Table of Concordance

This section provides a comprehensive Table of Concordance, as required by the approved Application Information Requirements (AIR). The intent of the Table of Concordance is to cross-reference the approved AIR with the Application / Environmental Impact Statement (including appendices) so that the information requested can be readily found in the Application.

The Table of Concordance is divided into two main parts: *Application Information Requirements* and *Application / Environmental Impact Statement*, with a final column for comments. The table presents the AIR as direct quotes in the *Description* column in the same order they appear in the approved AIR. Columns on the left-hand side of the table, under the heading *Application Information Requirements*, include *AIR Section No.*, *Title*, and *Description*. The right-hand side of the table provides the corresponding section of the Application / Environmental Impact Statement, with columns for cross-references to *Main Volumes Chapter No.*, *Section*, *Environmental Management Plans*, and *Appendix*. On the far right, there is a column for descriptive comments, if appropriate.

The following figure provides an annotated illustration of the Table of Concordance. In the electronic version of this table, the right-hand side columns under the *Application / Environmental Impact Statement* heading are hyperlinked to the main report text and appendices.

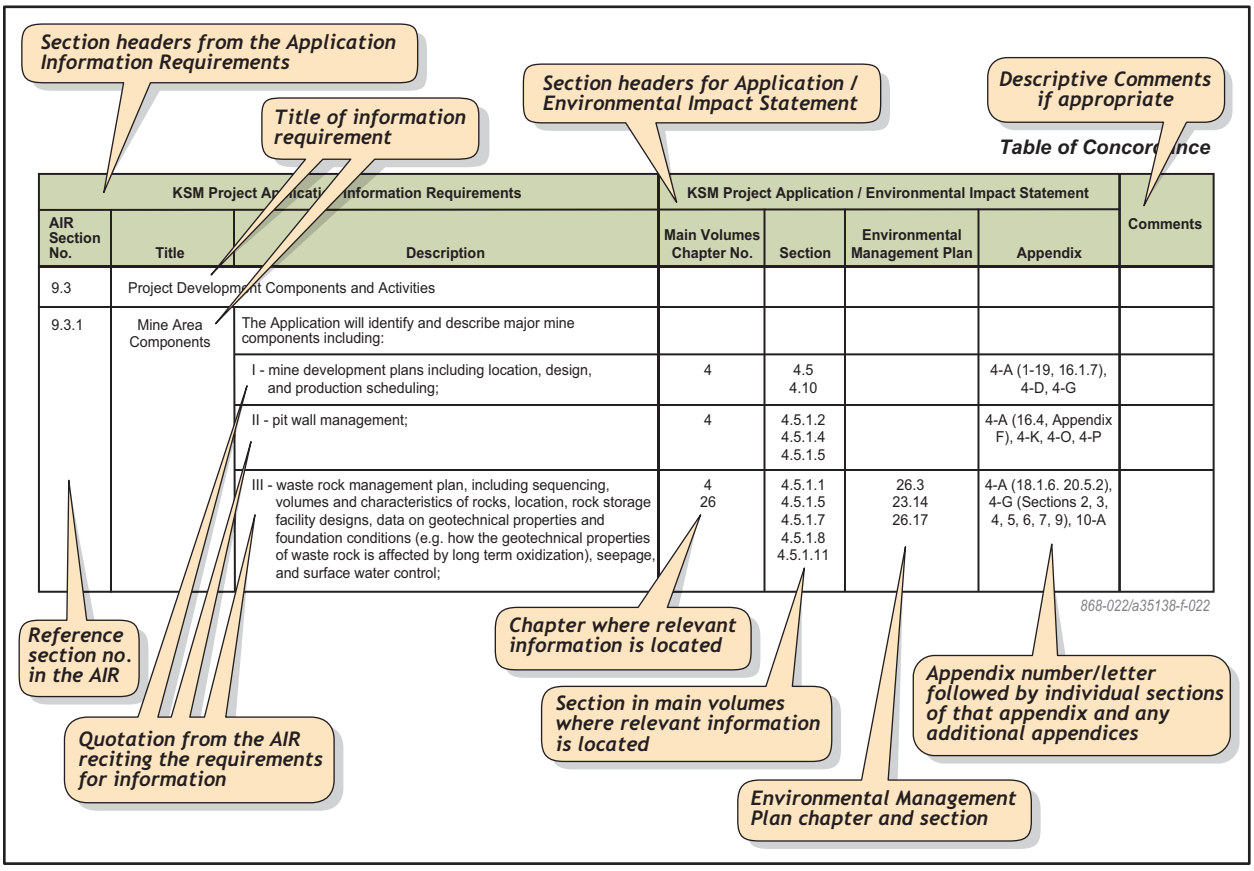

Table of Concordance

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
1	Executive Summary	An Executive Summary of the Application will be prepared as a stand-alone document that presents sufficient information to provide the reader with an overview of the proposed Project and the findings of the environmental assessment. The Executive Summary will contain a summary of the proposed Project information including, but not limited to, the following:	Executive Summary				
		• A description of the proposed Project and its environmental setting;	Executive Summary				
		• A summary of the estimated economic benefits of the Project;	Executive Summary				
		• A summary description of information distribution, Nisga'a Nation, First Nations and public consultation activities undertaken;	Executive Summary				
		• A summary of issues raised and solutions suggested during the consultations;	Executive Summary				
		• An overview of the Proponent's proposed consultations on the Application;	Executive Summary				
		• A summary of Valued Components (VCs) assessed;	Executive Summary				
		• A general overview of the key potential effects of the proposed Project and proposed mitigation and management measures;	Executive Summary				
		• A brief description of any significant residual effects of the proposed Project, including cumulative effects;	Executive Summary				
		• A summary of Nisga'a Nation considerations;	Executive Summary				
		• A summary of First Nations' Considerations; and	Executive Summary				
		• The proponent's overall conclusions	Executive Summary				
2	Preface	This section of the Application will indicate why the document is being prepared and how it has been developed and will include the following information:	Preface				
		• an indication that the proposed Project is subject to review under the *Environmental Assessment Act* (BCEAA), following from the issuance of an order under Section 10 (1) (c) of the BCEAA and pursuant to the procedural order issued under Section 11 of BCEAA;	Preface				
		• an indication that the proposed Project is subject to a comprehensive study under the Canadian Environmental Assessment Act (CEAA);	Preface				
		• an indication that the Project is located in part within the Nass Area and that the environmental assessment is therefore subject to the relevant provisions of the Nisga'a Final Agreement;	Preface				
		• affirmation that the Application has been developed in accordance with the Application Information Requirements (AIR) approved by the British Columbia Environmental Assessment Office (EAO),	Preface				
		• and complies with the relevant instructions in the EAO's procedural order; and	Preface				
		• identification of the agencies, Nisga'a Nation, Aboriginal groups and other parties involved in the development of the Application.	Preface				
		• The preface will also describe the structure of the Application.	Preface				
		• The Application will generally be presented in an order similar to the approved AIR.	Preface				
3	Acknowledgements	• The Application will contain an appendix which lists all of the Proponent's personnel and consultants who contributed to, or provided information for, the Application	Acknowledgements				

