

Appendix 3-F

Aboriginal Issues Tracking Tables

HARPER CREEK PROJECT

**Application for an Environmental Assessment Certificate /
Environmental Impact Statement**

APPENDIX 3-F. ABORIGINAL ISSUES TRACKING TABLES

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Aboriginal Rights and Interests	
Effects on Aboriginal rights and mitigation strategies	In accordance with Part C, Section 12 of the Application Information Requirements (AIR) (October 2011) the Application will include an assessment of the potential effects of the Project on Aboriginal rights and interests, and will identify measures to mitigate potential effects.
Barriere and North Thompson Rivers are very important fisheries.	Because of the recognized importance of these waterbodies and fisheries to the Simpcw First Nation (SFN), the Barriere and North Thompson rivers are included within the surface water quality (Chapter 13) , fish and aquatic resources (Chapter 14), and human health (Chapter 21) effects assessment study boundaries. Effects on SFNs current use of fishing resources are further assessed in Chapter 22 (Current use of Lands and Resources), and impacts on SFNs aboriginal rights to fish are evaluated in Chapter 23 (Assessment of Aboriginal Rights and Interests).
Access and Transportation	
Are upgrades going to be made to the Vavenby Bridge?	Proposed access to the Project during operations will be from Highway #5 via the Vavenby Bridge Road. During construction, oversized loads will use an alternate access route that will cross the North Thompson River at the Birch Island Lost Creek Road (BILCR) bridge, which has been design for heavier loads. There are no proposed upgrades to the Vavenby bridge.
Effects from road and mine construction, and strategies to manage or mitigate impacts	Section 5.0 of the AIR includes a requirement within each subsection, that the Application consider the potential interaction between each proposed Valued Component and Project infrastructure and activities. As such, an assessment of environmental impacts from road and mining construction will be considered throughout the Application. Most of the required access (Vavenby Forest Service Road and Saskum Plateau Forest Service Road) to the Project already exists. Minor upgrades will be required to a section of the road. Potential effects of the road upgrade will be assessed in the Application.
Air Quality	
Effects of airborne dust	Potential effects of the Project on dustfall and changes in air quality have been modelled in accordance with the air quality modelling plan approved by the Ministry of Environment. Modelling results and potential effects will be provided in the Application. An Air Quality Management Plan, including measures to mitigate fugitive dust, will also be included in the Application.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Effects from dust from the waste rock piles on North Thompson Valley air quality	Potential effects of the Project on dustfall and changes in air quality have been modelled in accordance with the air quality modelling plan approved by the Ministry of Environment. Modelling results and potential effects will be provided in the Application. An Air Quality Management Plan, including measures to mitigate fugitive dust from all sources, will also be included in the Application. Residual effects on air quality as a result of the Project are predicted to be localized and not significant.
Effects of contaminated air and water on the environment in the vicinity of the Project	<p>In accordance with section 5.2 of the AIR, potential effects of the Project on air quality have been assessed and are expected to be localized. No significant residual effects on air quality are predicted due to the implementation of fugitive dust control measures and installation of pollution control works (e.g., baghouse) on Project components (e.g., primary crusher).</p> <p>Effects on water quality as a result of the Project have been extensively addressed by re-designing the Project to avoid discharge to Baker Creek, and by optimizing the Project footprint to consolidate Project infrastructure (e.g., relocating PAG Low Grade Ore stockpiles). Additionally, a Sediment and Erosion Control Plan, Site Water Management Plan, Selenium Management Plan and a Metal Leaching/ Acid Rock Drainage Management Plan will further mitigate risks to water quality. The effects of the Project on surface water quality will be assessed in the Application.</p>
Fish and Aquatic Resources	
Monitoring effects on aquatic invertebrates	Baseline information for aquatic (benthic) invertebrates has been collected in the regional area between 2011 and 2014. Monitoring of aquatic invertebrates will continue throughout the life of the Project and will be informed by the Fish and Aquatic Effects Monitoring Plan (FAEMP), which will be provided in the Application. The intent of the FAEMP is to ensure the aquatic receiving environment will be protected from potential adverse effects due to Project activities.
Effect of temperature and reduced flows on Bull trout	A stream habitat flow assessment has been undertaken which includes the collection of instream flow, water temperature, and channel geomorphology information to assess potential impacts resulting from reductions in water quantity on the aquatic environment, including fish and fish habitat. The stream habitat assessment has followed the procedures outlined in "Reconnaissance (1:20,000) Fish and Fish Habitat Inventories" (RIC 2001a) and "Assessment Methods for Aquatic Habitat and Instream Flow Characteristics in Support of Applications to Dam, Divert, or Extract Water from Streams in British Columbia" (Lewis et al. 2004).

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Habitat compensation for habitat lost due to the Project and proposed off-channel rearing habitats	Direct effects on fish and fish habitat as a result of reduced flows are anticipated for T Creek, P Creek, and the upper part of Harper Creek. A Fish Habitat Offsetting Plan will be developed to offset these effects, and will be included in the Application. The development of the plan has been informed by Fisheries and Oceans "Fisheries Protection Policy Statement (October 2013). YMI will involve, and consult with, SFN, and other Aboriginal groups regarding the offsetting plan.
How well do you think fish will adjust?	The Application will include a Fish and Aquatic Effects Monitoring and Management Plan (FAEMP). The intent of the FAEMP is to ensure the aquatic receiving environment will be protected from potential adverse effects due to Project activities.
Will adfluvial fish be affected when flow decreases?	The Application will include a discussion of changes in water quantity and potential effects to adfluvial fish populations and habitat in the Fish and Aquatic Resources effects assessment.
Has interaction been observed between the migratory bull trout population of North Barrière Lake and the resident population in upper Harper Creek?	The Application will include a discussion of the interaction between resident (Harper Creek) and adfluvial (North Barrière Lake) Bull Trout. Potential effects on fish and fish habitat in Harper Creek and downstream to Barrière Lake have been evaluated using baseline data collection, watershed and instream flow modelling and toxicological effects assessment. The results of this assessment will be presented in the Application.
How long have the falls been monitored? How long have you been studying fish in Harper Creek?	Fish in Harper Creek have been monitored for five years in total. Baseline studies pertaining to hydrology, fish and fish habitat were conducted in the Project area in 2008, 2011, 2012, 2013, and 2014.
Effects on salmon fisheries	In accordance with section 5.5.11 of the AIR, potential effects on fish species are assessed in the Fish and Aquatic Resources chapter of the Application. A Fish Habitat Offsetting Plan has been developed to mitigate Project effects on flows and fish habitat. YMI will consult with SFN and other Aboriginal groups regarding the offsetting plan.
Sampling approach to understanding bull trout	Baseline studies pertaining to fish and fish habitat (including Bull Trout populations and habitat use) were conducted in the Project area in 2008, 2011, 2012, 2013, and 2014. The Application includes a cumulative baseline report for fish and fish habitat studies in the Project area, as well as a description of the sampling methodologies. Applicable BC Ministry of Forests, Lands, and Natural Resource Operations sampling standards were followed for fish studies.
Effects of lethal sampling on fish populations	Lethal fish sampling has been conducted to document baseline tissue metals concentrations following the Metal Mining Effluent Regulations (MMER) procedures. Lethal fish sampling is commonly used to collect detailed biological data and tissue metals data for environmental monitoring, and regulated by the BC Ministry of Environment through fish collection permits. Fish sample sizes used for lethal sampling are usually small (n=10) per waterbody, and usually include species that are abundant.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Archaeology and Heritage	
Impacts on archaeological sites	An Archaeological Impact Assessment (AIA) of the proposed mine site has been undertaken pursuant to Section 14 of the <i>Heritage Conservation Act</i> . An Archaeological Overview Assessment (AOA) of the access roads and transmission lines has also been completed. The AIA (November 2012) and AOA (May 2014) reports were provided to the SFN and other Aboriginal groups for review and comment. There are 2 recorded archaeological sites within the Local Study Area (LSA). These two sites are rock cairns of unknown function as discussed in the AIA Report for the Project. Mitigation measures for the rock cairns will be developed in consultation with SFN, other Aboriginal group, and the Archaeology Branch.
Mitigation measures for two rock cairns in the Project area	The AIA details the investigations of the two rock cairns that have been undertaken to-date. Once the function and age of the cairns is determined, mitigation measures for their management will be developed in consultation with SFN, the Archaeology Branch, and other Aboriginal groups.
Involvement of Elders in archaeology study	The AIA (November 2012) and AOA (May 2014) reports were provided to the SFN for review and comment. Members of both SFN and ALIB were involved in the archaeology studies conducted on the mine site footprint.
Closure and Reclamation	
List of landscape features and environmental conditions that cannot be rehabilitated or mitigated and compensation for these impacts.	One of the requirements of the Health and Safety, Reclamation Code for Mines in BC (2008) is that the mine plan and reclamation program be designed to protect the land and watercourses. The Code and <i>Mines Act</i> (2008) do not provide for compensation for areas that cannot be rehabilitated.
Long-term reclamation of mine site area	The Application will include a conceptual closure and reclamation plan, which is required by the BC <i>Mines Act</i> (1996) and Health and Safety, Reclamation Code for Mines in BC (2008). End land use and reclamation objectives have been defined in accordance with the Code. A final closure and reclamation plan will be developed at the end of mining. Ongoing monitoring to ensure reclamation objectives are met will be conducted during closure and post closure.
Consultation	
Revenue sharing	YMI is interested in engaging with local First Nations on employment and training opportunities associated with the construction and operation of the Project. The province has a mandate to negotiate an Economic and Community Development Agreements (ECDA) with local First Nations to share a percentage of provincial mineral tax revenues. Negotiations were started in 2012 with SFN, ALIB, NIB and LSIB. As of May 2014, the Province has concluded 14 Economic and Community Development Agreements (ECDA) with First Nations to share a percentage of provincial mineral tax revenues.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Capacity funding to participate in the EA process	Capacity funding for SFN participation in the EA process was provided by BC EAO and offered by YMI. YMI has involved and provided capacity funding to the SFN for the involvement in baseline studies, review of key EA documents (including the AIR, the original Application, the FN Consultation Summary and Plan, Working Tables, and the AOA). YMI is currently in discussion with SFN regarding capacity funding to participate in the review stage of the Application and has developed a Work Program to seek SFN participation.
Concerns about consultation and long-term agreements	YMI signed a Negotiation Agreement and Letter of Engagement with SFN with a General Services Agreement related to SFN and ALIB involvement in baseline studies in June 2011.
Cumulative Effects	
Cumulative effects of blasting	Blasting is considered in the air quality and noise effects assessments of the Application. Residual effects on air quality and noise as a result of blasting are predicted to be localized and not significant. Potential effects on wildlife as a result of blasting are also considered.
Cumulative effects	Sections 4.6 and 9 of the AIR require the Application to assess the potential environmental, economic, health, social and heritage cumulative effects of the Project. This assessment will be based on federal and provincial guidance documents. The approach to assessing cumulative effects follows the same steps as the project-specific effects assessment and begins by carrying forward the residual effects of the Project-specific effects assessment. The Application will identify past, present and future projects and activities considered to have the potential to interact with the residual effects of the Project.
Environmental Management Plans (EMPs)	
Need for comprehensive mitigation plans	Section 10.0 of the AIR proposes a list of EMPs to be included in the Application. The EMPs will detail the environmental practices and procedures to be applied, as appropriate, during the construction, operations, maintenance, and closure of the Project, and where relevant, decommissioning. The EMPs will help mitigate potential Project effects.
EA Process	
Concern about the EA process	The EA process is informed by the provincial and federal EA acts and the BC Environmental Assessment Office (EAO) and the Canadian Environmental Assessment Agency (CEA Agency) are responsible for managing the EA process. Concerns related to the process should be raised with the BC EAO and CEA Agency.

