Appendix 2-C

Summary of Issues, Concerns, and Interests Raised by Government Agencies during the Pre-Application Stage

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Topic	Summary of Issue, Concern or Interest	Raised by	Proponent Response
Environment	Potential effects of the Project, including water discharge, on stream fish habitat, water quality and load	CEAA, BC MOE, BC MEM	Water management is a key factor in the Project's basic engineering design. Substantial effort has been invested to develop Project infrastructure that minimizes reliance upon, or potential effects to, local water sources. This includes a seepage collection system under the CCR piles, re-use of contact water as make-up water in the coal preparation plant and constructing clean water diversions to minimize contact water. Mitigation of the effects of mine construction, operation and closure will include (where appropriate): • diversion of water around construction areas; • application of erosion and sediment control measures to minimize the concentration and channelization of water over disturbed areas; • regular inspection of water management infrastructure to ensure continued function. Potential effects of the Project on water quality and mitigation measures is further described in Chapter 8 (Assessment of Surface Water and Aquatic Environment Effects) and associated appendices.
	Potential effects of the Project on water quality due to underground seepage	BC MEM, BC MOE (EPD)	It is recognized that at this stage in Project planning, there is a high degree of uncertainty associated with estimating groundwater inflows to the underground mine. Two independent means of estimating inflow rates have been developed to support mine planning, and sensitivity analysis has been completed both of potential inflow rates, and of estimated water quality. Potential effects of the Project on groundwater and water quality and associated mitigation measures are further described in Chapter 7 (Assessment of Groundwater Effects) and Chapter 8 (Assessment of Surface Water and Aquatic Environment Effects) and associated appendices.
	ML/ARD management	BC MEM	The ML/ARD characterization is based on the Ministry of Environment's Environmental Code of Practice for Metal Mines sections 3 and 4 and Part 10 of the Health, Safety and Reclamation Code for Mines in British Columbia (BC MEMPR 2008), which contain guidance and requirements for acid rock drainage and metal leaching prediction, prevention and reporting. ML/ARD prediction, prevention and mitigation in British Columbia are further guided by the following documents: o Policy for Metal Leaching and Acid Rock Drainage in British Columbia (BC MEM and BC MELP 1998); o Guidelines for Metal Leaching and Acid Rock Drainage at Mine sites in British Columbia (Price and Errington 1998); o List of Potential Information Requirements in Metal Leaching/Acid Rock Drainage Assessment and Mitigation Work (Price 2005); and o Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials (Price 2009).
	Potential effects of the Project on wetland ecological function and conservation	Environment Canada	The Proponent will protect wetlands by (among other measures) developing reserve and buffer areas and scheduling work activities during time periods during which risk of effects are minimal (e.g. during the frozen ground period and low water conditions). Potential effects of the Project on wetlands and mitigation measures are further described in Chapter 12 (Assessment of Wetlands Effects).
	Potential effects of the Project on the Quintette caribou herd	Environment Canada	The Project design will minimize wildlife habitat effects by creating a small footprint, utilizing already disturbed land, and using existing access roads. Over the course of Project design, the Proponent chose to make a substantial change from an approximately four kilometre overland conveyor that would cross Murray River to a second underground decline under Murray River. This change will reduce potential effects to wildlife mobility associated with linear developments, fish habitat, and archaeological sites. The Project will minimize direct interaction with wildlife by: adhering to wildlife sensitive periods, guidelines and recommended minimum target buffer distances for important species and sensitive wildlife habitats; controlling traffic to avoid collisions with wildlife; minimize attractants; and enforcing a no hunting policy for employees and contractors. Potential effects of the Project on wildlife and mitigation measures is further described in Chapter 13 (Assessment of Wildlife Effects).
Social	Temporary Foreign Workers and associated social, economic and health issues need to be addressed	BC EAO	The Proponent has invested $15 million to develop worker housing in Tumbler Ridge. The Proponent is providing worker housing in Tumbler Ridge for the Murray River Project at no cost to the TFWs. The Proponent will provide TFWs with English language training. In addition, the Proponent will provide new TFWs with an information package about Tumbler Ridge and the surrounding region that will include information about community services, associations, and activities. The Proponent will also actively seek to sponsor community events that serve to bring TFWs together with current Tumbler Ridge residents. Further information about the effect of the Project on health care and mitigation measures is located in Chapter 15 (Assessment of Social Effects).