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
4	Table of Concordance	• The Application will contain a Table of Concordance that clearly indicates how the requirements contained in the approved Application Information Requirements have been met by the information provided.	Table of Concordance				
5	Table of Contents	• The Application will include a comprehensive Table of Contents that provides detailed chapter and section headings and sub-headings, and lists all figures, tables and appendices.	Table of Contents				
6	Acronyms and Abbreviations	• The Application will include a list of commonly used abbreviations and acronyms and their meanings.	Acronyms and Abbreviations				
Part A - Introduction and Background							
Overview of the Proposed Project							
7.1	Proponent Description	• The Application will describe the Proponent, including information on the history of the Proponent and contact information.	1	1.1			
		The Application will describe Seabridge Gold's intention to design and obtain permits for an economically feasible and environmentally responsible operation, to be sold to or partnered with another company for:	1	1.1			
		• construction, operation, decommissioning and closure;	1	1.1			
		• the implementation of mitigation measures and monitoring, including closure monitoring; and	1	1.1			
		• the management of potential adverse environmental, social, health, heritage and economic effects.	1	1.1			
7.2	Description of the Setting, Proposed Project and Scope of Project						
7.2.1	Project Setting	• The Application will describe the geographic setting in which the Project is proposed to take place and include maps at appropriate scales to illustrate the regional setting and clearly locate the proposed Project within that setting.	1	1.6			
		• Site plans, sketches and photographs will be used as necessary to indicate proposed Project components, site features and activities.	1	1.6			
7.2.2.1	Proposed Project - History and Tenure						
7.2.2.1	History	• The Application will provide a summary of the history of exploration and mining activity on and around the KSM Project property since its initial discovery.	1	1.4			
7.2.2.2	Tenure	• The Application will describe the ownership status and development rights held for the KSM Project property, including a listing of existing mineral tenures and their status, and other mineral tenures held in the vicinity of the proposed Project.	1	1.5			
7.2.3	Scope of the Proposed Project	• The Application will describe the scope of the proposed Project	1	1.72			
7.3	Need for and Purpose of the Proposed Project	• The Application will identify the main function of the proposed Project.	1	1.3.1, 1.3.2			
		• In this context, the Application will present the rationale for proceeding with the development at this time within the context of regional, provincial and federal economies, as well as global implications of supply and demand on metal mines and markets.	1 32	1.3.1 32.[1-3]			
		• The Application will include a summary of the economic feasibility of mining the combined Kerr, Sulphurets, Mitchell and potentially Iron Cap deposits.	1	1.3.1.1		4-C	
		• This analysis will identify key commercial assumptions used in the analysis such as metal prices and concentrate shipping and refining charges.	1	1.3.1.1			
7.4	Benefits of the Proposed Project	• The Application will identify and describe the benefits of the proposed KSM Project for communities in northwestern British Columbia, British Columbia as a whole and Canada.	1	1.3.1.1, 1.3.1.2			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
7.4	Benefits of the Proposed Project	The Application will provide preliminary feasibility level estimates of:	1	1.3.1.1, 1.3.1.2			
		• initial capital construction costs (capital costs plus labour as detailed in Section 9.6) with related aggregate costs for buildings, equipment and earthworks;	20	20.6.1		20-B (2.3)	
		• life of project capital costs, noted as current dollar value or Net Present Value;	20	1.1, 20.6.1		20-B	
		• annual operating costs, excluding labour;	20	20.6.1, 20.6.2			
		• costs for decommissioning/closure/reclamation estimated for a conceptual closure plan;	27	27.10.1			
		• employment in person years at each stage of the proposed Project (detailed in Section 9.5.3);	1	1.3.1.2, 20.7.2			
		• potential indirect employment for the construction and operation phases of the proposed Project, including any assumptions relating to industry-specific multipliers or other multipliers used;	1	1.3.1.2, 20.7.2		20-B	
		• annual Project-related government revenues including any relevant:	1	1.3.1.1, 20.7.3			
		• local/municipal (property taxes, other)	20	20.7.3			
		• Regional District (taxes, other);	20	20.7.3		20-B (3.2)	
		• provincial (income tax, sales tax, lease, licence and tenure, royalties, other); and	1	1.3.1.1, 20.7.1.2		20-B (3.2, 3.3)	
		• federal (income tax, Harmonized Sales Tax, payroll taxes, other).	1	1.3.1.1, 20.7.1.2		20-B (3.3)	
Assessment Process							
8.1	Regulatory Context	• The Application will identify government policies and regulations that have a bearing on the proposed Project as well as the need for the EA under the authority of the CEAA and BCEAA.	2	2.1			
8.1.1	Provincial Review	• The Application will briefly explain the provincial EA process, including the features of the proposed Project that cause it to be reviewable under the BCEAA, and the role of the Application in the overall EA process.	2	2.1.1.1, 2.1.1.2			
8.1.1.1	Pre-Application Stage	• The Application will summarize any legal orders issued pursuant to the BCEAA relating to the review of the proposed Project.	2	2.1.3.1			
		• The Application will further summarize interactions with provincial agencies related to the development of the environmental baseline and the AIR.	2	2.1.3.1			
8.1.1.2	Application Stage	• The Application will describe the process used by the EAO to review the Application, including the anticipated timelines.	2	2.1.3.2			
8.1.1.3	Provincial Legislation, Policies and Permits	• The Application will identify relevant provincial legislation and policies applicable to the proposed Project.	2	2.1.4			
		The relevant legislation may include most (if not all) of the following, and perhaps others:	2				
		• *Drinking Water Protection Act*	2	2.1.4			
		• *Environmental Assessment Act*	2	2.1.4			
		• *Environmental Management Act*	2	2.1.4			
		• *Forest Act*	2	2.1.4			
		• *Forest Practices Code of British Columbia Act*	17	17.1.4.2			
		• *Forest Range and Practices Act*	18	18.1.3			
		• *Health Act*	2	2.1.4			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
8.1.1.3	Provincial Legislation, Policies and Permits	• *Heritage Conservation Act*	21	21.1			
		• *Highway Act*	2	2.1.4			
		• *Land Act*	2	2.1.4			
		• *Mineral Tenure Act*	2	2.1.4			
		• *Mines Act*	2	2.1.4			
		• *Nisga'a Final Agreement Act*	2	2.1.7			
		• *Pipeline Act*		2.1.4			repealed
		• *Water Act*	2	2.1.4			
		• *Wildlife Act*	18	18.1.3			
		• The Application will identify provincial regulatory approvals that may be required for the proposed Project, and which of these approvals, if any, will be requested for concurrent review with the Application.	2	2.1.4.1			
8.1.2	Federal Review	• The Application will briefly explain the federal EA process, including the features of the proposed Project that cause it to be reviewable under the CEAA and those that determine the type of review under the CEAA, and the role of the Application in the overall EA process.	2	2.1.2			
		• The Application will summarize the progress of the CEAA process with regards to the proposed Project to the time of the submission of the Application.	2	2.1.2			
		• It will also describe the anticipated activities and timelines through to the conclusion of the CEAA process.	2	2.1.2.4			
8.1.2.1	Federal Legislation	• The Application will identify relevant federal legislation, and international treaties, agreements and conventions, applicable to the proposed Project.	2	2.1.5			
		The relevant legislation may include most (if not all) of the following, and perhaps others:					
		• *Canadian Environmental Assessment Act*	2	2.1.5			
		• *Canadian Environmental Protection Act*	6 & 7	6.1.2.1; 7.1.2			
		• *Explosives Act*	2	2.1.5			
		• *Fisheries Act*	2	2.1.5			
		• *International Boundary Waters Treaty Act*	2	2.1.6			
		• *International River Improvements Act*	2	2.1.6			
		• *Migratory Birds Convention Act*	18	18.1.3			
		• *Navigable Waters Protection Act*	2	2.1.5			
		• *Nisga'a Final Agreement Act*	2	2.1.7			
		• *Pacific Salmon Treaty Act*	2	2.1.6			
		• *Radio Communication Act*	2	2.1.5			
		• *Species at Risk Act*	18	18.1.3			
		• *Transportation of Dangerous Goods Act*	4	4.9.6		22-C	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
8.1.2.1	Federal Legislation	• The Application will identify federal regulatory approvals that may be required for the proposed Project.	2	2.1.5			
8.1.2.2	Metal Mining Effluent Regulations Schedule 2 Amendment	• The Application will describe the implications for the proposed Project of Schedule 2 of the Metal Mining Effluent Regulations under the Fisheries Act and the process required to amend the Schedule, if necessary.	2	2.1.5.1			
8.2	Nisga'a Final Agreement	Canada and British Columbia have determined that, since the proposed Project may reasonably be expected to have adverse environmental effects on residents of Nisga'a Lands, Nisga'a Lands, or Nisga'a interests set out in the Nisga'a Final Agreement, the proposed Project triggers paragraph 6 to 10 of Chapter 10 of the Nisga'a Final Agreement (NFA).	2	2.1.7			
		• The Application will identify the additional provisions of the Nisga'a Final Agreement that the parties to the NFA have advised are applicable to the proposed Project.	2	2.1.7			
8.3	Land Use	• The Application will describe the current land use context and address how proposed Project activities will interact with the objectives of the Cassiar Iskut-Stikine Land and Resource Management Plan (LRMP) and the draft Nass South Sustainable Resource Management Plan.	23	23.1		23-A	
		• The Application will describe land uses in the area of the proposed Project, including resource development, fishing, recreational use, and registered hunting, trapping and guiding.	23	23.2			
		• The Application will describe third party tenures adjacent to the proposed Project.	23	23.1		23-A	
		• The Application will also describe the Nass Area, the Nass Wildlife Area, Nisga'a Lands, Nisga'a Fee Simple Lands and Nisga'a Nation Commercial Recreation Tenure areas as defined by the Nisga'a Final Agreement and the adjacent or overlapping land claims asserted by the First Nations with whom the EAO has directed the Proponent to consult. The description of the extent of the asserted land claims will be based on information provided by the Province.	23	23.1		23-A	
		• The Application will identify the local government(s), applicable official community plans and communities potentially affected by the proposed Project.	23	23.1		22-A	
		• The Application will identify existing land uses and activities in the biophysical regional study area and reasonably anticipated activities that may contribute cumulative environment, economy, heritage, health or social effects.	23	23.1, 23.9			
8.4	Nisga'a Nation Information Distribution and Consultation	• The environmental assessment will be carried out in a manner that complies with the Nisga'a Final Agreement (NFA).	3 29	3.2 29.1			
		• In addition to any other requirements of these Application Information Requirements, the Application will provide information which will assist British Columbia and Canada in satisfying their obligations to the Nisga'a Nation in respect of the proposed Project under the Nisga'a Final Agreement.	29	29.1, 29.6		29-A 29-B 29-C 29-D	
		• These information requirements will be clearly identified in writing by British Columbia and Canada prior to the anticipated submission of the Environmental Assessment Certificate Application.	3	3.2.1			
		The provisions of Chapter 10 applicable to the conduct of the environmental assessment are paragraphs 6 through 10. Note, in particular the following paragraphs:	2 3 29	2.1.7, 3.2.1, 3.2.2, 29.1			
		6) If a proposed project that will be located off Nisga'a lands may reasonably be expected to have adverse environmental effects on residents of Nisga'a Lands, Nisga'a Lands or Nisga'a interests set out in this Agreement, Canada or British Columbia, or both, as the case may be, will ensure that the Nisga'a Nation:	2 3 29	2.1.7, 3.2.1, 3.2.2, 29.1			
		a) receives timely notice of, and relevant available information on, the project and the potential adverse environmental effects;	2 3 29	2.1.7, 3.2.1, 3.2.2, 29.1			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
8.4	Nisga'a Nation Information Distribution and Consultation	b) is consulted regarding the environmental effects of the project; and	2, 3, 29	2.1.7, 3.2.1, 3.2.2, 29.1			
		c) receives an opportunity to participate in any environmental assessment under federal or provincial laws related to those effects, in accordance with those laws, if there may be significant adverse environmental effects.	2 3 29	2.1.7, 3.2.1, 3.2.2, 29.1			
		8) All environmental assessment processes referred to in this Agreement will, in addition to the requirements of applicable environmental assessment legislation:					
		e) assess whether the project can reasonably be expected to have adverse environmental effects on residents of Nisga'a Lands, or Nisga'a interests set out in this Agreement and, where appropriate, make recommendations to prevent or mitigate those effects;	2 3 29	2.1.7, 3.2.1, 3.2.2, 29.1, 29.4, 29.5, 29.6			
		f) assess the effects of the project on the existing and future economic, social and cultural well-being of Nisga'a citizens who may be affected by the project;	2 3 29	2.1.7, 3.2.1, 3.2.2, 29.1, 29.4, 29.5, 29.6			
		i) take into account any agreements between the project proponent and the Nisga'a Nation or a Nisga'a Village concerning the effects of the project;	2 3 29	2.1.7, 3.2.1, 3.2.2 29.1			
		10) In exercising decision-making authority for projects that may have adverse environmental effects on residents of Nisga'a Lands, Nisga'a Lands, or Nisga'a interests set out in this Agreement, the decision maker will take into account, but will not be bound by, any agreement between the Nisga'a Nation or a Nisga'a Village and the project proponent concerning the effects.	2 3 29	2.1.7, 3.2.1, 3.2.2 29.1			
While the obligation to comply with the NFA is an obligation of the Province and Canada, the Proponent is generally in the best position to provide information about their proposed project; to answer questions about the project; to work both independently; and, where possible, in concert with the Nisga'a Nation to gather the information that the Province and Canada need in order to carry out their obligations under the NFA; and to suggest possible measures for preventing, avoiding, minimizing, mitigating or compensating the proposed projects' potential adverse effects. To assist the Crown in meeting its additional obligations under paragraph 8 and 10, the EAO and federal authorities under CEAA require the following from Seabridge Gold:							
		• carry out and report on steps taken under paragraph 6 of Chapter 10 of the NFA;	3	3.2		3-J	
		• provide the information, as described in these Application Information Requirements or other written notices provided by Canada or British Columbia, necessary for the Province and Canada to conduct the assessments required by paragraph 8(e) and 8(f) of Chapter 10 of the NFA including information or recommended measures to prevent or mitigate environmental adverse effects on residents of Nisga'a Land or Nisga'a interests; and	29	29.1, 29.4, 29.5, 29.6		29-A, 29-B, 29-C	
		• provide information regarding any agreements between the Proponent and the Nisga'a Nation or a Nisga'a Village concerning the effects of the proposed Project so that the Province and Canada can take those agreements into account as required by paragraph 8(i) in Chapter 10 of the NFA.	3 29	3.2 29.1			in discussions related to project agreements
8.4.1	Pre-Application Consultation	• The Application will describe the Proponent's information distribution and consultation activities with the Nisga'a Nation, as represented by the Nisga'a Lisims Government, completed during the pre-application stage of the environmental assessment process, pursuant to the Section 11 Order issued by the EAO.	3	3.2		3-J	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
8.4.1	Pre-Application Consultation	• The Application will report on the results of efforts to identify any adverse environmental effects on residents of Nisga'a a Lands, Nisga'a Lands, or Nisga'a interests set out in the Nisga'a Final Agreement and the effects of the proposed Project on the existing and future economic, social and cultural well-being of Nisga'a citizens who may be affected by the proposed Project as identified in information from the Nisga'a Nation and other sources; and measures to avoid or mitigate the potential adverse effects and/or to otherwise address or accommodate Nisga'a Nation concerns.	3 20 21 22 23 24 25 29	3.2.2 20.7 21.7 29.4, 29.5, 29.6		3-J, 3-K	
		• The Application will demonstrate consistency with the manner of consultation directed by the EAO's Project Assessment Manager or Director.	3	3.2			
8.4.2	Planned Consultation during Application Review	• The Application will describe Seabridge Gold's proposed plans for consultation with the Nisga'a Nation during the Application review stage, as directed by Section 19 of the Section 11 Order.	3	3.2.6		3-L	
		• This will include a proposed process for information exchange with the Nisga'a Nation, identification of issues and resolution of outstanding issues identified during the environmental assessment.	3	3.2.6		3-L	
		The Application will:					
		• Provide a summary of past and planned consultation activities.	3	3.2 3.2.6		3-J	
		• The Application will describe Nisga'a Nation interests identified through consultation and will describe the potential effects of construction and operation activities on those interests.	3 29	3.2.4, 29.4		3-K	
		• Commit to providing a summary during the Application review period of key issues and responses to these issues (issues will be summarised in a tracking table, and will be posted on EAO's electronic Project Information Centre (ePIC).	3	3.2.6		3-L	
8.5	First Nation Information Distribution and Consultation	• The Section 11 Order directs the Proponent to consult with the Tahltan Central Council (on behalf of the Tahltan Nation), the Gitanyow wilp Wiiltsx-Txawokw, and the wilps of the Gitxsan First Nation (as identified by the Gitxsan Hereditary Chiefs Office), including, but not limited to, wilp Skii km Lax Ha	3 30	3.3 30.1		3-M 3-N	
8.5.1	Pre-Application Consultation	• The Application will describe the Proponent's information distribution and consultation activities undertaken with each First Nation during the pre-application stage of the environmental assessment process, pursuant to the Section 11 Order issued by the EAO.	3 30	3.3 30.6.1		3-M 3-N 3-O	
		• The Application will report on the results of efforts to identify any specific First Nations interests, as identified in information available from the First Nations and other sources; and measures to avoid or mitigate the potential adverse effects and/or to otherwise address or accommodate First Nations' concerns.	3 30	3.3.3 30.6.1		3-M 3-N	
		• The Application will indicate any arrangements made with First Nations regarding the conduct of traditional use studies or the use of traditional ecological knowledge.	3 30	3.3.1.5 30.6			
		• The Application will demonstrate consistency with the manner of consultation directed by the EAO's Project Assessment Manager.	3 30	3.3 30.6.1			
		• The Application will describe the objectives of the consultation and the methods used, and report interests and issues raised during the consultation and the ways in which the Proponent has responded to the issues, including the measures taken to enhance positive effects, avoid or mitigate the potential adverse effects and/or to otherwise address or accommodate the First Nation's concerns.	3 30	3.3 30.6		3-M 3-N	
8.5.2	Planned Consultation during Application Review	• The Section 11 Order directed Seabridge Gold to describe in the Application Seabridge Gold's proposed plans for consultation with identified First Nations during the Application review stage.	3 30	3.3.4 30.6.2		3-L	
		• These plans will include a proposed process for resolution of outstanding issues relevant to the Application review that are identified during the review.	3	3.3.4			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
8.5.2	Planned Consultation during Application Review	The Application will:					
		• Provide a summary of past and planned consultation activities.	3	3.3-3.3.4		3-M	
		• Commit to providing a summary during the Application review period of key issues and responses to these issues (issues will be summarised in a tracking table, and will be posted on EAO's electronic Project Information Centre (ePIC).	3	3.3.4		3-L	
8.6	Government Agency Information Distribution and Consultation	• In the Application, the Proponent will demonstrate how it has consulted with government agencies and local governments. This will include a description of consultation activities, the issues raised as well as how the Proponent has addressed these issues through mitigation, management and/or proposed Project design plans.	3	3.4		3-P	
8.6.1	Pre-Application Consultation	• Consultation and information sharing with government agencies for the proposed KSM Project has been coordinated primarily by the EAO through its Technical Working Group and its various sub-committees.	3	3.4		3-P	
		• The Proponent has also had many direct contacts with both provincial and federal agencies and with US federal and State of Alaska agencies.	3	3.4		3-P	
		• The Application will describe the consultation and information sharing with agencies that took place during the pre-application stage.	3	3.4		3-P	
		• The Application will describe the objectives of these consultations, the methods used and the issues raised during these consultations.	3	3.4.2		3-P, 3-Q	
		• The application will also describe how the Proponent has responded to the issues identified.	3	3.4.1		3-Q	
8.6.2	Planned Consultation during Application Review	• The Application will include a proposed plan of consultation activities with government (Canadian federal, British Columbia, Alaska-based US federal and State) agencies and local governments during the review of the Application.	3	3.4.3			
		• The Application will also identify the proposed process for attempting to resolve outstanding issues.	3	3.4.3			
8.7	Public and Stakeholder Information Distribution and Consultation	• Public consultation measures must comply with the *Public Consultation Policy Regulation*, BC Reg 373/2002 and the requirements set out in the Section 11 Order issued pursuant to the BCEAA.	2, 3	3.5			
		• In preparing the Application, the Proponent will demonstrate how it has consulted with interested parties that are likely to be affected by the proposed Project, and other parties who may be interested in the proposed Project, as set out in the Section 11 Order issued pursuant to the BCEAA.	3	3.5		3-R	
8.7.1	Pre-Application Consultation	• The Application will describe the Proponent's information distribution and consultation activities undertaken with the general public and relevant stakeholders during the pre-application stage of the environmental assessment process pursuant to the Section 11 Order issued by the EAO.	3	3.5		3-R	
		• The consultation will seek to identify issues, concerns and interests that members of the public and specific stakeholders have regarding the proposed Project.	3	3.5.2		3-S	
		• The Application will describe, with appropriate consideration of the privacy provisions of the *Freedom of Information and Protection of Privacy Act*, consultations undertaken during the pre-application stage with stakeholders (e.g., guide outfitters, trappers, forestry, mining, outdoor recreational interests, and other tenure holders).	3	3.5.7			
		• The Application will describe the objectives of these consultations, the methods used and the issues raised during these consultations.	3	3.5		3-S	
		• The application will also describe how the Proponent has responded to the issues identified.	3	3.5.2		3-S	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
8.7.1	Pre-Application Consultation	• The application will also describe information sharing and other discussions that have occurred with Alaska-based federally recognized tribes in the United States whose interests may be affected by the proposed Project. Some of these may include: Central Council of Tlingit and Haida Indian Tribes of Alaska, Craig Community Association, Hydaburg Cooperative Association, Ketchikan Indian Community, Klawock Cooperative Association, Metlakatla Indian Community, Organized Village of Kasaan, and Organized Village of Saxmon.	3	3.5, 3.5.1.5		3-R, 3-S	
8.7.2	Planned Consultation during Application Review	• The Application will include a proposed plan of consultation activities with the public and relevant stakeholders during the review of the Application.	3	3.5.3		3-L	
		• The Application will also identify the proposed process for attempting to resolve outstanding issues.	3	3.5.3			
		• Describe public consultation undertaken during the pre-application stage (e.g., with the general public). This description will identify the objectives of the consultation and outline the methods used, and report the issues raised by the public, and how the Proponent has addressed and/or responded to these issues.	3	3.5			
9.Project Description							
9.	Project Description	• The Application will describe the phases of the proposed Project in sufficient detail to allow the Proponent to predict potential environmental, social, health, heritage and economic effects.	4	4.5, 4.8, 4.9		4-C, 4-J, 4-AC	
		• The Application will describe how the proposed Project is planned to proceed through construction, operation, decommissioning and closure.	4	4.10		4-C, 4-J, 4-AC	
		• The description will include a general timeline for the phases of the proposed Project.	4	4.10		4-C	
		• The Application will also describe the proposed Project components, on-site support and off-site facilities.	4	4.5, 4.8, 4.9.1 to 4.9.4		4-C, 4-D, 4-J, 4-AC, 4-W, 4-K, 4-AJ, 4-AG, 4-AF, 4-AE, 4-AD, 4-X, 4-AH, 4-R, 4-T, 4-Y, 4-P, 4-U, 4-A	
9.1	Geology and Mineralization	• The Application will describe the regional geology and property geology, including a description of the deposit geology, as well as mineralization, alteration and structural controls.	4 8	4.4 8.1		4-C, 4-Q, 4-AB, 4-J, 4-AC	
		• The Application will include maps, representative cross sections and figures to illustrate geological features.	4	4.4-1, 4.4-2 8.1		4-C, 4-Q, 4-AB, 4-J, 4-AC 4-C	
9.2	Mineral Resources	• The Application will provide an accounting of the defined mineral resource to standards compliant with National Instrument 43-101, for each deposit and the property as a whole.	4	4.3.1		4-C	
		• The Application will include a set of representative cross sections that show the important geologic features and gold and copper distribution.	4	4.3.1		4-C	
9.3	Project Development Components and Activities						
9.3.1	Mine Area Components	The Application will identify and describe major mine components including:					
		I - mine development plans including location, design, and production scheduling;	4	4.5 4.10		4-C (1-19, 16.1.7), 4-D, 4-J,	
		II - pit wall management;	4	4.5.1.2 4.5.1.4 4.5.1.5		4-C (16.4, Appendix F), 4-K, 4-L, 4-I, 11-I	
		III - waste rock management plan, including sequencing, volumes and characteristics of rocks, location, rock storage facility designs, data on geotechnical properties and foundation conditions (e.g., how the geotechnical properties of waste rock is affected by long term oxidization), seepage, and surface water control;	4 26	4.5.1.1 4.5.1.5 4.5.1.7 4.5.1.8 4.5.1.11	26.3 26.14 26.17	4-C (18.1.6, 20.5.2), 4-J (Sections 2, 3, 4, 5, 6, 7, 9), 10-A, 10-C	

