, including an opportunity to pump the spill back to the tailings

impoundment, and the water storage reservoir berm where further dilution will occur. There will be a second opportunity to pump any spill back to the tailings impoundment.

Water resources downstream of the Project will be monitored through the construction, operations, decommissioning/closure, and post-closure phases. The Project was designed to avoid negative effects on water quality in Tatelkuz Lake and other waterbodies downstream of the Project area.

Mitigation measures to protect water quality from mine site activities include:

- Operate as a zero discharge facility during operation and closure;
- Collect all drainage from the mine by gravity into the TSF to simplify water management, spill control, and mine closure;
- Utilize sediment ponds to contain and treat site run-off and reduce concentration of suspended solids during the construction phase;
- Meet applicable provincial and federal standards for surface water and sediment quality downstream of the proposed mine site, to avoid effects on fish, furbearers, and animals that use those waters;
- Meet receiving environmental guidelines and site-specific water quality objectives for discharged water during post-closure;
- Construct wetlands and treat pit lake during post-closure; and
- Pump TSF seepage to the TSF or pit lake, and continue monitoring during post-closure.

Section 12.2 presents additional mitigation measures and **Section 10** provides additional information on responses to accidents or malfunctions.

16.4.2.3 Cumulative Effects

At a meeting in May 2013, SFN noted their concerns regarding the increase in the number of new projects they were seeing in SFN territory. The Proponent completed Cumulative Effects Assessments (CEA) in which the Project-specific effects assessments identified a residual effect. The results of these assessments are described in each respective Valued Component (VC) in **Section 5** Assessment of Potential Environmental Effects, **Section 6** Assessment of Potential Economic Effects, **Section 7** Assessment of Potential Social Effects, **Section 8** Assessment of Potential Heritage Effects, and **Section 9** Assessment of Potential Health Effects. A summary of the cumulative environmental, economic, social, heritage, and health effects predicted to result from the Project are summarized in **Section 19**.

16.4.2.4 Family and Community Well-being

Although employment opportunities available to local SFN residents may be beneficial due to a reduction in unemployment and higher incomes, the increased incidence of disposable income could have some consequences such as greater incidence of substance abuse and a greater

strain on social support services. Changes in financial circumstances can contribute to some negative social outcomes by providing additional means to participate in alcohol, substance, and gambling abuse and create the potential for negative well-being effects (discussed in **Section 7.2.4** Family and Community Well-being). In addition, past research indicates Aboriginal women may be more vulnerable to varying types of abuse during resource extraction projects. Abuse may include domestic violence and increased demand for prostitution. To mitigate negative social effects, the Proponent will:

- Implement a strictly enforced no drugs and no alcohol policy;
- Deposit workers' salaries directly to their bank accounts;
- Provide access to money management training;
- Facilitate communication between the operation workers and their families;
- Provide recreational facilities and activities for workers at the Project site;
- Offer cultural awareness training and harassment-free workplace to employees;
- Offer counselling services to its employees;
- Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate; and
- Where appropriate, work with communities and other agencies (i.e. Omineca Safe House) to manage Project related concerns about pressures on services.

Increased demand for social services on local Aboriginal communities will depend largely on the number of members who obtain mine employment, the number of members who decide to move to (or back to) their communities to work on the Project and spending decisions regarding use of increased disposable income that may result from employment.

The Social Effects Assessment (**Section 7.2**) provides a summary of effects on communities in the LSA.

The Social Effects Assessment predicts a small population increase to the LSA (including Vanderhoof). Some services in the area may experience capacity challenges but over time, with planning and investment, service delivery should catch up to increased demand. The assessment notes that some social services have excess capacity and would be able to absorb effects from minor increases to population.

Due to the complexity of these social and economic interactions, it is difficult to predict whether Project effects will be positive, negative, or both. The additional wage income could have both positive and negative effects on SFN people. Those working at the Project may have greater economic ability to engage in negative social behaviour. However, the availability of cash income may also facilitate enhancement to the quality of life (e.g., household and lifestyle improvements, sports, hunting, fishing, and ski-doing). Over the longer-term, communities may adapt to higher incomes and disruptive spending tends to decline, while positive spending increases. In addition,

increased income for Aboriginal workers may support traditional activities providing income to purchase better equipment (e.g., boats, ski-doo) and make participation more accessible (e.g., purchase of fuel) and thus, enhance quality of life.

16.4.2.5 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers. Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to address those effects.

Table 16.4-2: Saik'uz First Nation Interests

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Human Health	Concern raised about cyanide and its potential effects.	Environmental Exposures	Potential effects from cyanide on wildlife, water, air and humans.	O; CL; PC	<p>The mine site will aim to operate as a zero discharge facility. During post-closure water will meet applicable provincial and federal quality standards to avoid effects on aquatic life and other wildlife.</p> <p>The Project will not treat waste rock with cyanide. Waste rock from the open pit will be disposed of at the waste rock dumps located adjacent to the open pit. Only the ore will be subject to treatment using a whole ore leach process. The tailings residue of this process will be deposited in the TSF after a cyanide destruction process has been applied. Mitigation measures for storage of cyanide include:</p> <ul style="list-style-type: none"> • Use of ISOTainers that are designed for controlled dissolution upon delivery to the Project site; • Storage at the transload facility is designed to minimize contact of solid cyanide with water (e.g., under a roof, off the ground, in specially designed containers); • Adequate ventilation in the storage facility; • Containment systems in place should there be spilled cyanide materials; and • Warning signs to alert workers that cyanide is present. <p>Mitigation measures for the safe transport of cyanide include:</p> <ul style="list-style-type: none"> • Cyanide off-loading and storage facilities will be located away from surface waters and within fenced and access-controlled boundaries with locked security fencing; • Gas detectors in the off-loading and storage area; and • Signage for workers. <p>The Proponent will implement a Country Foods Monitoring Plan. The monitoring plan is proposed for the</p>	Not expected	Not expected	<p>Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)</p> <p>Section 9.2 Health Effects Assessment</p> <p>Section 10 Accidents or Malfunctions</p> <p>Appendix 9.2.2B Country Foods Monitoring Plan</p>

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
					Project's operation and post-closure management. Monitoring will determine metals concentrations in specific indicator plants, small mammals, large mammals, and fish. Sampling will be undertaken during the beginning of Year -2 of mine construction (no emissions but dust would be monitored), and then at operations Years 3, 8, and 15, and Year 24 during the closure phase. This proposed schedule reflects the belief that there will be minimal change if any to baseline levels. If testing determines that levels are changing in a material way, further consultation and planning to address necessary mitigation measures would be undertaken with regulators and First Nations.			
Water Resources	Potential negative effects on water flow	Surface Water Flow	Proposed mining facilities (TSF, open pit and water management facilities) and related activities (water withdrawal and discharge) have the potential to affect natural streams, drainage areas, annual flows, seasonal distribution of flow, high and low flows, and lake levels.	C; O; CL	Variations in Tatelkuz Lake levels caused by the Project are anticipated to fall within the range of natural and historic lake level fluctuations. Water flow of the Nechako River will not be affected. Implementation of Environmental Management Plans and mitigation, including: Utilize water within the Project area to the maximum practicable extent by collecting and managing site runoff from disturbed areas, maximizing recycle of process water and storing surplus water within the TSF; Monitor surface quantity; On-site Project facilities exist entirely in the Davidson Creek and Creek 661 watersheds; Runoff and toe discharge from the east waste rock dump will contribute to surface flows in the upper extents of the Creek 661 Watershed after being directed through a sediment control pond; At closure the TSF will discharge via a spillway, discharge channel, and plunge pool to Davidson Creek; Adaptive management.	Specific waterbodies need to be identified.	Specific waterbodies need to be identified.	Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, and Closure Management Plan) Section 5.3.2 Surface Water Flow

