Appendix 3-J

Government Agencies Issues Tracking Table

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Issue	YMI Response	Raised By
Access and Transportation		
Access to mine site.	Buses will transport mine employees to and from the rail load-out facility in Vavenby.	BC MOTI
Increased traffic during construction.		Working Group Member (unidentified)
Closure and Reclamation		
Ongoing reclamation throughout the mine life, not just at closure, focusing on specific habitat types and rare species.	Progressive reclamation is planned for the Project. Chapter 7 provides a detailed desription of progressive reclamation plans. Progressive reclamation will focus on wetland habitat and associated rare species.	BC MEMNG
Consultation		
Adequacy of Aboriginal consultation on the Project.	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.	CEA Agency
Cumulative Effects		
Are cumulative effects being mapped in the RSA?	A cumulative effects assessment (CEA) is being performed for the Project in accordance with requirements from the BC Environmental Assessment Office and the Canadian Environmental Assessment Agency. A list of Project and activities included in the CEA is included in Section 8.7 (Cumulative Effects Assessment) of the Application/EIS.	BC MFLNRO
EA Methodology		
Justification for LSA and RSA.	The definitions and justification of the Project's LSA and RSA are provided in section 8.4.2.2 of Chapter 8. As well, each assessment chapter describes the LSA and RSA used for that particular assessment and presents the rationale for their selection.	CEA Agency
Baseline conditions should represent the naturally occurring condition, as opposed to conditions influenced by previous exploration or other disturbances.	The Proponent followed the guidance from the BC EAO's *Guideline for the Selection of Valued Components and Assessment of Potential Effects* when characterizing baseline (existing) conditions. This Guideline states that: "The description of existing conditions should include natural and/or human-caused trends that may alter the environmental or socio-economic setting irrespective of the changes that may be caused by the project or other projects and activities in the local area"., and "The description of existing conditions should also explain if and how other past and present projects and activities in the study area have affected or are affecting each VC, to support the consideration of potential cumulative effects. This may include earlier phases or activities (e.g. exploration) of the project." (page 18)	BC MOE
Review of Valued Ecosystem Component (VEC) approach with BC EAO's input.	The Project's proposed Valued Components were reviewed by the BC EAO.	Working Group Member (unidentified)
Mitigation measures to be clearly identified in the Application/EIS.	Each effects assessment chapter in the Application clearly identifies the mitigation measures. A table summarizing all mitigation measures is presented in Chapter 28.	CEA Agency
Environmental Management Plans (EMPs)		
Need for a selenium management plan.	A safe threshold for selenium for species in Harper Creek is assessed in the Selenium Management Plan (Section 23.13).	BC MOE
Fish and Fish Habitat		
Effects of mine footprint on fish.	Potential effects due to the "mine footprint" (including physical loss of fish-bearing and non-fish-bearing habitats, road and powerline construction on fish aquatic habitat, TMF, and other mine infrastructure) are discussed in Chapter 14. Mitigation measures are presented in Section 14.5 for all potential effects due to "mine footprint" potential effects.	BC MFLNRO
Effects to species at risk.	No non-fish aquatic species at risk were observed in the baseline sampling (Section 14.4.3.5, Chapter 14; Appendix 14-A).	EC
Impact of potential flow reductions on fish populations.		Working Group Member (unidentified)
Food and nutrient value should be considered in addition to flow, regardless of whether a stream is fish bearing, as DFO requires compensation for loss of food and nutrient value.	The assessment of Project effects on the aquatic resources considers potential effects from changes in water quantity and water quality on the abundance and growth of primary and secondary producers. These organisms form the base of the aquatic food web, and the assessment explicitly considers potential effects and downstream consequences. Futhermore, monitoring of primary and secondary producers will be a component of the Aquatic Effects Monitoring Program.	DFO
Present Area of Impact and Habitat Suitability Index.		DFO