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9.3.1	Mine Area Components	*IV* - mine roads and drainage control;	4	4.5.1.2 4.5.1.4 4.5.1.5	26.17	4-C (16.1.6), 4-D, 4-N, 4-AA	
		V - identification, segregation, and management of ML/ARD rock;	4 10 26	4.5.1.1 10.2	26.14	4-C (20.2.4), 4-J (5.3), 4-S, 4-T, 10-A, 10-B, 10-C	
		VI - ore, including low grade ore, stockpiles;	4	4.5.1.9		4-C (p16-53), 4-D, 4-J (9.5.2, IX-4.1)	
		VII - overburden storage;	4	4.5.6		4-D, 4-J (10.10), 27-B	
		VIII - topsoil storage for reclamation;	4	4.5.6		4-J (Appendix IV),	
		IX - surface water diversion, including tunnels;	4 26	4.5.1.2, 4.5.1.6, 4.5.1.7, 4.5.1.8, 4.5.1.11, 4.5.3.3, 4.5.3.10	26.2, 26.17	4-C (18.1.7, 18.1.10), 4-D, 4-Q (3.1, 3.2, 3.5, 5.1), .4-J (Section 9), 4-N, 4-AA, 4-AC (Section 8), 4-O	
		X - ore and waste conveyor tunnel and related infrastructure;	4	4.5.1.12 4.5.2 4.5.3.10		4-C (18.3, 18.4, Appendix H), 4-D, 4-Q, 4-J,	
		XI - ore and waste rope conveyors and related infrastructure;	4	4.5.1.13		4-C (Appendix C-2, Dwg 10-10-403), 4-D	
		XII - mine dewatering, water storage, and discharge water treatment;	4 26	4.5.1.3 4.5.1.4 4.5.1.5 4.5.1.6 4.5.1.11 4.5.3.8 4.5.3.10	26.5, 26.17	4-C (1.17, 18.1.5, 18.1.7, 18.1.8), 4-D, 4-Q, 4-J (Section 9), 4-N, 4-AA, 4-R, 4-S,4-T, 4-P, 11-F, 11-G, 11-I, 14-I	
		XIII - crushing and grinding of ore, and transfer of ore slurry to the ore transport tunnel;	4	4.5.1.10 4.5.3.2 4.5.3.8		4-C (1.20.3, 17)	Transport of ore slurry no longer being considered, replaced with conveying of crushed ore.
		XIV - explosives use;	4	4.7		4-C (16.1.8)	
		XV - heavy equipment fuel and lubrication facility;	4	4.5.1.13 4.5.3.5			
		XVI - borrow sources for dam construction;	4	4.5.5.2		4-C (18.1.2, 18.1.3, 18.1.10, 4-J (4.7, 8.11, 9.4.2)	
		XVII - condemnation drilling plan (if any) in areas of proposed permanent mine structures; and	4	4.5.7			
		XVIII - construction materials for roads and impoundments.	4	4.5.5.1 4.5.5.2		4-C (16.1.6, 18.1.2, 18.1.3, 18.1.10, 4-J (4.7, 8.11, 9.4.2)	
		• Major geotechnical components of the proposed Project will include a risk assessment that identifies the most likely mode of potential failure and the most severe impact of failure.	9 35 34			35-A through 35-C 34-A, 34-B	