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SFN Issue	YMI Response
Hydrogeology	
Subsurface aquifers in the vicinity of the tailings pond and open pit may allow water from the tailings pond or open pit to enter underground aquifers or groundwater	<p>The BC Water Resources Atlas (http://www.env.gov.bc.ca/wsd/data_searches/wrbc/) Aquifer Database identifies the presence of aquifers along the North Thompson River Valley. Similar fluvial or glaciofluvial aquifers are expected to be present in the shallow subsurface along the Barrière River and Harper Creek valley bottoms.</p> <p>Hydrogeological site investigations have been conducted in the area of the TMF, open pit, and in other areas throughout the Project site. No subsurface aquifers occur in the tailings management area and open pit. Implementation of a Site Water Management Plan and a Groundwater Management Plan will mitigate any potential effects of seepage from the TMF and open pit. Partially lined water management ponds have been sited at the toe of the TMF dam and non-PAG waste rock stockpile to intercept and collect seepage.</p>
Mine water source and amount of water required for mine operations	<p>The Site Water Management plan for the Project will involve collecting and managing site runoff from disturbed areas and maximizing the recycle of process water. Surplus water will be stored on site within the TMF and used as process water through the first 24 years of Operations. Process water for the final four years of Operations will primarily be derived from the open pit. The process water supply sources for the Project are as follows:</p> <ul style="list-style-type: none"> • precipitation runoff from the Project Site facilities; • water recycle from the TMF supernatant pond (Years 1 to 23) and the open pit (Years 24 to 28); and • groundwater from open pit dewatering.
Water in the tailings pond may seep into nearby waterways	<p>The estimated particle size distribution, consolidation characteristics, and geochemical characteristics of the bulk tailings indicate that the tailings will be of suitable quality to be used as an upstream low permeability zone during progressive dam raises. Consequently, seepage from the TMF will be minimized by developing tailings beaches along the embankments, thereby producing an extensive low permeability zone that facilitates seepage control. The TMF seepage collection pond will collect seepage and sediment-laden runoff, which will be pumped to the TMF for storage and recycling.</p>
Hydrology	
What watersheds are potentially impacted by the Project?	<p>The majority of the mine site catchment area is in the Harper Creek watershed; the remainder overlaps small portions of the Baker Creek and Jones Creek watersheds. Two sub-watersheds of Harper Creek (P Creek and T Creek) lie within the Project Site. Potential effects of the Project on these watersheds will be assessed in the Application in the Hydrology chapter.</p>

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SFN Issue	YMI Response
Potential effects on downstream water quantity and quality	The effects assessment for surface water quality is focused on the Project Site and infrastructure and surrounding area within which there is a reasonable potential for immediate direct and indirect effects on surface water due to an interaction with a Project component(s) or activities. The Local Study Area proposed for the surface water quality and quantity assessment includes the Harper Creek watershed (including P and T creeks) to the confluence with the Barrière River, and Baker Creek and Jones Creek watersheds at their confluence with the North Thompson River. Potential effects of the Project on water quality and quantity will be modeled and assessed in the Application.
Water from the tailings pond or open pit may enter and distribute within the North Thompson Valley watershed	<p>The estimated particle size distribution, consolidation characteristics, and geochemical characteristics of the bulk tailings indicate that the tailings will be of suitable quality to be used as an upstream low permeability zone during progressive dam raises. Consequently, seepage from the TMF will be minimized by developing tailings beaches along the embankments, thereby producing an extensive low permeability zone that facilitates seepage control. The TMF seepage collection pond will collect seepage and sediment-laden runoff, which will be pumped to the TMF for storage and recycling.</p> <p>The dewatering system for the open pit will pump all seepage and precipitation inflows out of the pit from suitably located pit sumps and direct it to the TMF. The system will keep the pit bottom dry during normal operating conditions.</p>
Impacts on streams flowing into Adams Lake and Chu Chua Creek	The Project Site is not located in the Adams Lake and Chu Chua Creek watersheds. There will be no Project impacts on streams flowing into Adams Lake and Chu Chua Creek.
How are downstream effects on North Thompson River being assessed and monitored?	Hydrological and water quality modelling is being conducted at study nodes on Harper Creek, T Creek, P Creek, Baker Creek, Jones Creek, and the North Thompson River. Baseline water quality is monitored at each of these same nodes while water quantity is monitored in combination with WSC stations. Baseline information for water quality, sediment quality, periphyton, benthic invertebrates, and fish have been collected at sites on the North Thompson River upstream and downstream of anticipated Project activities since 2007. This will allow potential spatial-temporal effects to be evaluated using a before-after/control-impact study design. This will form the basis of the Fish and Aquatic Effects Monitoring and Management Plan.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
<p>How does Yellowhead plan to compensate for wet/dry variability? How do you know to take or leave the right amount of water?</p>	<p>The annual site water balance presents a surplus. As a result, non-contact water diversions are part of the design of the Project. Water volumes within the TMF pond are measured throughout the year. Should the water volume decrease beyond an established level, less water could be diverted from the non-contact water diversions, thereby re-establishing the TMF pond volume.</p> <p>Hydrological modelling predicts future hydrological conditions by regression analysis of long term regional WSC stations calibrated to site data including the magnitude and return period for extreme wet and dry weather. These parameters are used in the design basis for the TMF embankment, ditches, diversions, culverts, and water retaining structures.</p> <p>To evaluate the variability in water usage due to wet/dry climate, sensitivity scenarios were used for two climate estimates (i.e., 50-year dry and 50-year wet streamflows).</p>
Land Use	
<p>Effects of a population increase on hunting and fishing</p>	<p>The Application will identify the rationale for identifying past and present projects, and reasonably foreseeable future developments to be included in the cumulative effects assessment and will include a map of the cumulative effects assessment area for land use. Hunting and fishing activities are discussed in the Land and Resource Use chapter of the Application.</p>
<p>Effects on Dunn Peak Protected Area</p>	<p>In accordance with section 6.2.3 of the AIR, potential effects of the Project from strategic viewpoints are assessed in the Visual Quality chapter in the Application (e.g., North Thompson River valley near Vavenby and surrounding recreational areas such as Dunn Peak). Dunn Peak is not predicted to be affected by the Project.</p>
Effects of the Environment on the Project	
<p>Effects of climate change and extreme weather events</p>	<p>In accordance with section 14 of the AIR, the potential effects of the Project on the environment have been assessed. Extreme weather events are incorporated into the design of the TMF by allowing sufficient capacity to store expected waste and water volumes as well as the Probable Maximum Flood (PMF). Operational freeboard is provided in excess of these storage requirements at all stages of dam construction. Calculation of the PMF considers trends due to climate change, and the TMF has been designed for a PMF with a return period of 1 in 10,000 years.</p>
<p>Do engineering standards for the TMF take into account climate change?</p>	<p>The TMF design follows the Canadian Dam Association, <i>Dam Safety Guidelines</i> (2007). Climate change is incorporated into the TMF design by considering longer-term regional climate records to allow longer-term estimates of variability that could occur over the life of the Project.</p>
<p>Has there been flood modelling done based on climate change and chaotic weather?</p>	<p>Hydrological modelling incorporates wet and dry year return periods for extreme weather. Climate change trends are taken into account as part of the effects assessment. The criteria for designing a TMF requires an Inflow Design Flood (IDF) to be calculated based on the Dam Class. All criteria follow the Canadian Dam Association, <i>Dam Safety Guidelines</i> (2007).</p>