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Potential negative effects on water quality	Surface Water Quality; Sediment Quality	Effects on waterbodies from the transmission line crossings that could affect water quality	C, O, CL, PC	<p>Water will be monitored on an ongoing basis throughout the life of the Project and post-closure;</p> <p>Erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, will be used to protect erodible soils from entering the water;</p> <p>Silt fencing will be used to limit sediments reaching fish-bearing streams;</p> <p>Grader operations will follow guidelines to prevent sediment deposition;</p> <p>Instream works will be avoided or minimized;</p> <p>Implementing design and operational procedures to limit risks associated with malfunctions and accidents;</p> <p>Implementing EMPs addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; and wetlands management;</p> <p>The Nechako River system is far downstream of Davidson Creek and is not expected to be contaminated given zero surface discharge during operations and closure, extremely limited seepage bypassing the water management system (2 L/s), and the expectation that when water is discharged from the TSF at post closure it will meet aquatic life guidelines or be treated;</p> <p>Mine will operate as a zero surface discharge facility during operation and closure.</p>	Not expected	Not expected	<p>Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)</p> <p>Section 5.3.3 Surface Water Quality</p> <p>Section 5.3.4 Sediment Quality</p>

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Cumulative Effects	Increase in the number of projects in SFN territory	All VCs include cumulative effects assessment where there are residual effects.	Cumulative effects	N/A	The Proponent completed cumulative effects assessments for VCs, as necessary A summary of potential cumulative effects of the Project are presented in Section 19 Implementation of mitigation and Environmental Management Plans.	N/A	N/A	Section 5.0 Assessment of Potential Environmental Effects Section 6.0 Assessment of Potential Economic Effects Section 7.0 Assessment of Potential Social Effects Section 8.0 Assessment of Potential Heritage Effects Section 9.0 Assessment of Potential Health Effects Section 19.0 Summary of Cumulative Effects
Family and Community Well-being	In-migration of workers and greater disposable income increases demand and pressures against Aboriginal women (e.g., violence against women including domestic abuse, human trafficking, and prostitution)	Family and Community Well-being; Regional and Local Services	Potential for negative economic, well-being effects such as increases in crime, alcohol/drug abuse, or family dysfunction.	C; O	Strictly enforced no drugs and no alcohol policy Deposit workers' salaries directly to their bank accounts Provide access to money management training Facilitate communication between the operation workers and their families Provide recreational facilities and activities for workers at the Project site Offer counselling services to employees as well as cultural awareness training and harassment-free workplace environment Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate	Not expected	Not expected	Section 6.2 Economic Effects Assessment Section 7.2 Social Effects Assessment Section 7.2.4 Regional and Local Services Section 7.2.5 Family and Community Well-being
Social	Potential exacerbation of alcohol and drug use and sale of drugs	Family and Community Well-being; Regional and Local Services	Potential for negative well-being effects, such as increases in crime, alcohol/drug abuse or family dysfunction.	C; O	Strictly enforced no drugs and no alcohol policy Deposit workers' salaries directly to their bank accounts Provide access to money management training Facilitate communication between the operation workers and their families Recreational facilities and activities for workers at the Project site Offer counselling services to employees as well as cultural awareness training and harassment-free workplace environment	Not expected	Not expected	Section 7.2 Social Effects Assessment Section 7.2.4 Regional and Local Services Section 7.2.5 Family and Community Well-being

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
					Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate Where appropriate, work with communities and other agencies (i.e. Omineca Safe House) to manage Project related concerns about pressures on services.			
Family and Community Well-being	Concern about increased stress on social support and frontline workers as a result of in-migration	Family And Community Well-being; Regional And Local Services	Potential effects from in-migration of workers and increased disposable income, increased pressure is placed on local social support services and frontline workers.	C; O	Implementation of mitigation, including: Provision of camps and worker rotation policies during the construction and operations phase to limit in-migration; Policy of no alcohol or drugs onsite; Provide access to money management training; Provide a respectful workplace with no harassment and with safety and security, multi-cultural workforce considerations, and cultural awareness training; Provision of recreational facilities and activities for workers at the Project site; Work with communities and other agencies to mitigate and manage Project related concerns to pressures on services.	Not expected	Not expected	Section 6.2 Economic Effects Assessment Section 7.2 Social Effects Assessment Section 7.2.4 Regional and Local Services Section 7.2.5 Family and Community Well-being
Economic	Employment and contract opportunities	Regional and local employment and businesses	Improved income and economic well-being, employment.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment, and Closure Management Plan) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.5 Stellat'en First Nation

A number of activities have been undertaken to develop an understanding of the StFN other interests. The Proponent initiated discussions with the StFN in August 2012. Since that time, the Proponent has continued to discuss opportunities to share information and gain insight into the interests and concerns of the StFN (**Table 16.5-1**). The Proponent has conducted in-person meetings with StFN representatives, including discussions about consultation, socioeconomics, and the draft AIR. In December 2013, the Proponent signed a Capacity Agreement with the StFN to facilitate their participation in the EA process. The agreement outlines how the two parties will cooperate on the completion of a TK/TLU study, consultation activities, and socioeconomic studies. Detailed information on consultation activities undertaken with the StFN is provided in **Section 17**.

Table 16.5-1: Summary of Stellat'en First Nation Interests

Interest	Issue/Concern/Comment	Manner Raised	Date Raised
Land Use	Concern that trapline holders should be compensated in some manner.	Meeting	16 Apr 2013
Water Resources	Potential negative effects from the transmission line crossing of the Stellako River	Meeting	10 Apr 2013
Human Health	Exacerbation of arsenic in the water	Meeting	10 Apr 2013
Family and Community Well-being	Concerned about loss of lifestyle and cultural values	Meeting	16 April 2013
Economic Development	Providing educational opportunities for youth	Meeting	10 Apr 2013
Economic Development	Interest in employment and contracting opportunities	Meeting	10 Apr 2013

16.5.1 Stellat'en First Nation Interests Assessment

The interests of the StFN and how the Proponent addressed them in the EA are presented in **Table 16.5-2**.