Consideration of SARA listed species in the assessment.	No non-fish aquatic species at risk were observed in the baseline sampling (Section 14.4.3.5, Chapter 14; Appendix 14-A).	DFO

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Issue	YMI Response	Raised By
Fish and Fish Habitat (cont'd)		
Consideration of effects of linear developments such as roads and railways on riparian areas.	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.	DFO
Requested lethal sampling in the fish habitat assessment and increased sample sites for the benthic invertebrate sampling program.	The Fish and Aquatic Effects Monitoring Plan (Chapter 24.7) outlines the proposed monitoring program for fish and benthic invertebrates. The monitoring program will be further developed, with consultation, during the permitting process.	BC MOE
Human Health and Country Foods		
Sampling and analysis of fish and game tissues to provide suitable baseline for country foods human health risk assessments.	Fish were collected during baseline studies (see Chapter 14, Section 14.4 and Appendices 14-A and 14-B) and analyzed for tissue metal concentrations. These concentrations were input into the Country Foods Baseline Report (Appendix 21-A). Additional fish from North Barriere Lake were sampled in 2014, with results available after the baseline report was written (see Appendix 14-B). Thus the assessment of potential human health effects from consuming these fish are presented in Sections 21.4.2 and 21.4.3. Baseline metal concentrations in game tissues were modelled (Appendix 21-A) based on guidance by Health Canada (2010), which incorporated baseline metal concentrations in environmental media (water, soil, and vegetation).	CEA Agency
Potential effects of selenium on vertebrate reproduction, and need to determine a safe threshold for selenium for species in Harper Creek.	Potential effects of selenium on vertebrate reproduction are discussed in the Selenium Management Plan (Chapter 24, Section 24.12). The reproductive endpoints considered included: mortality or deformities in developing embryos, reduced survival of fry, reduced hatchability of fertile eggs, and reduced fledging success of nestlings.	BC MOE
Potential for cadmium toxicity in aquatic resources and/or wildlife.	Potential for cadmium toxicity in aquatic resources and wildlife are assessed in Chapter 14, Section 14.5.3.	BC MOE
Effects of selenium on water quality.	A selenium bioaccumulation model for fish to determine safe selenium concentrations in the water column is provided in the Selenium Management Plan (Chapter 24.12).	BC MOE
Need to develop a bioaccumulation model over time.	A selenium bioaccumulation model for fish to determine safe selenium concentrations in the water column is provided in the Selenium Management Plan (Chapter 24.12).	BC MOE
Country foods need to be more fully addressed in the Application/EIS.	Consumption of country foods can have a potential direct effect on human health therefore country foods were assessed as a component of the human health assessment (Sections 21.5.1.2, 21.5.2.2,21.5.3.2, 21.5.4.2, 21.5.5.2).	HC
Produce from country gardens is considered country foods and should be considered for sampling if there is the possibility it could become contaminated (e.g., from airborne particulates).	Dustfall was included in the air quality model (see Chapter 9) and the effects of the Project on country foods were considered in Chapter 21 (Sections 21.5.1.2, 21.5.2.2,21.5.3.2, 21.5.4.2, 21.5.5.2). There are no residences near the Project Mine Site.	HC
Hydrology		
Effects of tailings on water hydrology.	The effects of Project Construction, Operation, Closure and Post-Closure on water quantity have been assessed in Chapter 12 (Section 12.5.3.1).	BC MFLNRO
Threshold for determining significance for reduced flow.		DFO
Infrastructure and Services		
Effects of increased number of heavy trucks on local bridges and roads.	Chapter 4, Project Design and Alternatives Assessment, describes the evaluation of the current and future capacity of roads and bridges to accommodate increased numbers of heavy trucks. A Traffic and Access Management Plan (Section 23.17) will be in place to exert control over vehicle movement for the Project.	BC MOTI
Need to study impacts on infrastructure and community growth.	The assessment of Project effects on socio-economic conditions, including on infrastructure and services due to community growth, is provided in Chapter 17 (Socio-economic Effects).	Interior Health Authority