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Potential for earthquakes, causing release of contaminated water into surface and underground water resources .	The potential effects of a seismic event on the Project are evaluated in the Effects of the Environment on the Project chapter in the Application. This analysis concludes that the evaluated worst-case earthquake (1:1000 return periods) would cause "very light" structural damage at the surface. Thus, it is highly unlikely that a seismic event in the Project area would cause the release of contaminated water into surface and underground resources. Please refer to the attached Knight Piesold memo dated March 8, 2012, which provides the results of a seismicity assessment for the Project.
Accidents and Malfunctions	
Have there been assessments of the failure potential of the TMF embankments?	The TMF embankments have been designed in accordance with the <i>Canadian Dam Safety Guidelines</i> , published by the Canadian Dam Association (2007). As per these Guidelines, the TMF has been designed using criteria based on maximum probable events (flood & seismic), which are 1 in 10,000 year events. The Application includes a qualitative assessment of the effects of a potential TMF failure in the Accidents and Malfunctions chapter in the Application.
Concerned about safety at the site	Section 8.0 of the AIR requires the Application to assess effects on employee and contractor health, safety, and well-being. The Application includes a number of EMPs related to safety at the Project site related to Emergency Response, Explosives Handling, Fuel and Hazardous Materials Management, and Traffic and Access Management.
Project Description	
Potential effects of upgrading or adding additional access, storage of blasting equipment and chemicals	The majority of roads planned for the Project already exist and therefore the need for construction of new access roads is limited in extent (2.5 km extension of a forest service road to the TMF). Storage of blasting equipment and chemicals will be conducted in accordance with the federal <i>Explosives Act</i> and will also meet BC <i>Mines Act</i> requirements.
Total surface area of the Project's spatial footprint	The total surface area of the mine site facilities is 1,853 ha. The mine site access road is approximately 23 km long and follows existing roads except for a new 2.5 km section.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Physical dimensions of any waste rock piles associated with the Project and total volume of materials	The physical dimensions of waste rock piles and total volumes of materials are presented in the Project's Feasibility Study (July 2014) and Project Description chapter of the Application. Total waste rock to be mined from the open pit is estimated at 543.7 Mt, including 39 Mt of overburden. Some overburden will be used for road and dam construction and the balance will be placed in a stockpile located to the east of the open pit for reclamation at the end of mine life. A total of 265 Mt of non-potentially acid generating (PAG) waste rock will be mined. Approximately 21 Mt of non-PAG waste rock will be used for initial dam construction and for potentially creating bases below the low grade ore stockpiles. An additional 110 Mt of non-PAG waste rock will be hauled to the tailing management facility (TMF) for dam raises throughout the mine life. The balance of the non-PAG waste rock will be placed in a stockpile located within the valley to the west of the open pit. Waste stockpile overall final slopes will be 1.5H:1V. PAG and unclassified waste rock totalling approximately 237 Mt will be placed within the TMF as part of the long-term management requirements for the site.
Project would be zero discharge during operations	The Project has been designed in accordance with a detailed Technical Report and Feasibility Study (Merit, 2014) and a Mine Waste and Water Management Design Report. These reports evaluate the feasibility of operating the Project with zero discharge during operations. The Application will include these reports as appendices to support the rationale for the proposed management of tailings and contact water. A surplus water discharge from the TMF during operations was not considered practical as part of the Project design, due to water quality considerations. As a result, all water will be stored in the TMF from the start of operations until Year 30. The Project Description in the Application will describe the TMF operation. .
Size of the mine pit	The ultimate open pit will be 2,400 m long and 1,670 m wide with a depth of approximately 375 m.
Risks of providing electrical power to the site are unknown	The 14 km, 138 kV overhead power line will connect to BC Hydro's transmission line. The line will cross the North Thompson River to the Project's main substation located adjacent to the processing plant, where it will be stepped down to 25 kV for distribution to Project infrastructure. The potential effects of the proposed power line are assessed in the Application. No significant residual effects are anticipated.
Socio-economic	
Will there be a section of the Application that deals with the impacts of potential increases in population of Vavenby?	Potential changes in the population of Vavenby are assessed in the socio-economic effects assessment chapter. Local police, District of Clearwater, and hospital were consulted as part of the socio-economic baseline studies.
Socio-economic and cultural effects on First Nations' communities	Potential socio-economic and cultural impacts of the Project on First Nations' communities are assessed in the Socio-economic and Aboriginal Rights and Related Interests chapters of the Application.