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9.3.1	Mine Area Components	• The descriptions of the location and design of major structures will include sufficient geotechnical investigation and evaluation of foundation conditions to provide the confidence that the government requires that the structures can be safely constructed and operated without significant design changes.	4 35	4.5.1.7 4.5.1.8 4.5.1.10 4.5.1.11		4-C (1.10, Appendix F), 4-E through 4-H, 4-Q, 4-J (Sections 3, 4, 7, 8), 4-L, 4-I, 11-F, 11-G, 11-I, 35-A	
		• Description of the rock storage facility and impoundment dams will refer to BC Mine Waste Rock Pile Research Committee Interim Guidelines, May 1991, and the Canadian Dam Association, Dam Safety Guidelines (for impoundment dams), 2007.	4	4.5.1.5 4.5.1.7 4.5.1.8 4.5.1.9 4.5.1.11 4.5.3.10		4-J (2.4.8, 6.3.3, 7.2, 9.1.4), 4-M, 4-AC (Section 5, I-6)	
9.3.2	Ore Transport Tunnel(s)	The Application will describe the ore transport tunnel(s), including:					
		XIX - tunnel route description;	4	4.5.2 4.5.1.12		4-C (18.4.2)	
		XX - tunnel design assumptions;	4	4.5.2.2 4.5.1.12			
		XXI - geology of the tunnel alignment;	4	4.5.2.1 4.5.1.12		4-Q (3.5)	
		XXII - geotechnical hazards evaluation;	4	4.5.2.5 4.5.1.12		4-W	
		XXIII - construction methodology;	4	4.5.2.3 4.5.1.12			
		XXIV - construction schedule;	4	4.5.2.4 4.5.1.12		4-C	
		XXV - water management;	4	4.5.1.11	26.17	4-N, 4-AA	
		XXVI - ground ore slurry and return water pipeline systems;	4	4.5.2			“N/A”, replaced with description of the conveyor system
		XXVII - diesel fuel pipeline system;	4	4.5.2.9			
		XXVIII - transmission line; and	4	4.5.2.10		4-C	
		XIXX - safety provisions.	4 34 35	4.5.2.7 34.3		4-D	
9.3.3	Process Plant	The Application will describe the process plant, including the following components:					
		I - final grinding of ore slurry;	4	4.5.3.8		4-C (17.3.7), 4-Z	
		II - flotation process;	4	4.5.3.8		4-C (17.3.8), 4-Z	
		III -process plant mass balance;	4	4.5.3.8		4-Z	
		IV - cyanide leach and activated carbon gold recovery process;	4 33	4.5.3.8 33.10		4-C (17.3.10), 4-Z, 4-R, 33-C	
		V - cyanide recovery and destruction processes;	4	4.5.3.8		4-Z, 4-R	
		VI - reagent handling and storage;	4	4.5.3.6 4.5.3.8		4-C (17.3.13)	

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9.3.3	Process Plant	*VII* - concentrate handling and storage;	4	4.5.3.9		4-C (17.3.9, 18.7.1)	
		VIII - process water storage reservoir (if required), intakes, pipeline, and distribution;	4	4.5.3.3		4-C (17.3.14), 4-N	
		IX - water treatment options, if required;	4 33	4.5.3.8 33.12.3		4-R, 4-S, 4-T	
		X - process plant runoff and sedimentation control facilities; and	4	4.5.3.3		4-N	
		XI - metallurgical and assay laboratories	4	4.5.3.3		4-C (18.7.1)	
9.3.4	Tailing Management Facility	• The Application will describe the tailing management facility in sufficient detail to be able to identify major components or structures that are likely to have a high failure consequence during operation and closure and where monitoring efforts will be required for the purposes of risk analysis.	35 33	33.5.1		4-AA, 4-AC 35-A 33-B	
		The tailing management facility description will include:					
		I - tailing characterization;	10	4.5.3.10 10.1.2.3		4-AC (Section 4, 20.5.1), 10-A, 10-C	
		II - tailing management facility plan including location, dam designs, data on geotechnical properties and foundation conditions, seepage, and surface water control, and discharge location;	4 33	4.5.3.10		4-AA, 4-AC (sections 5, 6, 7, 8) 33-B	
		III - borrow sources for dam construction; and	4	4.5.5.3		4-AC (7.3)	
		IV - pipelines and reclaim water facilities.	4	4.5.3.10		4-N, 4-AA	
9.3.5	Maintenance, Administration and On-Site Support Facilities	The Application will describe maintenance and on-site support facilities including the following:					
9.3.5.1	*Maintenance:*	*I* - heavy mobile equipment shops;	4	4.5.1.13 4.5.3.7		4-C (18.7.1, 18.7.2)	
		II - warehouse and outside storage;	4	4.5.3.7		4-C (18.7.1)	
		III - processing plant maintenance shops;	4	4.5.3.7		4-C (18.7.1)	
		IV - tire shops; and	4	4.5.1.13		4-C (16.1.10)	
		V - small vehicle maintenance shop(s).	4	4.5.1.13,		4-C (18.7.2)	
9.3.5.2	On-site Support Facilities:	*I* - construction camps and permanent camps, kitchens, and recreation facilities;	4	4.8.1 4.8.2		4-C (18.7, 21.1.5)	
		II - administration facilities;	4	4.5.1.6		4-C (18.7.1)	
		III - fire prevention systems and control facilities;	4	4.5.2.7			
		IV - potable water sources and treatment;	4	4.8.2.1, 4.8.2.2		4-C (18.11, 20.4.2))	
		V - electrical distribution system;	4	4.9.1		4-C (18.12), 4-AK	
		VI - hydro-electric facilities associated with the Mitchell Creek and McTagg Creek diversions and Sulphurets Creek cascade;	4	4.5.1.11		4-C (18.1.7, 18.12.15, 18.12.19, 18.12.20, 20.4.1), 4-J (9.10)	
		VII - back up power plants;	4	4.9.1		4-C (18.12.13)	