Increased traffic on local roads and use of Vavenby Bridge.	The Traffic Impact Study (Appendix 17-B) indicates that increases to traffic congestion will be minimal.	BC MOTI
Pinch points along the potential road access route.	The Traffic Impact Study (Appendix 17-B) indicates that increases to traffic congestion will be minimal.	BC MOTI
Potential effects of infrastructure outside the forest service road right-of-way.	The Traffic Impact Study (Appendix 17-B) indicates that increases to traffic congestion will be minimal.	BC MFLNRO

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Issue	YMI Response	Raised By
Project Design		
Storing the excess contact water that could be potentially released by climate change related events.	The Project is located in an area of high precipitation and known surplus water. The design and ongoing monitoring of the TMF consider the possibility of increased water inflow due to micro and macro shifts in climate. Upon closure, a spillway will be designed to manage the Probable Maximum Flood, with additional freeboard. A conceptual surplus water management plan will be developed during the Application review phase and will investigate options for removal of surplus fresh water and operational discharge of mine water.	EC
100-year flood design.	The 100-year flood is not a design event for the Project facilities. Site diversion and collection ditches are designed for a return period of 1 in 10 years. Spillways for smaller structures including sediment control ponds are designed to store a 1 in 10 year event, and safely pass an event with a return period storm event of up to 1 in 200 years. The TMF has been designed with the highest consequence design flood with a return period of 1 in 10,000 years.	CEA Agency
Use of PAG rock for construction.	The ML/ARD Management Plan indicates that only NPAG rock will be used for construction.	BC MEMNG
Process for dealing with PAG waste rock.	PAG waste rock will be disposed of subaqueously in the TMF. The Mine Waste and ML/ARD Management Plan (Section 23.10) describes the process to be followed.	BC MOE
Contact zone (orthogenesis/granodiorite) under the TMF dam.	The dominant bedrock type in the TMF area is orthogneiss and intrusive rocks such as granodiorite and quartz monzonite were also intercepted from certain drillholes. Three drillholes exhibited zones of fractured rock indicating a potential fault zone and two additional holes were drilled in order to confirm the presence of the fault and delineate its structure if present. However, a fault was not intersected by either drillhole. The geotechnical drillhole logs are presented in Appendices B1 and B2 of Appendix 7-B, 2012 Geotechnical Site Investigation Factual Report. The bedrock in the TMF area is described as 'GOOD' quality rock, with an average RMR value of 68 and an average RQD of 78%. Typically, the RMR values show little to no variation with depth, as shown in Appendix B3 of Appendix 7-B, 2012 Geotechnical Site Investigation Factual Report. The presently available information does not indicate a fault acting as a flow conduit. Future Site Investigation programs for subsequent design stages will further aim to prove/disprove this characterization.	BC MEMNG
Inferred fault under the TMF dam.	The dominant bedrock type in the TMF area is orthogneiss and intrusive rocks such as granodiorite and quartz monzonite were also intercepted from certain drillholes. Three drillholes exhibited zones of fractured rock indicating a potential fault zone and two additional holes were drilled in order to confirm the presence of the fault and delineate its structure if present. However, a fault was not intersected by either drillhole. The geotechnical drillhole logs are presented in Appendices B1 and B2 of Appendix 7-B, 2012 Geotechnical Site Investigation Factual Report. The bedrock in the TMF area is described as 'GOOD' quality rock, with an average RMR value of 68 and an average RQD of 78%. Typically, the RMR values show little to no variation with depth, as shown in Appendix B3 of Appendix 7-B, 2012 Geotechnical Site Investigation Factual Report. The presently available information does not indicate a fault acting as a flow conduit. Future Site Investigation programs for subsequent design stages will further aim to prove/disprove this characterization.	BC MEMNG
Tailings Management		