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SFN Issue	YMI Response
Job and income stability for community members employed with the Project	In accordance with section 6.4 of the AIR, potential effects on labour income generated and the health and well-being of communities, families, and individuals is assessed in the Application.
Effects on tourism	Effects on tourism are scoped out of the socio-economic effects assessment as the Project is some distance from Wells Gray Provincial Park. No impacts on the park are anticipated
Has YMI talked to other users such as the ranchers?	Since 2006, YMI has undertaken an extensive consultation program with potentially affected landowners, including local ranchers. Consultation activities with landowners will be described in the Application.
Effects on access and use of the Project area by the local snowmobile club	Effects of the Project on land use (including snowmobiling) are assessed in the Application in accordance with section 6.0 of the AIR.
Mitigation to address impacts to health and well-being	In accordance with section 6.4 of the AIR, potential effects on the health and well-being of communities, families, and individuals are assessed in the Socio-economic chapter.
Why aren't hunting and fishing included in the socio-economic study if the Project will impact these activities in a socio-economic way?	Indirect effects of the Project on socio-economic activities (i.e., hunting and fishing) are included in the Application as required under CEAA 1992. These effects will be assessed and presented in the Land and Resource Use chapter of the Application.
TK/TU and Traditional Use Sites	
Effects on hunting	The ability of Aboriginal groups to access and utilize hunting resources is assessed in the Land and Resource Use chapter of the Application.
Effects on food procurement areas and fish-bearing waterbodies and potential effects on SFN health and well-being	In accordance with sections 5.5 and 8.3 of the AIR, the Application assesses the potential effects of the Project on aquatic resources, including fish and fish habitat, and human health. The results of the effects assessments on fish and fish habitat and human health will be incorporated into the assessments of potential effects on current use of lands and resources for traditional purposes, and Aboriginal interests (including health and well-being as required by Section 12.5 of the AIR). Potential effects on food procurement areas will be assessed as part of the current use of lands and resources for traditional purposes assessment in the Land and Resource Use chapter of the Application.
Effects on access to traditional use sites	There are a number of alternate access routes in and around the vicinity of the Project that will ensure Aboriginal groups will continue to be able to access hunting and gathering locations outside of the Project site during all phases of the Project. Mitigation measures identified by SFN in their 2012 TEK Report have been considered by the proponent and, where possible, integrated into existing management plans and best practices.
Effects on transportation corridors including trails, creeks, and rivers	Transportation corridors, including trails, creeks, and rivers are not expected to be significantly affected by the Project. The Project area is crisscrossed by existing forest service roads minimizing the need for new access road development. No infrastructure is required in waterbodies (creeks, rivers) that would obstruct the ability to use the waterway, or damage the waterway. Potential effects of the Project on land use (trails) and water (surface water quality and quantity) have been assessed in accordance with the AIR and will be included in the Application.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Consideration of SFN Traditional Land Use and Ecological Knowledge Study (TLU and TEK) in vegetation and wildlife chapters	Information in the SFN TLU and TEK report (2012) will be integrated in the vegetation and wildlife chapters of the Application. The selection of wildlife and vegetation valued components has been informed by available traditional land use information provided by the SFN. The SFN TLU and TEK report is also used to support an assessment of effects on current use of lands and resources for traditional purposes, and effects of the Project on Aboriginal rights and interests.
Mitigation to manage effects on traditional use sites (identified in the 2012 SFN TLU and TEK report).	Measures to mitigate potential effects on traditional use sites will be described in the Land and Resource Use chapter of the Application. The Application takes into account information provided in the SFN TLU and TEK report.
Impacts on culturally important, areas, wildlife, plants, birds and fish species	<p>Potential impacts on culturally important areas are assessed in the Land and Resource Use chapter of the Application. This assessment is based on information provided in the SFN TLU and TEK Report (2012) and information provided by Aboriginal groups during the pre-Application stage of the EA process.</p> <p>Potential effects on SFN culturally important wildlife, plant, birds and fish species are assessed in the Aboriginal Rights and Interests chapter of the Application. This assessment is informed by information in the SFN TLU and TEK Report and conclusions reached in the Terrestrial Ecology and Wildlife chapters in the Application. YMI will consult with SFN, and other Aboriginal groups, regarding potential effects and proposed mitigation.</p>
Impacts on SFN's ability to practice their traditional livelihood, health and well-being, cultural practices, and trade networks	<p>The Application includes an assessment of the potential effects of the Project on the current and future ability of SFN and other Aboriginal groups to use lands and resources for traditional purposes (including cultural practises), human health (including noise, air quality, drinking water quality, and country foods), socio-economic effects, and community well-being.</p> <p>No significant residual effects to SFN use of lands and resources from the Project are anticipated. Access to harvesting areas outside of the Project site is not anticipated to be affected, and no specific preferred harvesting areas were identified within the Project site that could be affected.</p> <p>Residual effects to fish and wildlife resources were assessed to be of low magnitude and localized to the regional study area. Numerous alternate fishing, hunting and trapping sites and areas are available to SFN in their traditional territory. The Project will not impede the ability of SFN members to harvest resources in their traditional territory.</p> <p>The assessment of Project effects to water quality and country foods determined that no residual effects to human health are anticipated as a result of the Project.</p> <p>No direct Project effects on culturally important areas are anticipated. No Project effects on SFN trade networks are anticipated.</p>
Consider recommendations in 2012 SFN TEK report.	Recommendations in the SFN 2012 TLU and TEK Report have been considered and integrated into existing management plans and best practices where possible.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
SFN has traditional use areas in the LSA and downstream of the Project.	Information on traditional use (e.g., the Traditional Land Use & Ecological Knowledge Study (2012)) provided by the Simpcw First Nation has been included in the Application/EIS and used to support the assessment of current use of lands and resources for traditional purposes (Chapter 22) and the Assessment of Impacts on Aboriginal Rights and Interests (Chapter 23).
Vegetation	
Approach to Terrestrial Ecosystem Mapping (TEM) and incorporation into vegetation, and wildlife studies	TEM was produced at 1:20,000 scale for the Local Study Area following the methodologies described in <i>Terrain Classification System for British Columbia</i> (Howes and Kenk 1997), <i>Guidelines and Standards for Terrain Mapping in British Columbia</i> (Resources Inventory Committee 1996) and <i>Standard for Terrestrial Ecosystem Mapping in British Columbia</i> (Resources Inventory Committee 1998g). Field studies were undertaken to groundtruth the accuracy of the TEM and confirm presence of habitat features. Field plots were compared against mapping attributes. Protocols for field-truthing and any preliminary habitat ratings were based on the <i>Field Manual for Describing Ecosystems</i> (BC Ministry of Environment, Lands and Parks and BC Ministry of Forests 1998) and <i>British Columbia Wildlife Habitat Rating Standards</i> (Resources Inventory Committee 1999a). Following finalization of the TEM, it was queried to identify polygons containing site series that are associated with ecological communities at risk. TEM methods and mapping results in relation to the vegetation and wildlife effects assessment will be provided in baseline report appendices to the Application.
Chemical composition of materials in waste rock piles may affect plants, wildlife, birds, fish, insects, and/or humans coming into contact with it or ingesting it.	The mine layout, the Mine Waste and ML/ARD Management Plan and the Site Water Management Plan are designed to contain contact water within the mine site and prevent its uncontrolled release to the downstream environment. During mine closure, water leaving the mine site area will meet water quality objectives to protect the downstream environment.
Habitat loss due to Project infrastructure and waste rock piles	Habitat lost due to Project infrastructure and waste rock piles is discussed in the Application. However, habitat loss related to the Project is expected to be small when compared to available habitat in the regional area.
Water Quality	
Water volume and chemistry of open pit and TMF	In accordance with section 5.5.3 of the AIR, the Application identifies and evaluates potential effects of the proposed Project on hydrogeological conditions. Water chemistry of TMF contact water is assessed in the water quality assessment in the Application. Water volume of the open pit will be discussed in the Mine Waste and Water Management Design Report to be included in the Application. The volume of water contained in the tailings pond will fluctuate throughout the life of mine. The water chemistry of the TMF throughout all phases of the mine will be provided in the Water Quality assessment in the Application.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Water quality in Harper Creek and Baker Creek after receiving discharged water from the TMF and open pit	Project design updates have eliminated discharge from the open pit to Baker Creek. The effect of discharge from the TMF to water quality in Harper Creek is assessed in the Surface Water Quality chapter of the Application.
Potential impacts of mining activities within the mine footprint, downstream effects (e.g., contaminant seepage).	The mine layout, the Mine Waste and ML/ARD Management Plan and the Site Water Management Plan are designed to contain contact water within the mine site and prevent its uncontrolled release to the downstream environment. During mine closure water leaving the mine site area will meet water quality objectives to protect the downstream environment.
Potential effects of the rail loadout on the sensitive shoreline of the North Thompson River between Clearwater and Vavenby	The rail loadout facility will be located on an existing industrial site currently owned by YMI, and all concentrate will be contained within a covered warehouse to prevent the release of concentrate to the surrounding land and air and the North Thompson River.
Water quality of TMF	Water quality of TMF contact water will be assessed in the Application.
Effect of silt in waterways	Siltation of waterbodies downstream of Project activities will be controlled through the implementation of a Sediment and Erosion Control Plan and Site Water Management Plan. These plans will be provided in the Application.
Water in the tailings pond may affect plants, wildlife, birds, fish, insects, and/or humans coming into contact with it or ingesting it.	The influence of ML/ARD on water quality throughout the Project cycle has been incorporated into the predictive water quality modelling through the development of geochemical source terms. The water quality effects assessment will provide predicted water quality results.
Wildlife	
Effects on wildlife, aquatic life and plants	The potential effects of the Project Site on wildlife, aquatic environment and terrestrial ecosystems are assessed in the Application in accordance with Sections 5.5 and 5.6 of the AIR (Aquatic Environment and Terrestrial Environment respectively). Effects on wildlife, aquatic life and plants will be mitigated through the implementation of the Site Water Management Plan, Fish and Aquatic Effects Monitoring and Management Plan, Selenium Management Plan, Vegetation Management Plan and Wildlife Management Plan.
Effects of human activity and refuse on wildlife	In accordance with section 5.6.4 of the AIR, the Application assesses the potential effects of human activity on wildlife. Measures to mitigate effects of human activity on wildlife effects are provided in the Wildlife Management Plan.
Potential impacts and risks to species in the area	A wildlife baseline study report will be appended to the Application. Wildlife valued components for the effects assessment were determined by querying the Conservation Data Centre to identify wildlife taxa within the Headwaters Forest District or Kamloops Forest District that are red- or blue-listed or Identified Wildlife as well as species listed under the federal <i>Species at Risk Act</i> and by the Committee on the Status of Endangered Wildlife in Canada.

Table 3-F1. Simpcw First Nation Issues Tracking Table (to September 17, 2014)

SFN Issue	YMI Response
Effects on wildlife and wildlife habitat	In accordance with section 5.6.4 of the AIR, potential effects of the Project components (e.g., power line) and activities on wildlife habitat are assessed. These effects include habitat alteration, habitat loss or fragmentation, displacement and disturbance of vegetation and wildlife, access management, and potential introduction of invasive plant species.
Effects of blasting on wildlife	The effects of blasting on noise are assessed in the Wildlife chapter of the Application (modeling results will be presented in the Noise chapter). Measures to mitigate noise effects on wildlife from blasting are provided in the Wildlife Management Plan.
Effects on caribou	As a valued component, potential effects on caribou are assessed in the Wildlife chapter of the Application.
Effects on 32 plant species, 29 bird species, and 7 fish species in SFN TLU & TEK Report	Baseline studies to identify species potentially affected by the Project were undertaken to support a wildlife and vegetation effects assessment in accordance with the AIR. Information in the TLU and TEK report (2012) report will be incorporated into the Application and used to support an effects assessment on current use of lands and resources for traditional purposes and an assessment of potential effects on Aboriginal rights and interests.
Human Health and Country Foods	
Consideration of local knowledge in country foods related to fish and consumption rates.	YMI requested SFN provide this type of information for inclusion in the Application/EIS at the September 17, 2014 Working Group meeting where SFN raised this issue. The SFN provided information on country food/fish species that are harvested which was incorporated into the human health effects assessment (see Chapter 21). However, information on consumption rates were not provided to YMI, thus values from published literature were used instead (see Sections 21.4.2.2, 21.4.3.2, 21.4.3.2).