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9.3.5.2	On-site Support Facilities	*VIII* - bulk fuel storage facilities;	4	4.5.3.5, 4.5.1.14, 4.5.2		4-C (18.7.1)	
		IX - communications system;	4	4.5.3.3		4-C (18.10)	
		X - sewage treatment and disposal facilities, including preliminary estimates of volumes and effluent characteristics;	4	4.8.3		4-C (18.9)	
		XI - incinerator operations and putrescibles handling;	4 26	4.8.2.1, 4.8.2.2 26.6		4-C (20.5.4)	
		XII - recycling facilities for industrial wastes;	4 26	4.5.1.13, 4.5.3.7, 4.8.1 26.6		4-C (20.5.3, 20.5.4)	
		XIII - landfill(s); and	4 26	4.9.2 26.6		4-C (20.5.4)	
		XIV - explosives manufacturing and storage facilities, with a description of locations, explosives types and volumes and related infrastructure.	2 4	2.1.5 4.7		2-C 4-C (16.1.8, Appendix E6)	
9.3.6	Off-site Support Infrastructure for Mine Development and Operations	Support infrastructure for mine development and operations associated with the proposed Project include:					
		• the access roads,	4	4.5.4	26.25	4-AG, 4-AF, 4-AE, 4-AD, 4-X, 4-A, 4-AI	
		• power transmission corridor from Highway 37,	4	4.9.1		4-AK, 4-AJ	
		• ore concentrate transportation and dock facilities at the Port of Stewart, and	4	4.9.4			
		• other identified potential transportation facilities.	33	33.7			
9.3.6.1	Road Access to the Mine and Process Plant	• The Application will include the road design specifications, listing of stream crossings with specific design plans for major crossings (e.g., Unuk River) and conceptual designs for smaller crossings, and construction sequences.	4 15	4.5.4 15.1.4.3		4-C (18.5), 4-AG, 4-AF, 4-AE, 4-AD, 4-X, 4-AH, 31-C	
		• The Application will also describe the proposed Frank Mackie Glacier temporary construction access route.	4	4.5.4		4-C (18.5), 4-AI	
9.3.6.2	Electrical Power Supply and Transmission	• The Application will describe the transmission line, and related access roads, to provide power to the mine and process plant.	4 15	4.9.1 4.5.1.11 15.1.4.3		4-C (18.12), 4-AK, 4-AJ	
		• It will describe any stream crossings, including stream characteristics at the crossing and conceptual drawings for any crossings not meeting the definition of a "minor work" as described by "NWPA Minor Works Policy for Aerial Cables".	4 15 31	4.9.1 4.5.1.11 15.1.4.3		4-AJ 31-A; 31-B, 31-C	
		• The Application will also describe any alternative facilities, such as run-of-river hydro-electric facilities, proposed to supplement the supply of electric power from the provincial grid.	4	4.9.1 4.5.1.11 4.5.3.11		4-C (18.1.7, 18.12.15, 18.12.19, 18.12.20, 20.4.1), 4-J (9.10)	
9.3.6.3	Concentrate Transportation	• The Application will describe the truck loadout facilities and will identify the anticipated average number of truck trips per day (both to the port and returning from the port) and anticipated load capacity of concentrate trucks.	4	4.9.3		22-C	
9.3.6.4	Stewart Port Facilities	• The Application will evaluate the capacity of the port facilities in Stewart to accommodate and ship ore concentrate from the proposed Project, including the expansion that has been approved with an environmental assessment certificate.	4	4.9.3 4.9.4			

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9.3.6.4	Stewart Port Facilities	• The Application will also review road traffic issues through the District of Stewart.	4 22	4.9.3, 4.9.4 22.7.5	26.25	22-C	
		• The Application will include a discussion of other projects that may potentially ship concentrate through the Stewart port facilities and the potential proportion of total shipments that may be related, on an annual basis, to the proposed KSM Project.	4	4.9.4		22-C	
		• The Application will also include a discussion of the variables that may influence the size of ships that may be used to transport KSM concentrate from the port.	4	4.9.4			
9.4	Project Development Schedule	• The Application will provide a timetable and schedule for construction of the proposed Project with an estimate of timing to reach commercial production.	4	4.10		4-C (1.14, 1.23), 4-D	
		• It will further estimate the period of operation, with a discussion of criteria that may affect the length of the operating period, and discuss the timeline for decommissioning once operations end.	4	4.10			
9.5	Related Considerations						
9.5.1	Dangerous Goods and Hazardous Materials	• The Application will describe the transport, handling, storage, use and disposal of hazardous materials.	4 26	4.9.6	26.7	4-C (18.17.11, 20.5.3, 20.5.4)	
		• The Application will describe the transport of petroleum products and dangerous goods, such as reagents, to and from the mine site or process plant site.	4 26	4.9.6	26.7		
9.5.2	Crown Land Requirements	• The Application will describe the Crown land tenure requirements for the construction, operation and decommissioning of the proposed KSM Project.	2	2.1.4			
9.5.3	Personnel Requirements	• For construction, the Application will estimate the personnel requirements (by major job category) and use recognized labour survey or standards data to estimate costs of wages for this phase of the proposed Project.	4 20	4.9.7 20.7.2		4-C (1.23.3)	
		• For operations, the Application will describe the preliminary feasibility study estimates of personnel requirements (by major job category, with estimated costs of wages and benefits) of the proposed Project at each stage, the anticipated work schedule and means for transporting employees to the proposed Project site.	4 20	4.9.7 20.7.2		4-C (21.2.1, 21.2.3, 21.2.5, 21.2.6)	
		• The application will provide information on the distribution of jobs between permanent, temporary and seasonal positions.	4	4.9.7			
		• The Application will describe the Proponent's hiring and training policies relevant to the proposed Project, with the caveat that the Proponent may not be the operator of the proposed Project.	4 20	4.9.7 20.7.2.1			
		• The Application will identify the skills required during operations and indicate in general terms the potential for jobs to be filled locally, provincially, nationally or internationally.	4	4.9.7			
		• The Application will estimate, using multipliers provided by BC Stats, indirect employment resulting from the proposed Project. Assumptions related to multipliers will be stated.	4 20	4.9.7 20.6.1.7			
9.5.4	Procurement	• The Application will describe the Proponent's procurement plan and policy relevant to the proposed Project.	4 20	4.9.5 20.7.2.1		4-C (Appendix G1)	
		• The Application will identify the types and approximate overall value of contracts that will be required for the construction and operation of the proposed Project and indicate in general terms the potential for the contracts to be won by local, provincial, national or international contractors.	4 20	4.9.5 20.7.4		4-C 20-B	
9.6	Project Capital Costs	• The Application will provide the best available estimate, at a prefeasibility study level, of proposed Project capital costs over the life of the Project from construction through decommissioning.	4 20	4.11		4-C 20-B (2.3)	

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PART B – ASSESSMENT OF POTENTIAL EFFECTS, MITIGATION AND SIGNIFICANCE OF EFFECTS							
10. Methodology for Assessment of Potential Effects							
10.1	Overview						
10.1.1	Approach	• The Application will describe the methods used to conduct the assessment of potential effects and cumulative impacts/effects.	5	5.2			
		The assessment will incorporate the following steps:	5	5.2.3			
		1. Describe the existing environment	5	5.2.4			General method described in 5.2.4; topic-specific environment described in chapters (6-25).1
		2. Define the boundaries of assessment	5	5.2.7			General method described in 5.2.7; topic-specific boundaries described in chapters (6-25).4
		3. Select VCs	5	5.2.8 and Table 5.2-3			General method described in 5.2.8; topic-specific VCs described in chapters (6-25).5
		4. Identify potential effects	5	5.2.9 and Table 5.2-5			General method described in 5.2.9; topic-specific potential effects described in chapters (6-25).6
		5. Identify mitigation	5	5.2.10			General method described in 5.2.10; topic-specific mitigation described in chapters (6-25).7
		6. Evaluate potential residual effects and significance	5	5.2.11			General method described in 5.2.11; topic-specific residual effects described in chapters 6-25
		7. Assess cumulative impacts/effects	5	5.2.12			General method described in 5.2.12; topic-specific cumulative effects described in chapters 6-25; chapter 37
The requirements for each step are outlined in Sections 10.2 to 10.9. General requirements are identified in the following Section.							
10.1.2	General Requirements for Assessing Potential Effects	• The Application will contain all pertinent data and assessment methodologies.	5	5.2.4			General method for describing baseline data in 5.2.4; data and methods in topic-specific Appendices
		• Where modelling is undertaken, rationale will be provided for the model selection.	6-25	Sections .2, .7 and .8 in chapters 6 - 25			Models are described in topic-specific Chapters.
		• Explicit documentation of the assumptions, models and information sources used, as well as information limitations and associated levels of uncertainty, will support all steps of the Application, including the assessment of potential effects. Where professional, scientific or TK expertise is applied, a description of the methodology and/or assumptions used to arrive at those views will be given.	6-25	Sections .2, .7 and .8 in chapters 6 - 25			Models are described in topic-specific Chapters.
		• Analyses will be quantitative where data are available, but where data or models are lacking, best professional, scientific and traditional knowledge judgment may be used.	5	5.2.10			General method for describing analysis in 5.2.10
		• The approach and methodologies used to identify and assess potential effects, including cumulative environmental impacts/effects will be explained.	5	5.2-5.3			General method for describing analysis in 5.2 and 5.3; topic-specific cumulative effects described in chapters 6-25, 37