Table 16.5-2: Stellat'en First Nation Interests

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Land Use	Concern that trapline holders should be compensated in some manner	Non-traditional Land Use; Current Use of Land and Resources for Traditional Purposes	Loss of trapping associated with the mine footprint, transmission line, water supply pipeline, access roads, and airstrip.	C; O; CL	<p>The Proponent will continue to discuss potential Project effects on trapping with affected Aboriginal communities throughout the life of the Project. Compensation for affected trapline holders in accordance with industry and provincial protocols associated with proof of lost revenue; Project site design that minimizes total footprint area. Establish a group including affected Aboriginal group representatives to discuss access management for the transmission line corridor and the mine site; Informing holders of affected trapline areas of Project activities, schedules, and locations. Locating and maintaining breaks in the rollback to facilitate access to trapping trails during clearing.</p> <p>Disposing of wastes generated on site to limit the attraction of wildlife to the mine site (Industrial and Domestic Waste Management Plan).</p> <p>Implementing design and operational procedures to limit risks associated with malfunctions and accidents. Prohibiting mine employees from trapping, hunting or fishing on mine site property. Implementing the respective Environmental Management Plans, addressing air quality and emissions management; transportation and access management; landscape, soils, and vegetation management and restoration; and wildlife management.</p> <p>Implementation of Environmental Management Plans and mitigation</p> <p>Implementing a TK/TLU Committee with participation of the Aboriginal Groups on which territories the Project is located to monitor that commitments made by the Proponent in regards to TK/TLU are being complied with.</p>	Additional information from TLUS or interviews with trappers is needed	Unable to assess without further information.	<p>Section 12.2 Environmental Management Plans (Wildlife Management Plan, Wetland Management Plan)</p> <p>Section 7.2 Social Effects Assessment</p> <p>Section 7.1.2 Non-Traditional Land and Resource Use</p> <p>Section 7.2.7 Current Land and Resource Use for Traditional Purposes.</p> <p>15.6 Stellat'en First Nation</p>

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Concern raised about the transmission line crossing of the Stellako River and effects on the water	Surface water flow; Surface Water Quality; Sediment Quality	Potential negative effects on Stellako River water and sediment quality from erosion near the transmission line crossing the Stellako River	C; O; CL	<p>The Stellako River crossing has been adjusted to reduce impacts on sensitive environmental habitat.</p> <p>The proposed mine site will aim to operate as a zero discharge facility.</p> <p>Water will be monitored on an ongoing basis throughout the life of the Project and post-closure;</p> <p>Erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, will be used to protect erodible soils from entering the water;</p> <p>Silt fencing will be used to limit sediments reaching fish-bearing streams;</p> <p>Grader operations will follow guidelines to prevent sediment deposition;</p> <p>Instream works will be avoided or minimized;</p> <p>Clear-span bridges or open bottom culverts will be installed at all new fish bearing stream crossings;</p> <p>Implementing design and operational procedures to limit risks associated with malfunctions and accidents;</p> <p>Implementing EMPs addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; and wetlands management.</p>	Not expected	Not expected	<p>Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)</p> <p>Section 5.3.3 Surface Water Quality</p> <p>Section 5.3.4 Sediment Quality</p>

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Human Health	Exacerbation of arsenic in the water	Surface Water Quality; Sediment Quality	Potential changes in arsenic levels in water in Stlat'en territory.	C; O; CL	<p>Background arsenic levels are low. The mine site is designed to operate as a zero discharge facility and thus not exacerbate natural arsenic levels. During construction, sediment ponds will be used to contain and treat site run-off to reduce concentration of suspended solids.</p> <p>No effects on arsenic levels are expected in the StFN territory.</p> <p>Implementation of Environmental Management Plans and mitigation, including:</p> <p>Monitoring of surface quality and quantity;</p> <p>All water leaving the mine site meets applicable regulatory requirements;</p> <p>Surface water and sediment quality will meet applicable provincial and federal standards downstream;</p> <p>No discharge from the tailings impoundment during operations;</p> <p>The Proponent will implement a Country Foods Monitoring Plan. The monitoring plan is proposed for the Project's operation and post-closure management. Monitoring will determine metals concentrations in specific indicator plants, small mammals, large mammals, and fish. Sampling will be undertaken during the beginning of Year - 2 of mine construction (no emissions but dust would be monitored), and then at operations Years 3, 8, and 15, and Year 24 during the closure phase. This proposed schedule reflects the belief that there will be minimal change if any to baseline levels. If testing determines that levels are changing in a material way, further consultation and planning to address necessary mitigation measures would be undertaken with regulators and First Nations.</p>	Not expected for Surface Water or Sediment Quality	Not expected for Surface Water or Sediment Quality	<p>Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)</p> <p>Section 5.3.3 Surface Water Quality</p> <p>Section 5.3.4 Sediment Quality</p> <p>Section 9.2 Health Effects Assessment</p> <p>Appendix 9.2.2B Country Foods Monitoring Plan</p> <p>Section 10 Accidents or Malfunctions</p>

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Family and Community Well-being	Loss of lifestyle and cultural values	Family and Community Well-being; Current Use of Land and Resources for Traditional Use; Social Effects	Potential changes to lifestyle and cultural values.	C; O; CL	<p>The Proponent provided funding to StFN to complete a traditional use study. . Information from this study will be integrated when completed into the Project design, execution, management, and monitoring in subsequent stages of the Project development including the Application review phase, the permitting phase and Project construction, operations, closure, and post-closure phases.</p> <p>Implementation of mitigation, including: Establish a group including affected Aboriginal group representatives to discuss access management for the transmission line corridor and the mine site; Minimizing the Project footprint; Including traditional use plant species habitat in reclamation prescriptions; Informing holders of affected trapline areas of Project activities, schedules, and locations; Implementing design and operational procedures to limit risks associated with malfunctions and accidents; Informing workers of sensitive cultural areas, and implementing a policy of reporting and respectful use; Implementing EMPs addressing air quality and emissions management, transportation and access management landscape, soils and vegetation management and restoration, wildlife management and visual resources and aesthetics management. Developing alternative access plans with Aboriginal groups, where access to or use of specific cultural sites needs to be altered or is impeded.</p>	Need additional information	Need additional information	<p>Section 7.2 Social Effects Section 7.2.5 Family and Community Well-being Section 7.2.7 Current Use of Land and Resources for Traditional Use Section 10 Accidents or Malfunctions Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)</p>

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic	Interest in educational and training opportunities	Regional and Local Employment and Businesses	Positive contribution to skills and training.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses
Economic	Interest in employment, including employment related to transmission line development	Regional and Local Employment and Businesses	Potential increase in employment and improvement in economic conditions.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.5.2 Summary of Identified Aboriginal Interests

16.5.2.1 Land Use

During discussions with StFN, the issue of compensation for the loss of trapping areas was raised. There is one StFN trapping area, trapline 0712T039, that overlaps the transmission line. The transmission line footprint intersects 12% of this trapline. Project activities related to land clearing could create increased access to the trapline for outside users and result in some loss of land base and habitat in this trapping area. This could cause inconvenience and additional trapping effort or lead to access disruption. Additional, specific effects cannot be identified until more detailed information is provided on the use of the trapline. Based on investigations to date, the Proponent understands that the trapline is currently not in use. The Proponent has provided StFN funding to complete a TK/TLU study. This study is underway and, when available, information will be integrated into the Project design, execution, management plans, and monitoring in subsequent stages of the Project development. Potential effects on trapping include damage to or encroachment on trail systems, staging areas, trapping sites (including traps and snares), parking sites, or cabins. Emissions during construction may affect trapping. Refer to **Section 7.2.7** and **Section 15**, for more information.

Table 16.5-2 shows a summary of potential measures to mitigate Project-related effects on trapping.