Table 3-F2. Adams Lake Indian Band Issues Tracking Table (to July 31, 2014)

ALIB Issue	YMI Response
Aquatic Environment and Closure	
Water and tailings management, reclamation of aquatic environments.	Section 5.5 of the Application Information Requirements (AIR) (October 2011) require the Application to assess the potential effects of the Project on the aquatic environment, including water quality and quantity, fish and fish habitat. The Application will identify measures to mitigate potential effects (e.g., Fish Habitat Offsetting Plan, Aquatic Effect Monitoring Plan and Metal Leaching/ Acid Rock Drainage Plan). The Application will include a conceptual Closure and Reclamation Plan, which will be required by the BC <i>Mines Act</i> (1996) and Health and Safety, Reclamation Code for Mines in BC (2008).
Archaeology and Heritage	
Would like archaeology and cultural heritage work conducted prior to drilling.	In 2011 and 2012, YMI made best efforts to conduct archaeological assessment prior to the construction of drill pads.
Consultation	
Capacity funding offered has not been sufficient for the level of consultation and effort required.	YMI and ALIB signed a Memorandum of Understanding in April 2013 which provided capacity funding for the ALIB to participate in the environmental assessment (EA) process, review the studies and information collected to date on traditional use and identify any gaps. YMI has offered additional capacity funding to review other EA documents including the Working Tables (provided to the ALIB in July 2013) and provide additional information regarding potential impacts of the Project on ALIB Aboriginal interests, the Archaeological Overview Assessment report (provided to ALIB in May 2014) and the Work Program for the EA review process (provided to ALIB in May 2014).
Early consultation records are incomplete.	Updates to the consultation record are included in this report. YMI also provided a First Nations Consultation report to the ALIB in December 2012 for review and comment.
Would like meaningful consultation on the assessment, permitting, decision making and impacts of the Project.	As a member of the BC EAO Working Group for the Project, ALIB has had, and continues to have, the opportunity to participate in the EA review, including attending Working Group meetings, evaluating the Application against the AIR, and reviewing and commenting on the Application. YMI has been sharing information and consulting with ALIB since 2007. Consultation is described in the ALIB Section 11 Order Consultation Report (including Appendix A which summarizes key YMI communications with ALIB).
The Local Study Area excludes areas of importance to SFN.	Local study areas are defined based on expected near-field direct impacts of the Project. Regional study areas are selected to represent far-field Project effects and represent the outermost area where effects could occur, including potential cumulative effects. Proposed study area boundaries were presented in the draft Application Information Requirements (AIR) for review and comment by all members of the working group, including the SFN. No concerns were raised at that time regarding the LSA boundaries.

Table 3-F2. Adams Lake Indian Band Issues Tracking Table (to July 31, 2014)

ALIB Issue	YMI Response
Need involvement of First Nations and support of First Nations' technical staff.	YMI has provided opportunities to the ALIB to participate in in the EA for the Project. YMI has discussed engaging e ALIB technical staff in field baseline work including archaeology surveys, hydrology monitoring, and fish studies. Additionally, YMI has discussed aboriginal employment opportunities (e.g., line cutting work) and provided a list of business and contract opportunities to the ALIB. A record of discussions summarizing these items is provided in Appendix 3-E, Table 3-E2 of the Application/EIS.
Inadequate consultation for the Project and capacity issues.	Consultation activities with First Nations were started early in the Project preliminary design phase. Consultation integrated into the EA process is directed by the BC EAO and CEA Agency; YMI follows direction from the government on this activity. Thus, consultation with the ALIB to date has included meetings with leadership to discuss the Project. YMI has made offers of capacity funding to, and discussed other economic related (e.g., business and contracting) opportunities with the ALIB, offered to involve ALIB technical staff in EA field-baseline studies and on-going monitoring work, and have discussed the potential for the Project to provide employment opportunities during construction and operations phases. A description of the consultation undertaken to date with the ALIB is provided in Chapter 3.
Cumulative Effects	
Mapping of cumulative effects in the RSA.	Sections 4.6 and 9 of the AIR requires the Application to assess the potential environmental, economic, health, social and heritage cumulative effects of the Project. This assessment will be based on federal and provincial guidance documents. The approach to assessing cumulative effects will generally follow the same steps as the project-specific effects assessment, namely scoping, identification and analysis of potential cumulative effects, identification and description of mitigation measures, with subsequent identification of residual cumulative effects, and characterization of residual cumulative effects to determine significance. The Application will identify the rationale for identifying past and present projects, and reasonably foreseeable future developments to be included in the cumulative effects assessment and will include a map of the cumulative effects assessment area.
Employment, Training and Economic Opportunities	
Economic opportunities a priority for ALIB.	YMI supports providing economic benefits to local and regional businesses, and plans to procure goods and services from Aboriginal and non-Aboriginal-owned suppliers, based on competitive quality and price.
Would like a services contract with YMI	In June 2011, YMI signed General Services Agreements with SFN and ALIB to support their participation in the collection of baseline information and field work, including terrestrial vegetation, wildlife, fisheries, and archaeology studies. The ALIB had 150 person-days (or 1,200 hours) of employment and 224 person-days (or 792 hours) in 2011 and 2012 respectively.

Table 3-F2. Adams Lake Indian Band Issues Tracking Table (to July 31, 2014)

ALIB Issue	YMI Response
Fish and Fish Habitat	
What effects will the construction of roads and the power line associated with the Project have on fish and aquatic habitats?	Most of the required access (Vavenby Forest Service Road and Saskum Plateau Forest Service Road) to the Project Site already exists while the proposed power line route is criss-crossed by existing logging roads. Minor upgrades will be required to a section of the road. Potential effects of the road upgrade and power line construction will be assessed in the Application.
Fish distribution and methods of determining which waterbodies are fishless.	The Application/EIS (Chapter 4 and Appendix 14-C) includes a detailed discussion on fish species and habitat distribution in the local and regional fish and aquatic resource study areas based upon fieldwork conducted in 2008, 2011, 2012, 2013, and 2014. The Application includes a description of standardized sampling methodologies used specifically to confirm fish-bearing status, habitat classification and distribution. Applicable BC Ministry of Forests, Lands, and Natural Resource Operations sampling standards were followed to carry out these studies.
Would like to discuss fish offsetting options.	A Fish Habitat Offsetting Plan has been developed to offset effects to fish and fish habitat as a result of flow reductions and habitat loss. The development of the plan meets policy objectives in the "Fisheries Protection Policy Statement" (October 2013) and "Fisheries Productivity Investment Policy: A Proponents Guide to Offsetting" (November 2013). YMI will involve, and consult with Aboriginal and other groups regarding the offsetting plan.
Land Use	
Environmental effects on the Douglas Reserve land base.	Although located several kilometres south of the Project Site, the north-west corner of the Neskonlith Douglas Reserve claim area is part of the Harper Creek and North Barrière Lake watershed, which could potentially be affected by downstream effects of the Harper Creek Project. However, available ethnohistorical information does not provide evidence of hunting, fishing or gathering at the time of contact within the Project footprint. The mine site footprint is also outside of the boundary attributed to the Shuswap Lakes Division as represented by the Douglas Claim. Potential downstream effects on water quality will be assessed in the Application and include predictive water quality modelling. The Application will include an assessment of potential water quantity effects of the Project on creeks that are among the tributaries to the North Thompson River system.
Terrestrial Ecology	
Protection and management of rare and culturally important plants.	Rare plants have been identified during baseline surveys. Potential impacts on rare plants have been mitigated by re-locating project components and avoiding rare plants. Culturally important plants have been identified in the Simpcw Traditional Use Study. Potential effects of the Project on culturally important plants will be addressed in the Application.
Effects on forestry.	Terrestrial ecosystem mapping has been undertaken to quantify potential effects on ecosystems and forest structural stages within the Local Study Area. Habitat models will be provided in the Application.

Table 3-F2. Adams Lake Indian Band Issues Tracking Table (to July 31, 2014)

ALIB Issue	YMI Response
Consideration of ALIB plant list.	Information on culturally important plants provided by ALIB and SFN and potential effects have been considered in the Current use of Lands and Resources for Traditional Purposes section of the Land Use chapter in the Application. This information will inform an assessment of the Projects potential effects on Aboriginal rights and interests.
Traditional Knowledge/Traditional Use	
Identification of the traditional territory the Project is in.	The Section 11 Order (September 2009) and the Section 13 Order (October 2012) issued by the BC EAO provides direction to YMI with respect to the Aboriginal groups to be consulted about the proposed Project during the EA review.
Concerned about lack of information on heritage presented at September 17, 2014 Working Group meeting.	Effects of the Project on heritage and archaeology have been assessed in Chapter 20 of the Application/EIS. No significant effects on known archaeological sites are expected.
Effects on ALIB rights and title.	Section 12 of the AIR requires the Application to assess the potential effects of the Project on Aboriginal rights and interests. This chapter will be informed by the conclusions reached in the assessment of environmental and socio-economic effects as well as issues raised by Aboriginal groups during consultations. ALIB will have an opportunity to comment on this assessment when it reviews the Application.
Inclusion of Traditional Use information in the Application.	ALIB had the opportunity to review and comment on the Traditional Land Use and Ecological Knowledge Study prepared by the Simpcw First Nation in August 2012. YMI and the ALIB signed a Memorandum of Understanding in April 2013 which provided capacity funding for the ALIB and provided for ALIB to work in collaboration with the SFN; participate in the EA process; and provide YMI with information on potential impacts of the Project on ALIB Aboriginal interests. ALIB did not provide additional information on potential impacts on their Aboriginal interests or comments on the Traditional Use Study.
Water Quality	
Tailings seepage into the stream.	The TMF has been designed to limit seepage at the source, and collect seepage to the maximum practical extent. Studies have been conducted on potential seepage flow pathways and detailed results will be included in the Application. The water quality predictions for the Project describe the potential effects where unrecoverable seepage has been predicted to surface in the downstream receiving environment.
Spillway design and water treatment.	The closure spillway for the TMF will release flows that mimic the variability in the natural hydrograph. Water treatment is not expected to be required during operations; however, may be considered as a contingency if actual conditions vary from the water quality predictions.
What will the effects be if Tailing Management Facility (TMF) stored water seeps into the stream?	The TMF has been designed to minimize seepage to the receiving environment. Water quality predictions will be presented in the Application and potential effects of nominal seepage from the TMF to T Creek will be assessed.