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10.1.2	General Requirements for Assessing Potential Effects	• TK/TU information will be incorporated throughout the effects assessment as it can contribute to identification and justification of Valued Components, understanding spatial and temporal boundaries, description of the project setting, identification of potential effects, determination of significance levels, and development of mitigation measures.	5	5.2		30-A, 30-B, 30-C, 30-D, 30-E	General method for describing analysis in 5.2; topic-specific chapters address TK/TU
10.2	Description of the Existing Environment	• The Application will include data collected during the baseline study program and First Nation traditional knowledge studies, including norms, trends and extremes, to the extent that predictions can be made.	5	5.2.4			General method for describing baseline data in 5.2.4; data and methods in topic-specific Appendices
		• Existing reports and documents will be appended or referenced as appropriate.	5	5.2.4			General method for describing baseline data in 5.2.4; existing reports and documents in topic-specific Appendices
		• Data collection, analysis and presentation will follow BC RISC or equivalent standards.	5	5.2.4			General standards described in 5.2.4, details described in topic-specific chapters and appendices
		• Maps will be used to illustrate data collection points.	5	5.2.4			Maps are included in topic-specific chapters and appendices
		• Rationale will be provided for the selection of sampling sites and analytical parameters as appropriate.	5	5.2.4			Rationale included in topic-specific chapters and appendices
		• The Application will comment on the quality and reliability of these data and their applicability for the purpose used, and identify gaps, insufficiencies and uncertainties, especially those that should be remedied for monitoring purposes.	5	5.2.4			Analyses of data quality and applicability included in topic-specific chapters and appendices
		• Field and laboratory methods will be described, along with quality assurance and quality control measures applied.	5	5.2.4			Field and laboratory methods and QA/QC described in topic-specific chapters and appendices
		• The Application will present a quantification of data quality, adequacy and reliability using statistical analysis such as gap analysis, uncertainty analysis and statistical confidence.	5	5.2.4			General method for describing baseline data in 5.2.4; statistical analysis described in topic-specific chapters
		• The Application will provide a baseline description of the existing biophysical environment, and social, economic, heritage and health setting of the proposed Project.	5	5.2.4			Chapters 6-25 and their relevant appendices provide baseline descriptions
		• Information from First Nations traditional knowledge/traditional use (TK/TU) studies will be incorporated alongside information from scientific studies where relevant and appropriate.	5	5.2.4		30-A, 30-B, 30-C, 30-D, 30-E	
		• Traditional knowledge will be considered equally with scientific knowledge, where relevant and appropriate.	5	5.2.4		30-A, 30-B, 30-C, 30-D, 30-E	
		• The Application will include a level of baseline information sufficient to predict positive and adverse effects of the proposed Project.	5	5.2.4			Chapters 6-25 and their relevant appendices provide baseline descriptions
		• The description of the existing proposed Project setting will be presented in sufficient detail to permit the identification, assessment and determination of the significance of potentially adverse effects that may be caused by the proposed Project and to adequately identify and characterize the positive effects of the proposed Project.	5	5.2.4			General method for describing project setting in 5.2.4; topic-specific setting described in chapters (6-25).1
10.3	Spatial Boundaries	The Application will identify and present the spatial boundaries used for the effects assessment and the rationale for selecting the boundaries. Spatial boundaries will be identified using the following criteria:	5 6-25	5.2.7 [6-25].4			General method for describing boundaries in 5.2.7; topic-specific boundaries in chapters (6-25).4
		• the physical extent (terrestrial and aquatic) of the proposed Project, including any Project-specific site facilities or activities;	4 5 6-25	4.1 5.2.7, and 5.2.9 [6-25].4			Spatial boundaries are discussed in topic-specific chapters

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10.3	Spatial Boundaries	• the spatial extent (e.g. local, regional, etc.) of the effects assessment relative to the VC's, including:	5 6-25	5.27 [6-25].4			Spatial boundaries are discussed in topic-specific chapters
		• the extent of aquatic and terrestrial ecosystems potentially affected by the proposed Project;	8 13 14 15 16 17 18	8.4 13.4 14.4 15.4 16.4 17.4 18.4		17-D	
		• the extent of potential effects arising from atmospheric emissions from on-site mine infrastructure and fleet; and	6 7 18 25	6.4 7.4 18.4 25.4			
		• the extent of other potential biophysical and social, economic, health and heritage effects arising from the proposed Project.	20 21 22 23 24 25	20.4 21.4 22.4 23.4 24.4 25.4			
Figure 3 illustrates the proposed spatial boundaries for the social and economic studies to support the effects assessment. Figure 4 illustrates the broad spatial boundaries for the biophysical studies used to support the effects assessment, recognizing that different components of the biophysical studies will have their specific boundaries within these broad boundaries due to the varying range of potential effects. Both local and regional study area boundaries may be defined.							
10.4	Temporal Boundaries	• The Application will identify and present the rationale for the temporal boundaries used for the effects assessment.	4 5 6-25	4.10 5.2.7			
		• Temporal boundaries will consider seasonal and annual variation related to VCs and biophysical constraints for the phases of the proposed Project, where applicable.	5 6-25	5.2.7 [6-25].4			General method for describing boundaries in 5.2.7; topic-specific boundaries in chapters (6-25).4
		• The Application will include an assessment of the effects for the phases of the proposed Project (i.e. construction, operations, closure and post-closure).	5 6-25	5.2.7			General method for describing effects of phases in 5.2.7; topic-specific effects of phases in chapters 6-25
10.5	Valued Components (VCs) Chosen for the Assessment	• The Application will define the term "Valued Component" and describe the general criteria used to identify VCs that are assessed. VCs are environmental, social, economic, health and heritage components identified, in part, through consultation with the EAO, public, First Nations, Nisga'a Nation, scientists and government agencies involved in the EA process.	5 6-25	5.2.8			General method for selecting VCs in 5.2.8; topic-specific VC selection in chapters (6-25).5
		• VCs may be determined on the basis of values including First Nations' or Nisga'a interests, scientific and/or regulatory concern, conservation status, and biodiversity and sensitivity to proposed project effects. The rationale for choosing and assessing a specific VC will be provided.	5 6-25	5.2.8 (6-25).5			
		• Table 1 provides a preliminary list of the VCs that will be assessed. This list may change after review of the finalized proposed Project description, baseline studies, any documented TK/TU information, a more detailed understanding of the Nisga'a Final Agreement, and community consultation.	5 6-25	5.2.8, Table 5.2-3			
		• The Application will include sufficient detail to address the relevant potential effects on VCs over the entire temporal scope of the development and distinguish between biological, physical, social, heritage, health and economic parameters.	5 6-25	5.2.9 (6-25).6			General method described in 5.2.9; topic-specific potential effects described in chapters (6-25).6

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10.6	Assessment of Potential Project Effects						
10.6.1	Potential Project Effects	• The Application will assess potential environmental, economic, health, social, and heritage effects of the proposed Project.	5 6-25 29 30	5.2.9-5.2.12 [6-25].6 29.[4-6] 30.7			
		• It will also assess the relevant potential effects described in paragraph 8(e) and 8(f) of Chapter 10 of the Nisga'a Final Agreement.	5 29	5.2.9-5.2.12 29.2, 29.4-			
		• The effects will be described so that they can be understood and rationalized with respect to the implications on future generations in the north-western region of British Columbia.	5 6-25 29 30	5.2.9-5.2.12 6.8, 7.9, 8.8, 9.7, [11-25].8 29.[5-6] 30.7			
		• The Application will contain the pertinent data and assessment methodologies for the assessment of potential effects on specific VCs.	5 6-25 29 30	5.2.1-5.2.12 6.7, 7.8, 8.7, 9.7 [11-25].7 29.5 30.7			
		• Where modelling is undertaken, rationale will be provided for the model selection. Model input parameters and assumptions will be clearly defined and conservative in nature. Where applicable, models will include extreme climatic variations.	5 7 10 11 12 13 14 15 17 18 19 20	5.2.1-5.2.12 7.8.3, 10.2 12.8 14.7.1.2 18.1.5 20.7.1		11-D, 11-E, 11-F,11-G, 11-I 13-B 14-F, 14-G 15-L 19-A	
10.7	Mitigation	• The Application will identify technically and economically feasible measures to mitigate potentially adverse effects of the proposed Project and to enhance the beneficial effects. This will include measures, works, processes, or features that are not part of the basic features of the proposed Project and are specifically added to mitigate potential effects.	5 6-25 26 28 33 34 35 37	5.2.10 [6-25].7 28.[2-3] 33.[3-18] 34.[4-5] 37.6			
		• Mitigation that is part of the design of the proposed Project will be described in the Project Description and Alternatives Chapters.	4 33	4 33.[3-18]		Appendices 4-C, 4-J and 4-AC	
		• The Application will describe proposed mitigation methods and identify equipment needs and procedures (including monitoring requirements) and policies associated with the proposed measures.	5 6-25 26 28 33 34 37	5.2.10 [6-25].7 28.2 34.[4-5] 37.6	26	Appendices 4-C, 4-J and 4-AC	

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10.7	Mitigation	• The Application will identify monitoring programs during both the operational and post-closure periods, where applicable. A preliminary list of monitoring programs is presented in Section 32.	5 6-25 26 28 33 34 37	5.2.10 [6-25].7 28.2 37.6	26		
		• The Application will evaluate the effectiveness of the proposed measures and assess the risk of mitigation failure and the potential severity of the consequences.	5 6-25 26 28 35	5.2.10 [6-25].7 28.3	26	Appendix 35-D	
		• The Application will propose impact mitigation measures such as fish habitat compensation, where effects cannot be mitigated on-site.	5 6-25 26 33 34 37	5.2.10 [6-25].7 37.6	26	Appendices 15-Q, 15-R and 16-B	
		• Where there is significant uncertainty or a residual risk, the Application will outline contingency planning.	5 6-25 26 34	5.2.10 [6-25].7	26		
		• The Application will report the residual effects resulting from the proposed Project on the physical, chemical and biological components of the environment following proposed mitigation.	5 6-25 29 30 37	5.2.10 [6-25].7 29.6 30.8, 30.9 37.6			
10.8	Residual Adverse Effects and their Significance	• The Application will assess residual effects, which include beneficial effects and those adverse environmental effects which cannot be avoided or mitigated through the application of environmental control technologies or other acceptable means.	5	5.2.11			
		The Application will assess the significance of predicted effects according to the following criteria:	6-25	[6-25] sections .8 and .9			
		• Magnitude;	6-25	[6-25] sections .8 and .9			
		• Geographic extent;	6-25	[6-25] sections .8 and .9			
		• Duration;	6-25	[6-25] sections .8 and .9			
		• Frequency;	6-25	[6-25] sections .8 and .9			
		• Reversibility;	6-25	[6-25] sections .8 and .9			
		• Context (ecological resilience and anticipated resiliency timeframe); and	6-25	[6-25] sections .8 and .9			
		• Probability of occurrence and confidence level.	6-25	[6-25] sections .8 and .9			