Mitigation measures include:

- Establishing a group of affected Aboriginal group representatives to discuss access management for the transmission line corridor and the mine site;
- Compensating affected trapline holders in accordance with industry and provincial protocols associated with proof of lost revenue,
- Informing holders of affected trapline areas of Project activities, schedules, and locations;
- Minimizing total footprint area and limiting disturbance to species that may be trapped;
- Locating and maintaining breaks in the rollback to facilitate access to trapping trails during clearing;
- Disposing of wastes generated on site to limit the attraction of wildlife to the mine site;
- Implementing design and operational procedures to limit risks associated with malfunctions and accidents;
- Prohibiting mine employees from trapping, hunting or fishing on mine site property;
- Implementing Environmental Management Plans (EMPs).

Overall, the Project is expected to have a low effect on trapping activities. The wildlife effects assessment for furbearers (**Section 5.4.13**) identifies that the residual effects of habitat loss and alteration, sensory, and change in furbearer population dynamics will not be significant. Effects on

trapping due to a TSF dam failure or spills of hazardous materials are considered extremely rare and will be managed by design and operational standards (**Section 10**). The effects are limited to the mine site footprint and are reversible.

16.5.2.2 Water Resources

Concerns were raised regarding potential effects on the Stellako River crossing by the transmission line. To address some of these concerns, the proposed transmission line was re-routed to avoid sensitive environmental habitat. Effects are not anticipated to the water quality or flow in the Stellako River. To minimize disturbance to this area the Project will implement sediment control and erosion control measures.

Mitigation measures include:

- Water will be monitored on an ongoing basis throughout the life of the Project and post-closure;
- Surface water and sediment quality will meet applicable provincial and federal standards;
- Erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, will be used to protect erodible soils from entering the water;
- Silt fencing will be used to limit sediments reaching fish-bearing streams;
- Grader operations will follow guidelines to prevent sediment deposition;
- Instream works will be avoided or minimized;
- Implementing design and operational procedures to limit risks associated with malfunctions and accidents; and
- Implementation of the Project Environmental Management Plans addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; fish habitat compensation; and wetlands management.

16.5.2.3 Human Health

Concerns were raised about the potential for the Project to exacerbate arsenic levels in waterbodies, although specific waterbodies were not identified. The Proponent provided StFN with information on the concentration of arsenic in the water downstream of the Project. The data were collected just downstream of Tatalkuz Lake. The arsenic levels were below the BC drinking water guidelines and showed a stable trend. No residual or cumulative effects are expected.

16.5.2.4 Family and Community Well-Being

During a meeting in April 2013 StFN noted concerns regarding loss of lifestyle and cultural values. The Proponent continues to work with the StFN to complete a traditional use study to characterize

StFN values and lifestyle, as well as areas where traditional practices are exercised. Mitigation and management plans have been developed to avoid or address effects on traditional resources and to minimize adverse effects on the traditional way of life.

Mitigation measures include:

- Establish a group including affected Aboriginal group representatives to discuss access management for the transmission line corridor and the mine site;
- Minimizing the Project footprint;
- Including traditional use plant species habitat in reclamation prescriptions;
- Informing holders of affected trapline areas of Project activities, schedules, and locations;
- Implementing design and operational procedures to limit risks associated with malfunctions and accidents (**Section 10**);
- Informing workers of sensitive cultural areas, and implementing a policy of reporting and respectful use;
- Implementing EMPs (**Section 12.2**); and
- Developing alternative access plans with Aboriginal groups, where access to or use of specific cultural sites needs to be altered or is impeded.

16.5.2.5 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

16.6 Ulkatcho First Nation

A number of activities have been undertaken with the Ulkatcho First Nation (UFN) to identify interests. The Proponent initiated discussions with the UFN in May 2011. Since that time, the Proponent has continued to meet with UFN representatives regularly to gain insight into the interests and concerns of the UFN (**Table 16.6-1**). In February 2013, the UFN and the Proponent signed an Exploration Agreement outlining how the two parties will cooperate on matters such as consultation protocols and the EA process. The Proponent and the UFN also signed a Capacity Funding Agreement that included funding to complete a TK/TLU study.

A number of approaches have been used to gather information on UFN interests as they relate to the Project. The Proponent has conducted a number of in-person meetings with UFN representatives to discuss interests and concerns. In addition, the Proponent regularly delivers

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Project presentations and updates to UFN leadership. In March 2013, the Proponent hosted a community meeting in Anahim Lake to introduce the Project to UFN members and provide opportunities for members to raise interests, comments, and concerns. Another community meeting was held in December 2013 and participants were provided with feedback forms to obtain additional information on any interests or concerns (13 forms were completed). In addition, the Proponent has conducted site visits for Chief and Council. Community members have participated in baseline studies in UFN’s Traditional Territory, including archaeological and wildlife studies. In October 2013 the UFN shared with the Proponent a TK/TLU study, which also assisted in the identification of UFN interests. Detailed information on consultation activities undertaken with the UFN is provided in **Section 17**.

Table 16.6-1: Summary of Ulkatcho First Nation Interests

Interest	Issue/Concern/ Comment	Manner Raised	Date
Economic Development	Interest expressed in employment opportunities	Meeting Meeting Community Meeting	23 Aug 2011 6 Jan 2012 11 Dec 2013
Economic Development	Interest expressed in business and contracting opportunities	Meeting Community Meeting	23 Aug 2011 11 Dec 2013
Economic Development	Interest expressed in training and skills development through the Project	Site Visit Community Meeting	30 Sep 2011 11 Dec 2013
Soil	Concerns raised regarding potential effects such as soil erosion, soil stability, or contamination of soils	TK/TLU Report	08 Nov 2013
Heritage Resources	Interest in protecting historic area such as CMTs and unmarked graves	Meeting TK/TLU Report	23 Aug 2011 08 Nov 2013
Water Resources	Concern raised about potential effects to water quantity in Tatelkuz Lake	Community Meeting	11 Dec 2013
Water Resources	Concerns raised regarding potential effects to drainage patterns, flows and volumes of water, and redirection of watercourses and waterbodies, and degradation of water quality	TK/TLU Report	08 Nov 2013
Human Health	Concerns raised regarding potential environmental damage from chemical spills or leaching	TK/TLU Report	08 Nov 2013
Family and Community Well-being	Concerns raised regarding “boom and bust” cycle and inequitable distribution of employment (within Aboriginal and non-Aboriginal communities)	TK/TLU Report	08 Nov 2013 11 Dec 2013
Family and Community Well-being	Potential effects to Elders living on homesteads near the Project site	Letter Community Meeting	28 Oct 2011 11 Dec 2013
Family and Community Well-being	Potential for negative effects on family dynamics (dysfunction) from new money, increased access to disposable income	Working Group Meeting TK/TLU Report	30 Apr 2013 08 Nov 2013

Note: TK/TLU = Traditional Knowledge/Traditional Land Use

16.6.1 Ulkatcho First Nation Interests Assessment

The interests of the UFN and how the Proponent addressed them in the EA are presented in **Table 16.6-2**.