Table 3-F2. Adams Lake Indian Band Issues Tracking Table (to July 31, 2014)

ALIB Issue	YMI Response
Are there two levels of the spillway design? How are you going to treat the water if need be?	The closure spillway for the TMF will include one level. Water treatment is not expected to be required during operation, however it may be considered as a contingency if actual conditions vary from the water quality predictions.
Concerned about downstream effects of the Project as it drains south into Harper Creek and beyond.	Potential downstream effects on water quality have been assessed in the Application/EIS (Chapter 13) and include predictive water quality modelling results. Predictions were compared to applicable guidelines for aquatic life, livestock, and drinking water, as well as to existing baseline conditions to assess the significance of Project-related effects. Water quality in the North Thompson River, upper and lower Harper Creeks, and downstream into the Barrière River were assessed showing decreasing concentrations with distance from the Project Site. No significant effects on water quality are expected as a result of the Harper Creek Project.
Wildlife and Wildlife Habitat	
Effects on caribou and grizzly bear.	Based on wildlife baseline studies undertaken in 2008 and 2011, no occurrences of caribou have been identified in the Project Site. The Application will assess potential effects of the Project on grizzly bear. Baseline studies for both caribou and grizzly bear are provided in Chapter 16 Wildlife and Wildlife Habitat.
Consideration of ALIB animal list.	Information on culturally important plants provided by ALIB and SFN and potential effects have been considered in the Current use of Lands and Resources for Traditional Purposes section of the Land Use chapter in the Application. This information will inform an assessment of the Projects potential effects on Aboriginal rights and interests.
Effects of dust on wildlife.	Effects of dust on wildlife is considered in Chapter 16 of the Application/EIS. An Air Quality Management Plan is included in Section 24.2 which will serve to minimize fugitive dust emissions from Project activities.
Effects of noise and light wildlife.	Noise predictive modeling was carried out and is reported in Chapter 10 of the Application/EIS. Noise modeling results were used to assess sensory disturbance to wildlife in Chapter 16 Wildlife and Wildlife Habitat. Noise effects will be managed according to the Noise Management Plan, Section 24.11.

Table 3-F3. Neskonlith Indian Band Issues Tracking Table (to July 31, 2014)

NIB Issue	YMI Response
Aboriginal Rights and Title	
Meaningful consultation is required with NIB regarding use of natural resources Secwepemc territory.	YMI will make best efforts to consult with and involve NIB in the development of the Harper Creek Project.
Accurate representation of traditional territories.	The Project is located within the traditional territory of the Secwepemc (Shuswap) Nation. The Secwepemc Nation asserts interests to Secwepemcul'ecw territory, an area that encompasses approximately 145,000 km ² of the central interior region of the province. The Secwepemc Nation was composed of historic divisions with stewardship responsibilities for areas within the Nation. The NIB, ALIB, LSIB, and are all members of the Secwepemc Nation. The Project site overlaps with the asserted interest areas of the historical Shuswap Lakes Division, historically composed of the Adams Lake, Little Shuswap and Neskonlith Indian Bands. The mine site footprint is outside of the boundary attributed to the historical Shuswap Lakes Division. Maps of these territories are included in the Introduction section of this report.
Air Quality and Noise	
Impacts to air quality and noise from operations has the potential to disturb wildlife on and adjacent to the mine site.	Potential effects from dustfall and changes in air quality have been modelled in accordance with the air quality modeling plan approved by the BC Ministry of Environment. Modelling results will be presented in the Application. Continuous and instantaneous (blasting) noise predictive modeling results are also included in the Application to support an effects assessment of sensory disturbance of wildlife.
Archaeology and Heritage	
Impacts of the Project on cultural and archaeological sites or landforms.	There are 2 recorded archaeological sites within the Local Study Area (LSA). These two sites are rock cairns of unknown function as discussed in the Archaeology Impact Assessment (AIA) Report for the Project. The potential effects of the Project on cultural and archaeological sites will be assessed in the Application and an Archaeology Management Plan will also be included.
Consultation	
Lack of capacity funding and engagement regarding the Project.	YMI has made every effort to ensure the NIB have been effectively engaged by providing early notification of the Harper Creek Project to the NIB, providing EA documents for review and feedback, and offering capacity funding to review the documents, provide information on potential effects of their project on NIB interests, and support their participation in the EA process. A summary of communication activities that YMI has initiated from 2007 to 2014 for the purposes of consulting with the NIB regarding the Project are included in Appendix A of this consultation report. Issues that the NIB have raised with YMI related to the Project are summarized in this appendix. NIB has also been an active member of the Working Group. In 2011, ALIB (representing the NIB) attended two Working Group meetings, and in 2012, NIB representatives attended two Working Group meetings. YMI will continue to engage the NIB during the Application review stage as per the plan set out in Section 4 of this report, and will continue to document issues NIB may raise during the remainder of the EA process.

Table 3-F3. Neskonlith Indian Band Issues Tracking Table (to July 31, 2014)

NIB Issue	YMI Response
EA Process	
Lack of involvement in the EA process.	The EA process is driven by the BC Environmental Assessment Office (EAO) and the Canadian Environmental Assessment Agency (CEAA). YMI encourages NIB to seek further involvement in the EA process through consultation with EAO and CEAA.
Employment, Training, and Economic Opportunities	
Training and employment opportunities.	YMI supports providing economic benefits to local and regional businesses, and plans to procure goods and services from Aboriginal and non- Aboriginal-owned suppliers, based on competitive quality and price. YMI will host a careers and mining workshop for NIB, ALIB, and LSIB members, and residents and students residing in the region. YMI also provides two scholarships to Chase High School for post-secondary education in trades and environmental studies. YMI will work with NIB on the identification and involvement of NIB members in training and employment opportunities associated with the development of the Project.
Fish and Fish Habitat	
Impacts from operations have the potential to significantly impact fish and fish habitat, in particular in the Harper Creek watershed and the Barrière River system.	Potential effects due operations (changes to water quality and quantity) to the Harper Creek Watershed have been assessed using a predictive water quality model and conducting an in-stream flow assessment. The model results were used to determine potential effects on fish and fish habitat. Direct effects on fish and fish habitat as a result of reduced flows are anticipated for T Creek, P Creek, and parts of Harper Creek. A Fish Habitat Offsetting Plan will be developed to offset these effects, and will be included in the Application. YMI will involve and consult with NIB, ALIB, LSIB and SFN regarding the offsetting plan. Impacts due to operational failure (malfunction) or other unplanned events (accidents) have been evaluated in the Application. Environmental management and monitoring plans have been developed to mitigate potential effects from operational failures, and include an Emergency Response Plan, Sediment and Erosion Control Plan, Site Water Management Plan and Spill Prevention and Response Plan.
Involvement of NIB in fish habitat offsetting planning.	YMI will involve and consult with NIB, ALIB, LSIB and SFN regarding the offsetting plan.
Land Use	
Impacts on access to and practices within culturally important areas that may be impacted by the Project.	The potential effects of the Project on the use of culturally important areas within the Project area will be assessed in the Application. Residual effects on access to culturally important sites are not anticipated.