Tailings seepage into materials underneath the dam and long-term management.	Geotechnical and hydrogeological site investigations in 2011 and 2012 examined foundation conditions beneath the TMF embankments to evaluate permeability characteristics. The TMF has been designed to limit seepage at the source, and collect seepage to the maximum practical extent. Detailed results of seepage pathway studies are included in Chapters 12, 13, and in Appendix .	BC MEMNG, BC MOE
Potential effects of the open pit overflowing with tailings-contaminated water on or before year 60.	The open pit will be continuously monitored for the filling elevation and water quality so that management plans and timing can be confirmed to be accurate or corrective action can be taken to adjust the plans. Once the pit has reached an elevation between 1530 m, excess water will be pumped and released to the TMF and subsequently flow through the TMF spillway to the downstream receiving environment. The lowest elevation of the pit wall is expected to be elevation 1555 m, which allows for over 25 m of freeboard to manage storm inflows or to adjust to a revised filling rate. If water quality is unsuitable for release then batch treatment of the open pit may be applied as a contingency.	Working Group Member (unidentified)

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Issue	YMI Response	Raised By
Tailings Management (cont'd)		
Water discharge from the TMF.	Potential downstream effects on water quality due to discharge from the TMF are assessed in Chapter 13 and include predictive water quality modelling (Appendix 13-C).	BC MEMNG
Tailings management and reclamation.	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 Barriere River and Harper Creek valley bottoms. 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.	Working Group Member (unidentified)
Terrestrial Ecosystems and Vegetation		
Effects to species at risk.	Vegetation valued components for the effects assessment were determined by querying the BC Species Explorer to identify wildlife taxa within the Headwaters Forest District or Kamloops Forest District that are red- or blue-listed (CDC) as well as species listed under the federal *Species at Risk Act* and by the Committee on the Status of Endangered Wildlife in Canada and species of regional concern and species of interest to First Nations (Appendix 15-A, Table 1).	EC
Loss of wetlands/meadow complexes.	The Application will assess potential effects of the Project on wetlands (Chapter 15)	BC MFLNRO
Traditional Knowledge/Traditional Use (TK/TU)		
Consideration of TK during the planning and conduct of field activities.	The consideration of TK, where available and relevant, during the Pre-Application phase, including the planning and conduct of field activities, is discussed in section 22.3.6 of Chapter 22.	CEA Agency
Water Quality and Aquatic Resources		
Consequences of water quality not being an acceptable standard for reintroduction into the watershed in year 60.	Water management design now includes discharge from the TMF at closure. Storage of potentially poor quality water in the open pit after year 59 prior to discharge is no longer included in Project design.	Working Group Member (unidentified)
Referencing Canadian Environmental Quality Guidelines.	References to Canadian Environmental Quality Guidelines are included in Appendix 13-C. The water quality effects assessment considered BC guidelines where they existed as this is a BC project.	BC MOE
Potential of neutral condition metals leaching.	Neutral metal leaching was considered in development of geochemical source terms (Chapter 6) that are included in water quality predictions (Appendix 13-C). The water quality effects assessment (Chapter 13) includes the results of this predictive water quality model.	BC MEMNG
Seepage and run-off including water diversion and groundwater.	The principle design objectives for the waste rock stockpiles and TMF are to ensure protection of the regional groundwater and surface water during both Project Operations, Closure and Post- Closure (i.e., long-term), and to achieve effective reclamation at Closure. The design and location of the waste rock stockpiles and TMF has taken into account the following requirements: • situating the TMF and waste rock facilities away from sensitive environmental features including fish bearing drainages • clustering the facilities to minimize the overall footprint • permanent, secure, and total confinement of all solid waste materials within engineered disposal facilities • control, collection, and removal of free-draining liquids from the waste and tailings facilities during operations for recycling as process water to the maximum practical extent • prevention of acid rock drainage and minimization of metal leaching from reactive tailings and waste rock • staged development of the facility over the life of the project' and control, collection, and removal of free-draining liquids from the waste and tailings facilities during operations for recycling as process water to the maximum practical extent	BC MOE