16.6.2 Summary of Identified Aboriginal Interests

16.6.2.1 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

16.6.2.2 Soils

The UFN noted a concern regarding the potential for increased soil erosion, changes in soil stability and the contamination of soils (DM Cultural Services Ltd., 2013). The Proponent will implement a range of mitigation measures to address potential adverse effects on soils, including: minimizing Project footprint, maintaining slope gradients, employing erosion control measures such as matting, rip rap and hydro seeding, reclaiming the site after mine closure, and implementing spill response and clean-up plans. With mitigation measures in place, soil quality effects are expected to be negligible

16.6.2.3 Heritage Resources

Table 16.6-2 shows concerns were raised by UFN with respect to potential effects on culturally modified trees (CMTs) and other sites such as unmarked graves. There are CMTs within the mine site footprint; however, the modification dates are too recent to be protected under the *Heritage Conservation Act*. These sites were managed as non-protected CMTs and referred to as cultural heritage resources as per standard guidelines within the Vanderhoof Forest District. They have been fully documented, recorded, photographed, and where possible dated by dendrochronological (tree-ring) dating (increment core). Several are bark removal scars on lodgepole pine, and several are bent lodgepole pine trees inferred as either trail marker trees or territorial tree markers. Given the footprint of the mine, none can be preserved in place. **Section 8** provides additional detail.

During the archaeological fieldwork program, representatives from UFN provided assistance to support the fieldwork and assist in identification of any unmarked graves. At the time, no unmarked graves were found.

For both archaeological and historic sites, no residual effects are expected and cumulative effects may be both negative since sites may be affected resulting in a cumulative reduction in the finite

number of archaeological sites and positive since new sites may be identified, recorded, mitigated, and potentially protected.

16.6.2.4 Water Resources

A number of concerns were raised regarding water resources. This includes potential effects to water quantity in Tatelkuz Lake and potential changes in water drainage patterns, water flows, and volumes of water. Redirection of watercourses and waterbodies was also noted as a concern, as was degradation of water quality (although no specific waterbodies were identified at the time).

As noted, one of the concerns raised by UFN was the potential effects on water quantity in Tatelkuz Lake. Variations in Tatelkuz Lake levels caused by the Project are anticipated to fall within the range of natural and historic lake level fluctuations; therefore, Tatelkuz Lake will experience negligible effects. It is anticipated that water withdrawal from Tatelkuz Lake will not cause significant adverse effects on lake habitat or aquatic life.

UFN also noted concerns regarding effects to water quality, although specific waterbodies were not identified. The Project will not discharge from the tailings impoundment during the operations phase. An environmental control dam downstream of Davidson Creek will capture seepage from the main dam. A water storage reservoir is planned for downstream of the environmental control dam that will intercept any seepage that might pass below the environmental control dam. Davidson Creek water will be monitored downstream from the water supply reservoir and is forecast to meet protection of aquatic life guidelines or site-specific water quality objectives given that almost of the water will be that pumped from Tatelkuz Lake to maintain instream fish needs. At post closure the expectation is that discharge water from the TSF will meet aquatic life guidelines, or be treated.

During the post closure phase, when there will be discharge from the tailings impoundment, water is forecast to meet aquatic life guidelines or site-specific water quality objectives, before discharge, which are more stringent than drinking water guidelines. Monitoring of water quality in the TSF during the projected 18-year closure phase will be used as a check on this prediction and additional wetlands or other treatment implemented if guidelines or site-specific water quality objectives are not going to be met otherwise. Sediment control ponds will be developed during the construction phase to prevent sediment from entering Davidson Creek. At closure, a constructed wetland at the main tailings impoundment will trap suspended sediment to the concentrations applicable at that time (decades after mine closure). Any accidental spill will pass both the environmental control dam where dilution will occur, including an opportunity to pump the spill back to the tailings impoundment, and the water storage reservoir berm where further dilution will occur. There will be a second opportunity to pump any spill back to the tailings impoundment.

Tatelkuz Lake and other water resources will be monitored through the construction, operations, decommissioning/closure, and post-closure phases. The Project was designed to avoid negative effects on water quality in Tatelkuz Lake and other water bodies downstream of the Project area.

Mitigation measures to protect water quality include:

- Operate as a zero discharge facility during operations and closure;
- Project design that minimizes footprint;
- Monitor water on an ongoing basis throughout the life of the Project and post-closure.
- Collect all drainage from the mine by gravity into the Tailings Storage Facility (TSF) to simplify water management, spill control, and mine closure;
- Utilize sediment ponds to contain and treat site run-off and reduce concentration of suspended solids during the construction phase;
- Meet applicable provincial and federal standards for surface water and sediment quality downstream of the proposed mine site, to avoid effects on fish, furbearers, and animals that use those waters;
- Meet receiving environmental guidelines and site-specific water quality objectives for discharged water during post-closure;
- Construct wetlands and treat pit lake during post-closure; and
- Pump TSF seepage to the TSF or pit lake, and continue monitoring during post-closure.
- Implement erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, to protect erodible soils from entering waterbodies;
- Implement design and operational procedures to limit risks associated with malfunctions and accidents; and
- Implement EMPs addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; and wetlands management.

Section 12.2 presents additional mitigation measures and **Section 10** provides additional information on responses to accidents or malfunctions.

No residual effects are expected on surface water elevations in Tatelkuz Lake. However, there will be a not significant residual effect due to loss of fish habitat quality and quantity in the upper one metre of the littoral zone of Tatelkuz Lake. Higher temperatures are expected in Davidson Creek during construction and operations due to water being added from Tatelkuz Lake. Changes in flow will be mitigated. There may be water quality effects on fish and fish habitat, and some residual water quality effects may result from diversion of Lake 1682LNRS into Creek 705 watershed. No effects are expected on sediment quality since sediments would be contained on-site and seepage from TSF would be pumped back into TSF and polished in an installed wetland.

16.6.2.5 Human Health

One of the concerns raised by the UFN in the TK/TLU report includes the potential for chemical spills and/or leaching which would result in environmental damage.

The Project will implement an Emergency and Spill Preparedness and Response Plan. Effects due to a TSF dam failure or spills of hazardous materials are considered extremely rare and will be managed by design and operational standards (**Section 10**).

16.6.2.6 Family and Community Well-being

UFN expressed a number of concerns related to family and community well-being. In 2011, concerns were raised regarding the potential for effects to nearby elders' homesteads. The homesteads are not located in the vicinity of the Project and no effect will occur.

Another concern raised by UFN includes the potential for disruptions to family and community well-being. Although employment opportunities available to UFN residents may be beneficial due to a reduction in unemployment and higher incomes, the increased levels of disposable income could have some social consequences. Changes in financial circumstances can contribute to some negative social outcomes by providing a means to participate in alcohol, substance and gambling abuse with potential related adverse well-being effects. Mitigation measures to reduce these effects will include:

- Strictly enforced no drugs and no alcohol policy;
- Deposit workers' salaries directly to their bank accounts;
- Provide access to money management training;
- Facilitate communication between the operation workers and their families;
- Recreational facilities and activities for workers at the Project site;
- Offer cultural awareness training and harassment-free workplace to employees;
- Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate; and
- Offer counselling services to employees.

The Proponent is in discussions with the UFN about implementing a socioeconomic wellness monitoring program to address any changes in social conditions.

Due to the complexity of these social and economic interactions, it is difficult to predict whether Project effects will be positive, negative, or both. The presence of additional wage income could have both positive and negative effects on UFN people. Those working at the Project may have greater economic ability to engage in negative social behaviour. However, the availability of cash income may also facilitate enhancement to the quality of life (e.g., sports, hunting, fishing, skiing). It is expected that over the longer-term, communities adapt to higher incomes and

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disruptive spending tends to decline, while positive spending increases. In addition, increased income for Aboriginal workers may support traditional activities providing income to purchase better equipment (e.g., boats, ski-doo's) and make participation more accessible (e.g., purchase of fuel).