Table 3-F3. Neskonlith Indian Band Issues Tracking Table (to July 31, 2014)

NIB Issue	YMI Response
Socio-economic	
Input into draft Neskonlith socio-economic baseline report, comments on the AIR and need for additional time and capacity funding.	<p>YMI provided a draft socio-economic baseline report to the NIB for review in November 2011 and received initial comments from the NIB in November 2012, followed by an updated version of the baseline socio-economic report in November 2013. The updated baseline report has been considered and will be included in the Application.</p> <p>ALIB, on behalf of the NIB, reviewed and provided comments on the draft AIR to the BC EAO. In November 2012, the NIB provided comments on the approved AIR directly to the BC EAO. YMI has addressed comments that are within the scope of the EA process in the Application. Review timelines are established by the BC Environmental Assessment Office and the Canadian Environmental Assessment Agency. In addition to capacity funding offered to the NIB by the BC EAO in September 2012, YMI offered capacity funding to NIB on a number of occasions for the review of several reports required for the Application.</p>
Impacts to community socio-economic development	YMI understands the importance of socio-economic development to the NIB and appreciates their provision of the socio-economic baseline reports and their input at all Project Working Group meetings. Effects to community socio-economic development have been assessed and will be included in the Application.
Traditional Knowledge/Traditional Use (TK/TU)	
Concern regarding impacts of the mine operation on NIB culture, health and social well-being. These concerns are focused on the local and regional impacts, which may include decreased water quality in the Barrière River and North Thompson River watersheds, impacts on important wildlife and vegetation.	Potential effects of the Project on NIB culture, health and social well-being have been assessed in the Application. The Application includes an evaluation of the potential effects on water quality; access and use of traditional resources and sites; noise and dust effects on wildlife; vegetation; community well-being; human health, and the potential for accidents and malfunctions.
Include culturally important plants in baseline studies.	Information on culturally important plants provided by SFN and ALIB and potential effects have been considered in the Current use of Lands and Resources for Traditional Purposes section of the Land Use chapter in the Application. This information will inform an assessment of the Projects potential effects on Aboriginal rights and interests.
Aboriginal input on data collection and assessment.	In 2007 and 2008 YMI discussed the possibilities of NIB members becoming involved in field baseline studies for the Project. NIB requested information on available positions and YMI provided a work schedule for the 2008 field season. As a member of the BC EAO Working Group NIB has the opportunity to review and comment on various EA documents and studies and attend Working Group meetings where baseline studies are discussed. YMI provided the Work Program for Application review stage (May 2014).

Table 3-F3. Neskonlith Indian Band Issues Tracking Table (to July 31, 2014)

NIB Issue	YMI Response
Vegetation	
<p>Impacts from operations on vegetation and plant communities, including but not limited to traditional use items such as medicinal, food, ceremonial values on and adjacent to the mine site.</p>	<p>Vegetation and plant communities, including culturally important plants will be considered and assessed in the Application. An assessment of the effects on current use of lands and resources for traditional purposes will also be provided in the Application. Measures to mitigate effects on vegetation include minimizing the Project footprint to avoid sensitive areas. The Project site is criss-crossed by numerous forest service roads due to prior logging activities. Use of Forest Service Roads in the vicinity of the Project will not be restricted, except for traffic control for vehicles, buses and trucks travelling to and from the Project Site, and except for roads beyond the gate at the entrance to the major project infrastructure at the Project Site. There are a number of alternate access routes in and around the vicinity of the Project that will ensure Aboriginal groups will continue to be able to access hunting and gathering locations outside of the Project site during all phases of the Project. Access mitigation measures will be described in a Traffic and Access Management Plan in the Application.</p>
Water and Water Quality	
<p>Effects of ML/ARD on water quality.</p>	<p>The influence of ML/ARD on water quality throughout the Project cycle has been incorporated in the predictive water quality modelling through the development of geochemical source terms. The water quality effects assessment will provide predicted water quality results.</p>
<p>Concern regarding unforeseen weather, seismic or other failure events (equipment, roads, etc.), resulting in the release of contaminants into the Thompson River or Harper Creek or associated aquifers</p>	<p>An evaluation of the effects of the environment (including earthquakes) on the Project has been undertaken and will be included in the Application. A seismic hazard analysis was completed for the Project by Knight Piesold in March, 2012 to inform the Project Technical Report and Feasibility Study. A Mine Waste and Water Management Design Report was also developed by Knight Piesold in 2014 to evaluate the parameters for design of the water management facilities. These reports will be included in the Application as appendices.</p> <p>The dam safety classification for the project tailings dams is very high. The design flood and earthquake levels were adopted from the Canadian Dam Association guidelines for the project: Inflow Design Flood - probable maximum flood (PMF); and Earthquake Design Ground Motion - Maximum Credible Earthquake.</p> <p>There is no discharge from the Project to the Thompson River watershed. The effects of TMF discharge to T Creek, P Creek, and Harper Creek have been modelled in the water quality predictive model and the effects will be considered in the fish and aquatic resources effects assessment.</p>
<p>Project effects on water quality.</p>	<p>The potential for ML/ARD was considered in the development of geochemical source terms that are included in water quality predictions. The water quality effects assessment will provide the results of the predictive water quality model. Potential effects during operations (changes to water quality and quantity) to the Harper Creek Watershed will be described and presented in the Surface water Quality and Hydrology chapters of the Application.</p>

Table 3-F3. Neskonlith Indian Band Issues Tracking Table (to July 31, 2014)

NIB Issue	YMI Response
Wildlife and Wildlife Habitat	
Habitat restoration post-project.	End land use and reclamation objectives for the Project have been defined in accordance with the <i>Mines Act</i> and will be described in the Application. Progressive reclamation activities will occur where possible. End land use objectives will be considered in the wildlife effects assessment. Ongoing monitoring to ensure reclamation objectives are met will be conducted during the closure and post-closure phases as required. YMI will involve and consult with NIB regarding on-going monitoring and reclamation.
Impacts of operations wildlife and wildlife habitat.	Effects on wildlife and wildlife habitat will assessed in the wildlife effects assessment.

Table 3-F4. Little Shuswap Indian Band Issues Tracking Table (to July 31, 2014)

LSIB Issue	YMI Response
Air Quality and Noise	
Dust and air-borne particulate matter affecting downstream/downwind air quality. Noise disturbance wildlife during mating and birthing seasons.	The potential effects of the Project on air quality are assessed in the Application. Total suspended particulate (TSP) matter, particulate matter (PM ₁₀), respirable particulate matter (PM _{2.5}) and dust deposition were included in the assessment. Model results have been compared to federal and provincial guidelines. Mitigation measures to reduce emissions will be included in an Air Quality Management Plan.
Archaeology and Heritage	
Concern that the purpose of cairns identified in the AIA is unknown. It is important for LSIB to resolve their understanding of the purpose of the two cairns.	The Archaeological Impact Assessment will detail the investigations on the two rock cairns conducted to-date. Once the function and age of the cairns is determined, mitigation measures for their management will be developed in consultation and co-ordination with the Archaeology Branch, Aboriginal groups and other stakeholders as needed.
Loss of rock cairns may impact acknowledgement of First Nations use of territory.	Issues related to asserting Aboriginal rights or title are beyond the scope of the EA process. YMI will refer this issue to the BC EAO and CEA Agency for follow-up.
Fish and Fish Habitat	
Potential effects to fish and fish habitat in Harper Creek and its confluence to Barrière Lake.	Potential effects on fish and fish habitat in Harper Creek and downstream to Barrière Lake have been evaluated using baseline data collection, watershed and instream flow modelling and toxicological effects assessment.
Access to fish and fish bearing streams including maintenance of sufficient flows and access for fish throughout mine life.	As directed by the Department of Fisheries and Oceans, a Fish Habitat Offsetting Plan will be developed to mitigate Project effects on flows and fish habitat. Effects of the Project on access to traditional fishing areas has been assessed in the Application. YMI will consult with LSIB, ALIB, NIB and SFN regarding the Fish Habitat Offsetting Plan. No significant effects are expected with the implementation of mitigation measures.
Socio-economic	
Barriers to accessing employment and training opportunities (e.g., community capacities and skills levels).	The proponent is interested in further discussions with LSIB to identify skills requirements for employment with the Project and training needs for LSIB members. HCMC will aim to maximize employment benefits within local communities (including First Nation communities), the region (Regional District of Thompson-Nicola Electoral Areas A, B, P, and O), and the province as a whole. Activities to achieve this goal will include communication of the Project development schedule, including timing of major activities and key milestones, and workforce requirements, and the hiring schedule, including types of experience and qualifications required to work at the Project (in particular once it enters the Operations phase). HCMC will prepare and implement a local hiring and training policy – along with the labour requirements, broken out by trade/competency, and minimum educational qualifications – prior to commencement of hiring of operations personnel, other than senior staff positions. Prior consideration for employment will be afforded to residents of the Thompson-Nicola Regional District Electoral Areas A, B, P, and O, followed by the province, subject to availability of appropriately skilled persons. Hiring practices will follow BC and federal legislation and regulations with a focus on hiring local and regional residents, where possible, including local Aboriginal groups and local communities.