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10.8	Residual Adverse Effects and their Significance	• The means by which ratings or conclusions regarding the above criteria are used to determine the overall significance of the residual effect will be clearly described.	5 6-25	5.2.11 [6-25] sections .8 and .9			
		• The criteria will be defined such that there is distinction between those for ecological parameters and those for social-heritage parameters.	5 6-25	5.2.11 [6-25] sections .8 and .9			
		• All residual effects will be rated as either significant or not significant.	5 6-25	5.2.11 [6-25] sections .8 and .9			
		• The Application will include a conclusion on the significance of residual effects. The methods for determining significance will follow CEA Agency's "Reference Guide: Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects" (CEA Agency 1994). KSM Project specific significance will be calculated quantitatively for: ambient air quality, groundwater quantity, groundwater quality, surface water quantity, surface water quality and noise.	5 6-25	5.2.11 [6-25] sections .8 and .9			
10.9	Potential Cumulative Impacts	• The Application will assess potential environmental, economic, health, social and heritage cumulative impacts of the proposed Project.	5 7 8 37	5.2.12 [6-25] sections .9 and .10			General method for cumulative effect assessment in 5.2.12; topic-specific cumulative effects assessment in sections .9 and .10; chapter 37
		• The cumulative impact assessment will meet both the requirements of the EAO for a cumulative impact assessment and the requirements identified under CEAA (as described in Chapter 30) for a cumulative effects assessment (CEA).	5 37	5.2.12			
		• The process for determining cumulative impacts/cumulative effects considers only residual effects of the Project that have the potential to interact with other projects and actions, as explained in the diagram below. The cumulative impact assessment will consider approved land use plan provisions, comprehensive baseline studies, and overlapping effects potentially due to other developments, past, present and in the foreseeable future that are sufficiently certain to proceed, even if not related to the Project.	5 37	5.2.12			
		Prior to the identification of potential overlapping effects, the following issue scoping steps will be taken:	5	5.2.12			
		1 - Define the spatial boundaries of Valued Components and/or assessment topics.	5 6-25 37	5.3-1			General method for cumulative effect assessment in 5.2.12; topic-specific cumulative effects assessment presented in 6-25; chapter 37
		2 - Define the spatial and temporal boundaries of other Projects and Actions	5 6-25 37	5.3 37.5			
		3- Identify the potential for interaction (spatial and temporal linkages (overlap) of VCs and/or assessment topic with other projects and actions;	5 6-25 37	5.3 37.5			
		For a project or activity to be included in the cumulative impact/effects assessment, following conditions must be met:					
		1- The projects or action could result in a residual effect on a selected VC; and	5 37	5.3 37.5 37.6			
		2- The Project-specific residual effect on that VC, is likely to act in a cumulative fashion with the residual effects of other past, present, or reasonably foreseeable future projects and activities in the area (i.e., there is an overlap of the residual effects spatially and temporally).	5 37	5.3 37.5 37.6			

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10.9	Potential Cumulative Impacts	The following three categories of projects and activities are considered:	5	5.3			
		1- Past or present projects and activities which have potential to result in effects within the spatial boundaries defined for a VC and/or assessment topic.	5	5.3			
		2- Reasonably foreseeable projects. For this assessment, reasonably foreseeable projects that were considered for inclusion in the cumulative impact assessment are defined as ones that are advanced in the environmental assessment pre-Application stage and whose residual effects are generally known and definable, ones that have submitted an Environmental Assessment Certificate Application to the BC EAO for an Environmental Assessment Certificate or ones that have already secured an Environmental Assessment Certificate.	5	5.3			
		3- Other projects specifically identified by EAO through discussions with other parties.	5	5.3			
		The Application will report and describe relevant projects.	5	5.3			
		• The Application will include a rationale for including or excluding potentially relevant projects from the cumulative impacts/effects assessment. The following projects or human activities, illustrated in Figure 5, are initially identified as possible candidates for inclusion in the cumulative environmental effects assessment:	5 7, 8, 11-25 37	5.3 7.10, 8.9, [11-25].9 37.2, 37.6			Project and activities consider in the CEA are in 5.3; topic-specific rationale for exclusion of other projects is EA chapters 6-25, excluding chapters 6, 9 and 10; chapter 37
		Past or Present Projects and Activities					
		• Eskay Creek Mine - a closed mine within about 20 kilometres of the KSM site. KSM will use the same access road.	5	5.3			
		• Granduc Mine – a closed mine. The KSM temporary glacier access road will start from near the former Granduc mill site, about 30 kilometres from the proposed Project.	5	5.3			
		• Johnny Mountain Mine – a closed mine located in the Iskut River watershed about 50 kilometres northwest of the Eskay Creek mine road.	5	5.3			
		• Snip Mine – a closed mine located in the Iskut River watershed about 50 kilometres northwest of the proposed Project.	5	5.3			
		• Kitsault Mine – a closed mine. Located in the Nass Area about 65 kilometres south of the proposed KSM Project.	5	5.3			
		• Swamp Point Aggregate Mine – a suspended aggregate mine with an Environmental Assessment Certificate. Located on the east side of Portland Canal, about 50 km south of the community of Stewart.	5	5.3			
		• Forest Harvesting - historic clear cuts exist in the Nass Timber Supply Area (TSA) within 10 km of the proposed Project.	5	5.3			
		• Tourism Lodges (i.e. Bell II) and related activities such as heliskiing – there is potential for overlap of commercial recreation tenures with the proposed Project.	5	5.3			
		• Roads and Vehicle Traffic – the proposed Project will use Highways 37 and 37A to transport concentrate.	5	5.3			
		• Recreation and Tourism (Parks) - wilderness recreation may occur in the vicinity of the proposed Project and Ninginsaw Park is within 15 kilometres of the proposed Project.	5	5.3			
		Reasonably Foreseeable Projects					
		• Galore Creek Mine – a proposed mine with an Environmental Assessment Certificate, located about 90 kilometres northwest of the proposed Project. Would haul concentrate on Highway 37.	5	5.3			
		• Red Chris Mine – a proposed mine with an Environmental Assessment Certificate, located about 60 kilometres north of the proposed KSM Project. Would haul concentrate on Highway 37.	5	5.3			

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10.9	Potential Cumulative Impacts	• Kitsault Mine – a proposed mine in the Pre-Application stage of the BC EAA process. Located in the Nass Area about 65 kilometres south of the proposed KSM Project.	5	5.3			
		• Forrest Kerr IPP – a proposed run-of-river hydroelectric power facility with an Environmental Assessment Certificate located about 30 kilometres northwest of the proposed Project; would use the same access road as the proposed Project.	5	5.3			
		• Northwest Transmission Line – a proposed electricity transmission line which is currently within the Environmental Assessment review process; will pass within about 10 kilometres of the proposed Project.	5	5.3			
		• Storie Moly Mine – a proposed mine near the former community of Cassiar.	5	5.3			
		• Schaft Creek – a proposed mine in the Pre-Application stage of the BC EAA process, located about 105 kilometres north of the proposed Project. Would haul concentrate on Highway 37.	5	5.3			
		• Bear River Gravel Project – a proposed aggregate mine in the Pre-Application stage of the BC EAA process, located within the Bear River intertidal zone within the boundaries of the District of Stewart.	5	5.3			
		• Turnagain Mine – a proposed nickel mine located about 70 km east of Dease Lake.	5	5.3			
		• Mount Klappan Coal Project – a proposed coal mine in the Pre-Application stage of the BC EAA process. Located about 160 km northeast of Stewart, or about 90km northeast of the proposed Project.	5	5.3			
		• Bronson Slope - a proposed mine that was the subject of an environmental assessment process until 2002, when it was withdrawn, located in the Iskut River watershed about 50 kilometres northwest of the Eskay Creek mine road.	5	5.3			
		• Morrison Copper Gold – a proposed mine that is currently in the Environmental Assessment process, located near the community of Smithers.	N/A	N/A			Not included in application as BC government denied an environmental assessment certificate for the proposed Morrison mine.
		• Snowfields/Brucejack – a proposed mine located immediately south of the KSM Project.	5	5.3			
		• The potential effects of future projects will be assessed to the extent that they can be reasonably predicted considering the state of knowledge of the projects and related mitigation.	5	5.3			
		• The assessment of potential cumulative impacts will follow the same methods described for assessing residual adverse effects.	5 7, 8, 11-25 37	5.2.12 7.10, 8.9, [11-25].9 37.4			
11	Potential Environmental Effects						
11.1	Climate and Air Quality						
11.1.1	Baseline Study	The Application will include a climate and air quality baseline study. This study will include the following:					
		• Characterization of local meteorological conditions undertaken.	7	7.1.1		7-B 7-C	
		• Review and summarize the existing ambient air quality data available in the area. This would include a summary of the on-site baseline dustfall data and baseline particulate matter (PM) data collected from remote regional stations that have been used to support EAC applications for other mineral development projects. The existing PM monitoring stations operated by government agencies are urban and therefore are not representative of the PM baseline concentrations at the proposed Project site. Thus, this information will not be included.	7	7.1.3			