UFN raised concerns regarding the potential for a "boom and bust" economic cycle, typically characterized by an increase in employment and income and a subsequent drop in employment and income following mine closure. The Project will generate considerable economic activity (direct, indirect, and induced jobs and business activity); however, social problems may occur during both the boom and bust ends of this cycle, including effects on family dynamics and family finances due to possible loss of income at the end of the boom cycle. An adverse economic effect is predicted at closure, although some employment and procurement opportunities associated with long-term environmental engineering, monitoring, and management are expected. Skills gained at the mine will likely be transferable, enabling workers to apply them at other mines, similar resource developments or heavy industrial projects in the region.

UFN noted concerns regarding equitable distribution of employment within Aboriginal and non-Aboriginal communities. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent's approach to addressing interest in economic development. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

Table 16.6-2: Ulkatcho First Nation Interests

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Family and Community Well-being, Social	Potential effects to Elders living on homesteads near the Project site	Family and Community Well-being	Potential effects to Elders living on homesteads near the Project site	N/A	The homesteads are not located in the vicinity of the Project and no effect will occur.	Not expected	Not expected	N/A
	Potential negative effects on family dynamics (dysfunction) from increased access to disposable income	Family and Community Well-being	Potential for negative well-being effects such as increases in crime, alcohol/drug abuse, or family dysfunction.	C; O; CL	Strictly enforced no drugs and no alcohol policy. Deposit workers' salaries directly to their bank accounts. Provide access to money management training. Facilitate communication between the operation workers and their families. Offer recreational facilities and activities for workers at the Project site. Offer counselling services to employees as well as cultural awareness training and harassment-free workplace environment. Work with local agencies to assist in monitoring community well-being and to take corrective actions where appropriate Offer counselling services to its employees. The Proponent is in discussions with the UFN about a socioeconomic wellness monitoring program to address any changes in social conditions.	Not expected	Not expected	Section 7.2 Social Effects Assessment Section 7.2.5 Family and Community Well-being

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Interest in opportunities for employment	Regional and local employment and businesses	Employment may improve the quality of life for community members.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses
	Interest in opportunities for businesses and contracting	Regional and local employment and businesses	Business opportunities could increase income.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	12.2 Environmental Management Plans (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional And Local Employment And Businesses

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Effects	Increased opportunities for training	Regional and local employment and businesses	Opportunities for education may improve.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	12.2 Environmental Management Plans (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional And Local Employment And Businesses
Soil	Potential increased soil erosion, soil stability, or contamination of soils.	Surficial Geology and Soil Cover; Physiography and Topography; Soil Quality	Soil erosion and contamination.	C; O; CL; PC	Implementation of Environmental Management Plans and mitigation, including: Erosion control measures (erosion control matting, rip rap, and hydro seeding); Footprint minimization; Slope gradient maintenance; Site reclamation following mine closure detailed in. Reclamation and Closure Plan; Geotechnical assessments to be completed as needed	Not expected	Not expected	12.2 Environmental Management Plans (Construction Management, Erosion and Sediment Control, Operations Management, Hazardous Materials Management, Emergency and Spill Preparedness and Response, Landscape, Soils and Vegetation Management and Restoration, and Closure Plans) Section 5.4.2 Physiography and Topography; Section 5.4.3 Surficial Geography and Soil Cover; Section 5.4.4 Soil Quality

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Heritage Resources	Interest in protecting CMTs and unmarked graves	Historic Heritage Sites; Archaeological sites; Current Use of Land and Resources for Traditional Purposes	Potential loss of or damage to CMTs and unmarked gravesites from land alteration and grading of mine site area.	C; O	Implementation of Environmental Management Plans and mitigation, including: Design changes to avoid or minimize effects where possible; CMTs fully documented regardless of the age of the modification scar (including CMTs not protected under the <i>Heritage Conservation Act</i>); Sites were documented, recorded, photographed and where possible dated by dendrochronological dating (increment core). At the time, no unmarked graves have been found.	Not expected	Negative/Positive	N/A

Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Concerns raised regarding changes in drainage patterns, flows and volumes of water, redirection of watercourses and waterbodies, degradation of water quality	Surface Water Quality; Sediment Quality; Surface Water Flows	Potential change in water and sediment quality; Potential change in surface water flow	C; O; CL, PC	<p>Mine will operate as a zero discharge facility; Surface water and sediment quality will meet applicable provincial and federal standards downstream;</p> <p>Monitor water on an ongoing basis throughout the life of the Project and post-closure;</p> <p>Implement erosion and sediment control measures, including erosion control matting, rip rap, and hydro seeding, to protect erodible soils from entering waterbodies;</p> <p>Implement design and operational procedures to limit risks associated with malfunctions and accidents;</p> <p>No discharge from the tailings impoundment during operations;</p> <p>Seepage from the main dam captured by an environmental control dam downstream of Davidson Creek;</p> <p>Water storage reservoir planned for downstream of the environmental control dam to further intercept any seepage;</p> <p>On-site Project facilities exist entirely in the Davidson Creek and Creek 661 watersheds;</p> <p>Runoff and toe discharge from the east waste rock dump will contribute to surface flows in the upper extents of the Creek 661 Watershed after being directed through a sediment control pond;</p> <p>At post closure the TSF will discharge via a spillway, discharge channel, and plunge pool to Davidson Creek;</p> <p>Adaptive management.</p> <p>Implement EMPs addressing water quality and liquid discharges management and sediment and erosion control.</p>	Not expected	Not expected	<p>12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan)</p> <p>Section 5.3.3 Surface Water Quality</p> <p>Section 5.3.4 Sediment Quality</p> <p>Section 5.3.1 Surface Water Flow</p>

Interest	Issue/Concern/Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Potential changes to water quantity in Tatelkuz Lake	Surface Water Flow	Proposed mining facilities (TSF, open pit and water management facilities) and related activities (water withdrawal and discharge) have the potential to affect natural streams, drainage areas, annual flows, seasonal distribution of flow, high and low flows and lake levels within Tatelkuz Lake.	C; O; CL; PC	Variations in Tatelkuz Lake levels caused by the Project are anticipated to fall within the range of natural and historic lake level fluctuations; Utilize water within the Project area to the maximum practicable extent by collecting and managing site runoff from disturbed areas, maximizing recycle of process water, and storing surplus water within the TSF; On-site Project facilities exist entirely in the Davidson Creek and Creek 661 watersheds; Runoff and toe discharge from the east waste rock dump will contribute to surface flows in the upper extents of the Creek 661 Watershed after being directed through a sediment control pond; At post closure the TSF will discharge via a spillway, discharge channel, and plunge pool to Davidson Creek; Monitor surface quantity; Adaptive management. Implement EMPs addressing erosion and sediment control, water quality and liquid discharges management, and mine water management.	Not expected	Not expected	Section 12.2 Environmental Management Plans (Erosion and Sediment Control Plan, Aquatic Resources Management Plan, Water Quality and Liquid Discharges Management Plan, (Mine Water Management Plan) Section 5.3.2 Surface Water Flow