Table 3-F4. Little Shuswap Indian Band Issues Tracking Table (to July 31, 2014)

LSIB Issue	YMI Response
Traditional Use Sites	
Curtailed access to sites during operation; status of access (e.g., to hunt and gather) post-closure.	No specific current use sites or areas were identified by Aboriginal groups in the Project Site itself. Use of Forest Service Roads in the vicinity of the Project will not be restricted, except for traffic control for vehicles, buses and trucks travelling to and from the Project Site, and except for roads beyond the gate at the entrance to the major project infrastructure at the Project Site. There are a number of alternate access routes in and around the vicinity of the Project that will ensure Aboriginal groups will continue to be able to access hunting and gathering locations outside of the Project site during all phases of the Project. Access mitigation measures will be described in a Traffic and Access Management Plan in the Application.
Vegetation	
Restoration of non-timber vegetation resources following closure.	Progressive closure and reclamation activities will be undertaken throughout the life of mine. These activities will be detailed in the Application. Reclamation will be conducted according to the <i>Mines Act</i> Health, Safety and Reclamation Code for Mines in BC.
Enable LSIB's enhanced harvest of suitable and utilized species prior to construction.	HCMC will work with LSIB, ALIB, NIB and SFN to discuss harvest of culturally important plants in the Project Site prior to construction.
Water Quality and Aquatic Resources	
Water quality and potential downstream effects.	Potential downstream effects on water quality have been assessed in the Application and include predictive water quality modelling. Water quality predictions were compared to applicable guidelines for the protection of aquatic, agricultural, and human receptors and existing conditions to assess potential Project-related effects. Downstream effects related to potential accidents and malfunctions have also been evaluated.
Concern about recycling non-potentially acid generating (PAG) rock downstream of stockpiles due to potential water quality contamination.	The water quality modelling for the Project takes into account potential influences of all construction materials including non-PAG waste rock used in the construction of site facilities. These facilities include the TMF embankments, site roads, and water management ponds. Water quality predictions will be discussed in the Application, as well as monitoring plans will be put in place as part of Project operation to monitor water quality. The monitoring plans will include a framework for corrective action if water quality is not as predicted. The corrective action could include such contingencies as additional collection measures, or water treatment.
Greater understanding is desired related to the decision to store water for lifecycle of mine verses regular discharge, including non-PAG water.	Discharge requirements for the Project are described in the Application in accordance with the information required in the approved 2011 Application Information Requirements.
Maintenance of sufficient water flows to creeks below.	Changes in water quantity and potential effects to fish and aquatic habitat have been assessed in the Application. Mitigation and a Fish Habitat Offsetting Plan have been developed and are also included in the Application.

Table 3-F4. Little Shuswap Indian Band Issues Tracking Table (to July 31, 2014)

LSIB Issue	YMI Response
Wildlife	
Excess noise disturbing wildlife, especially during mating and birthing. Sound dampening controls in major process areas to mitigate this.	Noise during Project construction and operations has been evaluated for disturbance effects on wildlife and has been considered within the wildlife effects assessment. Mitigation measures and a Noise Management Plan are also included.
Concern regarding the road down into open pit for a wildlife escape route.	The open pit design is based on a series of considerations outlined in the Technical Report and Feasibility Study (Merit, 2014) including overall and inter-ramp slope recommendations provided by Knight Piésold Ltd., and a minimum footprint for disturbance of the surrounding area. The open pit design includes a haul road to enable wildlife egress.
Prohibit use of firearms by all Project personnel.	To reduce the potential effect of wildlife mortality due to shooting, all personnel involved in on-site Project construction, operations or closure activities will be prohibited from hunting or carrying firearms in the LSA. One firearm may be carried by a single, trained individual per construction site, for defence purposes only.
Road deactivation program should be emphasized to a greater extent in the vicinity of the mine.	The Project Site is located in an active forestry area and is serviced by forestry service roads. Access to the major project infrastructure will be gated but remain in service to enable maintenance and monitoring during the Closure and Post-closure phases. All superfluous roads and linear features such as the powerline, pipelines, channels and conveyors will be reclaimed.
Increase in mine traffic impeding/ disrupting wildlife movement. Alternate access around site for hunting purposes and road closures to effectively eliminate unauthorized hunting.	The Project Site is located in an area with extensive forestry service road networks and the Project is not predicted to affect hunting access. The layout and location of the Project is not predicted to significantly disrupt movement of wildlife in the Project Site.

Table 3-F5. Métis Nation BC Issues Tracking Table (to July 31, 2014)

MNBC Issue	YMI Response
Aboriginal Rights and Title	
Protection of Aboriginal rights and title, including traditional land use.	In accordance with Part C, Section 12 of the AIR (October 2011) the EIS will include an assessment of the potential effects of the Project on Aboriginal rights and interests, and will identify measures to mitigate potential effects. An assessment of current use of lands and resources for traditional purposes has been conducted and will be provided in the Land and Resource use chapter of the EIS.
Air Quality	
Comment on draft AIR: Mitigations for dealing with fluctuations in potential contaminants and air quality.	In accordance with section 5.2 of the AIR, potential effects of the Project on air quality have been assessed and are expected to be localized. No significant residual effects on air quality are predicted due to the implementation of fugitive dust control measures and installation of pollution control works (e.g., baghouse) on Project components (e.g., primary crusher). The results of the air quality assessment will be provided in the EIS.
Aquatic Environment	
Comment on Draft AIR: Provide rationale for listed species (undefined) that are not considered to be Valued Components (VCs).	The BC EAO defines VCs as components “that are considered important by the proponent, public, First Nations, scientists, and government agencies involved in the assessment process” (BC EAO 2013). To be included in the Application/EIS there must be a perceived likelihood that the VC will be affected by the proposed Project. VCs proposed for assessment were identified in the Application Information Requirements (AIR; BC EAO 2011) and in the CEA Agency (2011) Background Information document.
Cumulative Effects	
Concern regarding the cumulative effects of the Project.	Sections 4.6 and 9 of the AIR require the EIS to assess the potential environmental, economic, health, social and heritage cumulative effects of the Project. This assessment will be based on federal and provincial guidance documents. The approach to assessing cumulative effects follows the same steps as the project-specific effects assessment and begins by carrying forward the residual effects of the Project. The EIS will identify past, present and future projects and activities with potential to interact with the residual effects of the Project.
Comment on Draft AIR: Rationale for Species of regional significance that are not listed as VCs (Table 4.1).	The BC EAO defines VCs as components “that are considered important by the proponent, public, First Nations, scientists, and government agencies involved in the assessment process” (BC EAO 2013). To be included in the EIS there must be a perceived likelihood that the VC will be affected by the proposed Project. VCs proposed for assessment were identified in the AIR (AIR; BC EAO 2011) and in the CEA Agency (2011) Background Information document.
EA Process	
Compliance reporting may need to be an adaptively scheduled element and should evolve in close communication with relevant agencies.	Compliance reporting for Project activities will be conducted in accordance with relevant provincial and federal requirements.

Table 3-F5. Métis Nation BC Issues Tracking Table (to July 31, 2014)

MNBC Issue	YMI Response
Environmental and Operational Management Plans	
Include waste removal and waste management plans.	Section 10.0 of the AIR proposes a list of Environmental Management Plans (EMPs) to be included in the EIS, which includes construction waste and hazardous waste management plans. The EMPs will describe the environmental practices and procedures to be applied, as appropriate, during the construction, operations, closure, and post-closure phases of the Project. The EMPs will help mitigate potential Project effects.
Land Use	
Effects of the Project on other land uses.	In accordance with section 2.5 of the AIR, potential effects of the Project on land use (e.g., commercial and recreational interests) have been assessed. The ability of Aboriginal groups to access and use traditional resources (e.g., hunting, fishing, and gathering) in the vicinity of the Project has also been assessed and will be provided in the Land and Resource Use chapter of the EIS.
Socio-economics	
Interest in training and employment opportunities.	In accordance with section 6.4 of the AIR, potential effects on employment opportunities for regional residents, effects on employment, and labour income generated are assessed in the EIS.
Traditional Use Sites	
Request to do a Traditional Land Use (TLU) Study.	YMI has requested information from MNBC (August 28, 2012 and July 23, 2014) on MNBC traditional use of the Project vicinity and for information about potential effects of the Project on Métis Aboriginal rights and interests. YMI remains receptive to considering information brought forward by MNBC on their Aboriginal rights and interests in the Project area.
Vegetation	
Effects on forestry and natural habitat.	In accordance with the section 6.2 of the AIR, an assessment on terrestrial ecosystems was undertaken. The Project is located in an area that has been harvested and is heavily roaded. Effects of the Project on forest habitat will include clearing vegetation, the majority of which will occur in the Engelmann Spruce – Subalpine Fir Biogeoclimatic Unit which occurs at higher elevations. These effects will occur during Construction and Operation phases. Forest productivity is lower in this unit in part due to longer colder winters and deeper snowpacks, so effects on Annual Allowable Cut will be less than would occur in more productive areas.
Wildlife	
Effects of the Project on wildlife.	In accordance with section 5.6.4 of the AIR, potential effects of the Project on wildlife and wildlife habitat have been assessed. Effects that will be considered include: habitat alteration, habitat loss or fragmentation, displacement and disturbance of vegetation and wildlife, access management, and potential introduction of invasive plant species. The results of the assessment will be provided in the EIS.

Table 3-F5. Métis Nation BC Issues Tracking Table (to July 31, 2014)

MNBC Issue	YMI Response
No mention of the Fisher, Bobolink, Rusty Blackbird, American Bittern, or Sockeye in the VCs.	In accordance with section 5.5.11 of the AIR, potential effects on fish species, including sockeye, have been assessed and results will be provided in the Fish and Aquatic Resources chapter of the EIS. Fisher is considered as a VC in the Wildlife Chapter of the EIS and was evaluated for potential effects from the Project in accordance with the AIR. There are no reported observations of Bobolink, American Bittern or Rusty Blackbird within the wildlife LSA for the Project based on available datasets (eBird 2014), and there were no observations of these species during breeding bird surveys. The Project Site does not contain suitable habitat to support a population of these species, and therefore the species were excluded from the assessment.

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