Metal mine effluent and water quality.	The effect of mine effluent on downstream water quality will be assessed in Chapter 13.	EC

Appendix 3-J. Government Agencies Issues Tracking Table

Issue	YMI Response	Raised By
Water Quality and Aquatic Resources (cont'd)		
Ensure baseline studies on water quality modelling cover the necessary parameters.	Water quality baseline studies included the necessary parameters to support water quality modelling.	BC MEMNG
Groundwater seepage.	Groundwater seepage pathways from the open pit, NPAG waste rock, LGO stockpiles, and TMF have been incorporated into the water quality model (Appendix 13-C) and the effects on water quality will be assessed in Chapter 13.	BC MEMNG
Mine operations causing acute toxicity within the initial dilution zones.	Acute toxicity within the initial dilution zone (at modelling nodes) is assessed in Chapter 13, Section 13.XX.	BC MOE
Need to consider particulates in runoff water in the impact assessment.	Particulate in runoff water are assessed in Chapter 13, Section 13.XX as well as Chapter 14, Section 14.XX, as well as Chapter 16, Section 16.XX.	BC MOE
Seepage from the LGO stockpiles.	Predicted seepage pathways sourced in the LGO stockpiles are documented in Appendix 11-B. Proposed mitigation measures to minimize and capture this seepage are described in Chapter 11 (section 11.5.2). The Groundwater Management Plan (section 23.9) provides for monitoring down-gradient of the PAG LGO stockpile and an adaptive management strategy to respond if water quality does not meet the specified performance objectives.	BC MOE
Sediment surrounding the mine site and minimization of run-off.	A Sediment and Erosion Control Plan, Site Water Management Plan will mitigate risks to water quality. The effects of the Project on surface water quality will be assessed in the Application.	EC
Present a more realistic upperbound source than the 95th percentile.	Geochemical source terms (Chapter 6) that are included in water quality predictions (Appendix 13-C) considered a range of parameters. A modified Upper Bound Case is in development. The water quality effects assessment (Chapter 13) includes the results of the predictive water quality model.	BC MOE
Potential need for a replacement long-term monitoring station for water quality.	The Fish and Aquatic Effects Monitoring Plan (Chapter 24.7) outlines the proposed monitoring program for water quality. The monitoring program will be further developed, with consultation, during the permitting process.	BC MFLNRO
Wildlife and Wildlife Habitat		
Consideration of bear/human interactions during construction and operation of the Project.	A Wildlife Management Plan (Section 24.20) will be instituted for all Project phases, and will provide clear procedures for avoiding bear encounters and for handling those that do occur (e.g., Bear Smart - waste management, education and enforcement).	BC MFLNRO
Effects of mine footprint on wildlife.	The impacts of the Project footprint on wildlife has been assessed using the following effects: habitat alteration, disturbance and displacement and mortality (Chapter 16). Mitigation measures for mine footprint effects to wildlife are presented in the Wildlife Management Plan (Section 24.20).	BC MFLNRO
Effects to migratory birds.	Effects to migratory birds have been assessed in Chapter 16.	EC
Effects to species at risk.	Wildlife valued components for the effects assessment were determined by querying the BC Species Explorer to identify wildlife taxa within the Headwaters Forest District or Kamloops Forest District that are red- or blue-listed (CDC) or Identified Wildlife as well as species listed under the federal *Species at Risk Act* and by the Committee on the Status of Endangered Wildlife in Canada and species of regional concern and species of interest to First Nations (Appendix 15-A, Table 1).	EC
Moose use of the project area.	The Application will assess potential effects of the Project on moose (Chapter 16)	BC MFLNRO
Helicopters disturbing mountain goats.	HCMC has stated that helicopters will not be required as part of the Project due to the availability of alternative ground access	BC MFLNRO