Human Health	Concerns were raised regarding potential for chemical spills or leaching and associated environmental damage	Human Health	Potential TSF dam failure or spills of hazardous materials	C; O; CL, PC	<p>The Project will implement an Emergency and Spill Preparedness and Response Plan. Effects due to a TSF dam failure or spills of hazardous materials are considered extremely rare and will be managed by design and operational standards.</p> <p>The mine site will aim to operate as a zero discharge facility.</p> <p>Surface water and sediment quality will meet applicable provincial and federal standards downstream of the mine site to avoid effects on humans, fish, furbearers, or animals that use those waters.</p> <p>Water will be monitored on an ongoing basis throughout the life of the Project and post-closure.</p> <p>No discharge from the tailings impoundment during operations; Seepage from the main dam captured by an environmental control dam downstream of Davidson Creek; Water storage reservoir planned for downstream of the environmental control dam to further intercept any seepage; Limit sediment export during all phases of construction, operations and closure; Adaptive Management.</p> <p>The Proponent will implement a Country Foods Monitoring Plan. The monitoring plan is proposed for the Project's operation and post-closure management. Monitoring will determine metals concentrations in specific indicator plants, small mammals, large mammals, and fish. Sampling will be undertaken during the beginning of Year -2 of mine construction (no emissions but dust would be monitored), and then at operations Years 3, 8, and 15, and Year 24 during the closure phase. This proposed schedule reflects the belief that there will be minimal change if any to baseline levels. If testing determines that levels are changing in a</p>	Not expected	Not expected	<p>Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management, and Closure Management Plan)</p> <p>Section 5.3.3 Surface Water Quality</p> <p>Section 5.3.4 Sediment Quality</p> <p>Section 10 Accidents or Malfunctions</p> <p>Appendix 9.2.2B Country Foods Monitoring Plan</p>
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Interest	Issue/Concern/ Comment	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
					material way, further consultation and planning to address necessary mitigation measures would be undertaken with regulators and First Nations.			

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.7 Nazko First Nation

The Proponent initiated discussions with the Nazko First Nation (NFN) in November 2011. Since that time, the Proponent has continued to meet with NFN leadership to discuss interests and concerns related to the Project (**Table 16.7-1**).

Approaches used to gather information on NFN interests include meetings, site tours, and written communication. NFN and The Proponent have had some discussions regarding NFN participation in aspects of the EA. These included discussions on consultation and socioeconomics. In addition, NFN has been forthcoming about interests in opportunities for employment and training. The Proponent has been responsive to these interests and looks forward to additional discussions with NFN about their interests.

Table 16.7-1: Summary of Nazko First Nation Interests

Interest	Issue	Manner Raised	Date
Water Resources	Concern about flow of water from Project site to Euchiniko River and Nazko territory	Meeting	13 Nov 2012 9 July 2013
Human Health	Concern about arsenic levels in Nazko territory that are elevated due to previous water treatment deficiencies	Meeting	26 Sep 2012
Economic Development	Interest expressed in employment and education opportunities	Meetings	Multiple
Economic Development	Interest expressed in business opportunities and contracts including joint ventures	Meetings	Multiple

16.7.1 Nazko First Nation Interests Assessment

The interests of the NFN and how the Proponent addressed them in the EA and Application are presented in **Table 16.7-2**.

16.7.2 Summary of Identified Aboriginal Interests

16.7.2.1 Water Resources

The NFN expressed concerns about potential effects from water flowing from the Project into NFN Traditional Territory. The Project is designed to avoid any effect on the Nechako watershed and surrounding waterbodies such as the Euchiniko River. No effects from water flow are expected to occur in NFN Traditional Territory.

16.7.2.2 Human Health

Concerns were raised about the potential for the Project to exacerbate arsenic levels in waterbodies, although specific waterbodies were not identified. The Proponent provided NFN with information on the concentration of arsenic in the water downstream of the Project. The data were collected just downstream of Tatelkuz Lake. The arsenic levels were below the BC drinking water

guidelines and showed a stable trend. The NFN traditional territory is not located downstream the mine site and is not anticipated to be affected by mine activities. No residual or cumulative effects are expected.

16.7.2.3 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.



Table 16.7-2: Nazko First Nation Interests

Issue	Interest	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Water Resources	Concern about flow of water from Project site to Euchinko River and Nazko territory	Surface water flow	No effects on water quality are expected from the Project on any watersheds within Nazko territory.	C; O; CL, PC	No effects on water quality are expected from the Project on any watersheds within Nazko territory. The mine site will aim to operate as a zero discharge facility during operations and closure. On-site Project facilities exist entirely in the Davidson Creek and Creek 661 watersheds. The Proponent will implement environmental management plans, addressing mine water management; water quality and liquid discharges management; transportation and access management; emergency and spill preparedness and response; air quality and emissions management; landscape, soils, and vegetation management and restoration; erosion and sediment control; aquatic resources management; and wetlands management.	No effects are expected	No effects are expected	Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, Cyanide Management Plan, and Closure Management Plan) Section 5.3.1 Surface Water Flow



Issue	Interest	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Human Health	Exacerbation of arsenic in the water (no specific waterbodies identified)	Surface Water Quality; Sediment Quality	No effects on arsenic levels are anticipated in the Nazko Territory.	C; O; CL; PC	<p>The NFN traditional territory is not located downstream the mine site and no effects on arsenic levels are expected in the Nazko territory. Results from studies related to concentration of arsenic in the water downstream of the Project were provided to Aboriginal groups. Background arsenic levels were low. The mine site is designed to operate as a zero discharge facility and thus not exacerbate natural arsenic levels.</p> <p>During construction, sediment ponds will be used to contain and treat site run-off to reduce concentration of suspended solids.</p> <p>Water will be monitored on an ongoing basis throughout the life of the Project and post-closure. All water leaving the mine site will meet applicable regulatory requirements.</p>	No effects are expected	No effects are expected	<p>Section 12.2 Environmental Management Plans (Mine Water Management Plan, Aquatic Resources Management Plan, Mine Waste Management Plan, Water Quality and Liquid Discharges Management Plan, Hazardous Materials Management Plan, Emergency and Spill Preparedness Plan, and Closure Management Plan)</p> <p>Section 5.3.3 Surface Water Quality</p> <p>Section 5.3.4 Sediment Quality</p> <p>Section 9.2 Health Effects Assessment</p> <p>Section 10 Accidents or Malfunctions</p>
Economic Development	Interest expressed in employment and education opportunities	Regional and local employment and businesses	Employment may improve the quality of life for community members.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	<p>Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment)</p> <p>Section 6.2 Economic Effects Assessment</p> <p>Section 6.2.5 Regional and Local Employment and Businesses</p>



Issue	Interest	VC	Potential Environmental Effect	Project Phase	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Interest expressed in business opportunities and contracts including joint ventures	Regional and local employment and businesses	Business opportunities could increase income.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.8 Skin Tyee First Nation

A range of activities has been carried out to understand STN interests. The Proponent initiated discussions with the STN in June 2011. Since that time, the Proponent has continued to meet with STN representatives to gain insight into the interests and concerns of the STN.

The Proponent has utilized a number of approaches to gather information about the interests of the STN. These include in-person meetings, a focus group, as well as extensive written communication and information sharing. On 22 August 2013 the Proponent and the STN signed a Cooperation Agreement, which outlines how the two parties will cooperate on matters such as consultation protocols, the EA, TK/TLU studies, and meetings. As part of the Agreement, the Proponent and the STN hold regular meetings to discuss matters related to the Project, including the interests of the STN. In addition, the Agreement provides for annual community presentations that will provide STN members and the Proponent with an opportunity to share information about the Project as well as any related interests or concerns. **Table 16.8-1** summarizes STN interests identified to date.