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Topic	Summary of Issue, Concern or Interest	Raised by	Proponent Response
Land Use	Potential effects of the Project on navigable waters	Transport Canada	The waters identified as interacting with the Project are not included in the NPA's List of Scheduled Waters. Out of a total of 19 stream reaches and crossings assessed for the Project, only Murray River was found to be navigable. This report (Appendix 16-B) concludes that based on the data available and presented, the common law right of navigation is not likely to be infringed upon on any of the waters identified as interacting with project components. Potential effects to navigation are addressed Chapter 16 (Assessment of Land Use Effects).
	Potential land use effects resulting from tenure overlap	BC EAO, BC MOE	The Project could result in the sterilization of resources for PNG tenure holders due to liberation of coalbed gas. The Proponent will engage in discussions with potentially-affected PNG tenure holders to identify acceptable mitigation measures. The Project could affect the quality of wind resources accessible to wind power companies due to potential subsidence affecting the placement of wind towers. The Proponent will engage in discussions with potentially-affected wind power companies to identify acceptable mitigation measures. The Project could affect existing infrastructure for other tenure holders due to subsidence. The Proponent has designed the Project to include a Longwall Exclusion Zone - a horizontal buffer designed to protect existing infrastructure. Where infrastructure exists outside of the Longwall Exclusion zone that may be affected by subsidence, the Proponent will engage with tenure holders to identify acceptable mitigation measures. Potential effects to land use will be addressed in Chapter 16 (Assessment of Land Use Effects).
	Potential effects of the Project on subsidence	BC MOE (EPD)	The Project could affect existing infrastructure for other tenure holders due to subsidence. The Proponent has designed the Project to include a Longwall Exclusion Zone - a horizontal buffer designed to protect existing infrastructure. Where infrastructure exists outside of the Longwall Exclusion zone that may be affected by subsidence, the Proponent will engage with tenure holders to identify acceptable mitigation measures. Potential effects to land use will be addressed in Chapter 16 (Assessment of Land Use Effects). Potential effects of subsidence on Terrain Stability could include mass movement, changes to fluvial processes, and soil erosion (Chapter 10 - Assessment of Terrain Effects). Effects on Terrestrial Ecosystems could include loss or degradation of ecologically valuable soils, loss or deterioration of the BC CDC listed and forested ecosystems, and decrease in abundance and quality of harvestable plants (Chapter 11 - Assessment of Effects on Terrestrial Ecology). Subsidence could also lead to losses and degradation of wetlands (Chapter 12 Assessment of Effects on Wetlands). Since the extent or location of effect occurrence is difficult to predict, management and mitigation efforts will reflect the required response level determined at the time of potential event. The initial emphasis will be placed on subsidence monitoring. In case major adverse effects on (terrestrial or wetland) ecosystems or on terrain stability or are identified, HD Mining will investigate the causes and undertake remedial actions including review of the opportunities to modify the mine plan.
	Potential effects of the Project on recreation trails	BC MJTSD	There are no hiking trails within the Land Use LSA, though recreationalists will travel through the LSA to access the Mt. Herman, Barbour Falls and Nesbitt's Knee Falls trails. The Project will not inhibit access to these trails. Some vantage points along trails within the RSA, especially on the east side of the Murray River, may make the Project visible to hikers. The project has been designed to minimize the surface footprint, and is adjacent to existing developments. During Construction and Operation, the project will be managed to limit potential effects to the quality of recreational experience by controlling noise sources and traffic. Potential effects to recreation are addressed in Chapter 16 (Assessment of Land Use Effects).
	Fishing and other water-based recreation	BC MJTSD	Access to the Murray River for fishing and water based recreation will not be affected by the Project. Potential effects to fish and fish habitat are assessed in Chapter 9 (Assessment of Fish and Fish Habitat Effects) and potential effects to recreational land use are addressed in Chapter 16 (Assessment of Land Use Effects).

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Topic	Summary of Issue, Concern or Interest	Raised by	Proponent Response
Health	Potential effects of liberated methane on air quality	Health Canada	Coalbed gas management is a critical part of safe mine operation. A description of coal bed gas management that will be employed at the Project is provided in Chapter 3 (Project Description). The Project will employ an inter-connected drainage system to collect coalbed gas and vent it to the surface via the ventilation shaft. Depending on the volume of methane released, HD Mining may consider other options such as catalytic oxidation, flaring or capture and use. Potential effects of the Project and mitigation measures are further described in Chapter 6 (Assessment of Air Quality Effects) and Chapter 24.2 (Air Quality and Dust Control Management Plan).
	Effects of particulate matter (dust deposition) on air quality	Health Canada	Air quality modelling has been completed for the Project (Appendix 6-B). Dust deposition rates were predicted to be above the BC objective along the road. The exceedances extend approximately 1 km from the road, with the majority of exceedances to the east of the road due to the prevailing wind direction. The model has been run assuming no anthropogenic dust control; however, mitigation measures such as road watering would reduce the amount of unpaved road dust by 75%. Other means of dust control are described in Chapter 24.2 (Air Quality and Dust Control Management Plan). Based on preliminary analysis of the air quality model results no risks to human health would be expected due to the Project-related changes in air quality. Potential effects of the Project on human health and mitigation measures are further described in Chapter 18 (Assessment of Health Effects).
	Potential effects of noise on human health	Health Canada	Noise modelling has been completed for the Project (Appendix 18-C) to support the assessment of human health. Potential noise effects from the Project will be mitigated by : * minimizing the number of trips required; * reducing speeds to 50 km/hour near communities (i.e., Tumbler Ridge); * adhering to a vehicle maintenance program; * following maintenance procedures and schedules provided by vehicle manufacturers; * using vehicle noise suppression technologies where possible; * avoiding the use of engine brakes, reversing alarms, horns, whistles, and bells near communities; and * providing noise awareness training for Project transportation personnel. There are no predicted residual effects of the Project on human health due to noise and mitigation measures are further described in Chapter 18 (Assessment of Health Effects).
	Potential effects of the Project on drinking water	Health Canada	A water quality prediction model has been developed for the Project (Appendix 8-E). Results of the model were compared against drinking water standards. Based on the water quality predictions, and the locations of potential drinking water use, no risks to human health would be expected due to the Project-related changes in water quality. Potential effects of the Project on human health and mitigation measures are further described in Chapter 18 (Assessment of Health Effects).
	Country foods	Health Canada	A baseline country foods screening level risk assessment was undertaken to assess the risk to consumers of country foods due to incidental consumption of metals present in country foods. No risks to human health were identified in the baseline country foods assessment from the consumption of representative country foods (moose, snowshoe hare, grouse, trout, whitefish, and berries). The quality of country foods was also considered as part of the effects assessment for human health. No predicted residual effects to human health are expected due to the consumption of country foods. Potential effects of the Project on human health and mitigation measures are further described in Chapter 18 (Assessment of Health Effects).
	Transportation and storage of dangerous goods	Health Canada	Information about the type, estimated amount, storage, use, handling, and disposal of hazardous materials, reagents, and dangerous goods is provided in the Project Description (Chapter 3).