Table 16.8-1: Summary of Skin Tyee First Nation Interests

Interest	Issue	Manner Raised	Date
Economic Development	Training and employment	Meetings	03 Sep 2012 25 Sep 2012
Economic Development	Business and contracting opportunities	Meeting	25 Sep 2012

16.8.1 Skin Tyee First Nation Interests Assessment

The interests of the SFN and how the Proponent addressed them in the EA are presented in **Table 16.8-2**.

16.8.2 Summary of Identified Aboriginal Interests

16.8.2.1 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

Table 16.8-2: Skin Tyee First Nation Interests

Interest	Issue	VC	Potential Environmental Effect	Project Phase C – Construction; O – Operations; D/C – Decommissioning/Closure; PC – Post-closure	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Interest in training and employment	Regional and local employment and business	Employment may improve the quality of life for community members.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses
Economic Development	Interest in business and contracting opportunities	Regional and local employment and business	Business opportunities could increase income.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.9 Tsilhqot'in National Government

Discussions with the TNG began in June 2011. The Proponent has provided the TNG with information about the Project as well as any updates through meetings and written communications. Consultation activities are described in **Section 17**. TNG representatives consider the Project to be outside of TNG's Interests Area, but would nonetheless like community members to be considered for employment and training opportunities (**Table 16.9-1**).

Table 16.9-1: Summary of Tsilhqot'in First Nation Interests

Interest	Issue	Manner Raised	Date
Economic Development	Interest expressed in training and employment	E-mail Meeting	05 Dec 2012 22 Feb 2013

16.9.1 Summary of Identified Aboriginal Interests

16.9.1.1 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent's approach to addressing this interest. **Section 6.2.3** also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

16.9.2 Tsilhqot'in National Government Interests Assessment

The interests of the TNG and how the Proponent addressed them in the EA are presented in **Table 16.9-2**.



Table 16.9-2: Tsilhqot'in National Government Interests

Interest	Issue	VC	Potential Environmental Effect	Project Phase C – Construction; O – Operations; D/C – Decommissioning/Closure; PC – Post-closure	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Interest in training and employment	Regional and local employment and businesses	Employment may improve the quality of life for community members.	C; O; CL	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plans (Recruitment, Training, and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses

Note: N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure



16.10 Métis Nation BC

The Canadian Environmental Assessment Agency has advised the Proponent that the Project has the potential to affect Métis interests. To assist in the determination of those interests, the Proponent has provided Project information and updates to representatives of the Métis Nation BC (MNBC) on the Project design and the EA process. The Proponent is receptive to understanding the interests and concerns of Métis citizens as they relate to the Project.

The Proponent initiated discussions with the MNBC in October 2012. Since that time, the Proponent has met with MNBC representatives to provide Project information and gain insight into the interests and concerns of the MNBC and continued to share information through emails. Consultation efforts are described in **Section 17**. To date, interests have focused on employment and training for Métis citizens. The Proponent will continue to consult with the MNBC on developing training and employment opportunities for local Métis citizens and will incorporate them into the Recruitment, Training, and Employment Plan.

Table 16.10-1 summarizes MNBC interests identified to date.

Table 16.10-1: Summary of Métis Nation BC Interests

Interest	Issue	Manner Raised	Date
Economic Development	Interest expressed in training and Employment	Meeting	31 Oct 2012
Economic Development	Interest expressed in capacity building (including training) for the Métis in the Vanderhoof and Fort St. James areas	Meeting	30 Jan 2013

16.10.1 Summary of Identified Aboriginal Interests

16.10.1.1 Economic Development

The Project will generate considerable economic activity including direct, indirect, and induced jobs and business activity. The Proponent is committed to developing and hiring Aboriginal workers.

Refer to **Section 16.1.3** for the Proponent’s approach to addressing this interest. Section 6.2.3 also provides further information on potential effects on employment and businesses and on management measures proposed to enhance those effects. Effects are expected to be positive.

16.10.2 Métis Nation BC Interests Assessment

The interests of the MNBC and how the Proponent addressed them in the EA are presented in **Table 16.10-2**.



Table 16.10-2: Métis Nation BC Interests

Interest	Issue	VC	Potential Environmental Effect	Project Phase C – Construction; O – Operations; D/C – Decommissioning/Closure; PC – Post-closure	Mitigation	Potential Residual Effect	Potential Cumulative Effect	EA Section Full Response
Economic Development	Interest in training and employment	Regional and local employment and businesses	Employment may improve the quality of life for community members.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plan (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment and Businesses
Economic Development	Interest expressed in capacity building (including training) for the Métis in the Vanderhoof and Fort St. James areas.	Regional and local employment and businesses	Positive effect on capacity development in some communities.	C; O	No mitigation needed, as effects will be positive.	N/A	N/A	Section 12.2 Environmental Management Plan (Recruitment, Training and Employment) Section 6.2 Economic Effects Assessment Section 6.2.5 Regional and Local Employment Businesses

Note: VC = Valued Component; EA = Environmental Assessment; N/A = Not Applicable; C = Construction; O = Operations; CL = Closure; PC = Post-closure

16.11 Project Design Changes to Mitigate Effects on Aboriginal Interests

Input from Aboriginal groups has guided the design of the Project. The Proponent has made substantive changes to the Project to minimize potential environmental effects and effects on Aboriginal interests including:

- Designing the Project, including designing and moving on-site and off-site infrastructure, to entirely avoid the Blackwater River drainage. The Blackwater River is a tributary of the Fraser River and is of importance to Aboriginal groups in the area. Historically, the Carrier and Tshilqot'in peoples used the area to transport goods for trade along the historic Grease Trails. The Blackwater River is designated as a heritage river by the Government of BC.
- Designing the Project and its infrastructure to avoid the Ungulate Winter Range (UWR) by modifying the tailings storage facility to be located completely outside of the UWR, this is the winter habitat for the Tweedsmuir-Entiako caribou herd. In addition, the use of the existing exploration road, which passes through the UWR, will be discontinued and new access to the mine site is proposed. Access to the mine site will not be from the west but from the north starting at KM 124.5 of the Kluskus FSR. LDN, UFN and other First Nations expressed concern about the potential for the Project to affect caribou. Based on discussions, the Proponent designed the Project to avoid the UWR.
- Redesigning the proposed transmission line to avoid sensitive wildlife habitat near the Stellako River. Input from the StFN and other non-Aboriginal groups, was a key factor in the redesigned route.
- Ensuring the water pipeline avoids historic and culturally sensitive areas near Tatelkuz Lake identified through Traditional Knowledge and Land Use studies.
- Designing the Project to avoid the lower reaches of Davidson Creek. Based on research and input from Aboriginal groups, the Proponent understood that fisheries values were higher in the lower reaches of Davidson Creek where kokanee salmon spawning occurs.
- Designing the Project to avoid historic trails and recreation areas. Existing historic areas were identified in proximity to the Project, including the Alexander Mackenzie Heritage Trail, Messue Wagon Road, and Messue Horse Trail/Kluskus Bypass. Aboriginal groups in the area noted the trails are of historic importance and are still used by members today (particularly LDN people).