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11.1.2	Project Setting and Characterization	The Application will:					
		• Describe regional meteorological conditions within the proposed Project area;	7	7.1.1			
		• Describe local meteorological conditions based on results from the four site meteorological stations, including an assessment of how the baseline data fit into the El Niño Southern Oscillation;	7	7.1.3.3			
		• Describe available ambient air quality monitoring data for the proposed Project region;	7	7.1.3.4			
		• If insufficient data are available to characterize site conditions, describe the local air quality conditions based on regional data; and	7	7.1.3.4			
		• Provide an overview of background information, environmental setting and characteristics for climate and ambient air quality.	6 7	6.1 7.1			
11.1.3	Spatial Boundary	• The spatial boundaries of the assessment will include:	6 7	6.4.1 7.4.1			Chapter 7 Air Quality: LSA/RSA - Embedded within one modeling domain; tighter receptors in project footprint
		• Local Study Area (LSA) will include the proposed Project footprint, based on a preliminary feasibility level design, plus a 1,000 m buffer; and	6 7	6.4.1 7.4.1			
		• Regional Study Area (RSA) will be 100 km in an east-west direction and 60 km in a north-south direction. This region encompasses the areas that could potentially be affected (e.g. truck traffic on Highway 37) by the proposed Project based on the topography and the existing airsheds. The centre of the RSA would be roughly between the proposed mining area and the tailing management facility (TMF).	6 7	6.4.1 7.4.1			
11.1.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	6 7	6.4.2 7.4.2			
11.1.5	Valued Components	• The Application will identify potential effects on:					
		• Climate;	6	6.5.1			
		• Greenhouse gases; and	6	6.5.1			
		• Ambient air quality.	7	7.5			
11.1.6	Assessment of Potential Effects	• The Application will identify and evaluate potential effects of the proposed Project on maintaining ambient air quality and climate conditions that are consistent with both provincial and federal standards and quality-of-life related issues.	6 7	6.6, 6.7 7.6, 7.7		7-D	
		• The Climate component will assess the potential effects of the proposed Project on atmospheric levels of Greenhouse Gas (GHG).	6	6.7.1			
		• The methodology for assessing proposed Project GHG emissions will follow recommended procedures presented in *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* (CEA Agency 2003). The approach is summarized below.	6	6.1.2			
		Identify GHG considerations. This will include:					
		• Determination of applicable GHG policies, plans or programs;	6	6.1.2			
		• Determination of the industry GHG profile; and	6	6.2.1.			
		• Clarification of the magnitude, intensity and timing of proposed Project GHG emissions by estimating proposed Project GHG emissions during construction and operation of the proposed Project.	6	6.6.2		6-A	
		• Describe and quantify the direct effects on potential large scale carbon sinks (i.e., vegetation loss due to the mine site and the road).	6	6.6.1.2, 6.7		6-A	

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11.1.6	Assessment of Potential Effects	• Assessment of GHG considerations. This will involve comparison of the proposed Project GHG profile with industry profiles and provincial/territorial and national GHG inventories.	6	6.9			
		• The Air Quality effects assessment will estimate emission rates for the Criteria Air Contaminants (CACs) of concern, and undertake air dispersion modelling to determine ambient air concentrations resulting from proposed Project emissions.	7	7.8.3		7-A	
		• The sources included in the air dispersion model will include point and mobile sources, such as vehicle exhaust, and particulates and potential effects from blasting and concentrate transport.	7	7.8.3		7-A	
		• Predicted ambient air concentrations determined through modelling will be compared to appropriate federal and provincial air quality objectives/standards. The atmospheric dispersion of air emissions will emphasize fine particulate matter such as $PM_{2.5}$ and PM_{10} on a local and regional scale.	7	7.8.3		7-A	
		• Acid deposition and the potential impact of acidic precipitation resulting from release of gases such as NO_X and SO_X will be assessed.	7	7.8.3		7-A	
11.1.7	Mitigation and Environmental Management	The Application will:					
		• Identify mitigation measures and environmental management strategies to avoid, minimize, or otherwise mitigate potential adverse effects of the proposed Project on ambient air quality and climate conditions.	6 7 26	6.7.2 7.7.1	26.11		
		• If the proposed Project results in medium or high emissions or departs from industry or jurisdictional profiles, then a GHG management plan would be developed. Development of a GHG management plan would follow the procedures presented in CEAA 2003 and include best practices for greenhouse gas emissions or emissions intensity and specific approaches towards managing emissions over the lifetime of the proposed Project.	6 26	6.10	26.12		
		• Provide a list of commitments that the proponent will make with respect to air quality and climate conditions based on proposed mitigation.	6 7	6.7.2 7.7.2			
11.1.8	Potential Residual Effects and Their Significance	The Application will:					
		• Identify potential residual effects from the proposed Project on ambient air quality and climate conditions after mitigation measures and environmental management strategies have been applied; and	6 7	6.7 7.8			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	6 7	6.8 7.9			
11.1.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	7 37	6.9, 7.10			
11.2	Terrain, Surficial Geology and Soils						
11.2.1	Baseline Study	The Application will include a terrain, surficial geology and soils baseline study. This study will include the following:					
		• Review and summary of existing information on geology and surficial materials;	8	8.1.4		8-A, 8-B, 8-C	
		• Terrain mapping using aerial photo interpretation and digitized polygons;	17	17.1.2		8-B	
		• A field program to check the terrain mapping in support of the Terrestrial Ecosystem Mapping (TEM) program and collect information for closure planning.	8 17	8.1.3 17.1.2		8-A 17-A	
		• Description of soils and sites in detail including information on slope, aspect, surficial material, horizon depth, soil texture, coarse fragment content, root depth, soil structure, drainage, soil classification, and topsoil depth;	8 17	8.1.5 17.1		8-A, 8-C	
		• Chemical analysis of soils samples from representative locations which will include metals and organic carbon; and	8	8.1.6		8-A	

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11.2.1	Baseline Study	• Soils and terrain maps.	8	8.1.5		8-B 8-C	
11.2.2	Project Setting and Characterization	The Application will provide:					
		• A description of the geology, soils, and surficial materials occurring in the proposed Project area; and	8	8.1.4, 8.1.5		8-A	
		• A summary of the results of the chemical analyses.	8	8.1.6			
11.2.3	Spatial Boundary	• The study area will include a buffer extending at least to the height of land or 1.5 km around the outer limits of the proposed infrastructure (i.e. for the process plant site, mining area, and TMF), whichever comes first. This will match the Terrestrial Ecosystem Mapping area studied in the baseline.	8	8.4.1			
		• For the access road, pipelines, and transmission line, the study area will include a buffer extending 1.5 km along either side of the centre line of the linear development, whichever comes first.	8	8.4.1			
11.2.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	8	8.4.2			
11.2.5	Valued Components	The Application will identify potential effects on:					
		• Soil quality; and	8	8.5.1			
		• Sensitive soils.	8	8.5.1			Sensitive soils considered in soil quality VC
11.2.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on soil VCs. Potential effects will include, but are not limited to:	8	8.6		8-D	
		• Soil lost (soils which will no longer function due to being covered e.g. by roads, the TMF, pits); and	8	8.7.1			
		• Soils that will potentially be degraded by the proposed Project.	8	8.7.2			
11.2.7	Mitigation and Environmental Management	• The Application will provide mitigation and management plans that will reduce or eliminate the potential effects. These will be developed based on standard or accepted practices and adjusted to the site conditions.	8 26	8.7.1.1 8.7.2.1	26.13.1, 26.13.2, 26.13.3		
		• This section of the Application will also describe the Proponent's commitments, including those related to implementation of best practices.	8 26	8.7.1.1 8.7.2.1			
11.2.8	Potential Residual Effects and Their Significance	The Application will:					
		• Identify potential residual effects of construction, operation and closure/post closure activities on terrain, soils and surficial geology, after mitigation measures and environmental management strategies have been applied.	8	8.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	8	8.8			
11.2.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	8 37	8.9			
11.3	Geohazards						
11.3.1	Baseline Study	The Application will include a geohazards baseline study. This study will include the following:					
		• Terrain mapping - completed in accordance with the BC Resource Inventory (1997) standards with *refinements* as necessary for mine site specific geohazard assessments.	9	9.1.4.2.1		8-B, 9-F, 9-G	

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11.3.1	Baseline Study	• Snow avalanche hazard potential - completed according to the Canadian Avalanche Association Guidelines for Snow Avalanche Risk Determination and Mapping in Canada. Locator style mapping (identification of paths using arrows) will be used for avalanche paths intersecting the access road, and Atlas style mapping (delineation of avalanche polygons) will be used for the mine site area. Along the access road, only avalanche paths intersecting the road will be delineated, and mine site area mapping will focus on paths with the potential to intersect proposed mine infrastructure.	9	9.1.4.2.3		4-W, 9-A, 9-E	
11.3.2	Project Setting and Characterization	The Application will provide information on the:					
		• Stability of natural slopes in the proposed Project area, and more specifically in the vicinity of the proposed Project infrastructure; and	9	9.1.4		9-F, 9-G	
		• Landslide and snow avalanche hazards and inventory in the vicinity of the proposed Project infrastructure.	9	9.1.4		4-E through 4-H, 9-A through 9-E	
11.3.3	Spatial Boundary	• The spatial boundaries of the study will include the proposed access roads, transmission line alignment, tunnel portals, process plant site, tailing management facility, the mine footprints and related proposed Project facilities.	9	9.4			
11.3.4	Temporal Boundary	The temporal boundaries of the geohazard assessment will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	9	9.4			
11.3.5	Valued Components	• The Application will identify potential effects of geohazards, such as landslides, and avalanches on the security of proposed Project facilities and personnel.	9	9.5, 9.6, 9.7		9-A through 9-H	
11.3.6	Assessment of Potential Effects	• The Application will assess the potential effects of geohazards on the proposed Project infrastructure and on the safety of proposed Project personnel, and the potential effects of the proposed Project on geohazards.	9 33 34	9.6, 9.7 33.3, 33.[6-8], 33.[11-12] 34.3		9-A through 9-H	
11.3.7	Mitigation and Environmental Management	• The Application will provide preliminary mitigation and management plans to avoid, minimize or mitigate the potential effects of geohazards on proposed Project infrastructure.	9 26	9.7, 9.8		9-A through 9-H	
		• This section of the Application will also describe the Proponent's commitments, including those related to implementation of best practices.	9 26	9.7, 9.8		9-A through 9-H	
11.3.8	Potential Residual Effects and Their Significance	The Application will:					
		• Identify potential residual effects of geohazards on construction, operation and closure/post closure *activities*, and the related consequences, after mitigation measures and environmental management strategies have been applied.	9	9.7, 9.8			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	9				No residual effects
11.3.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	37				No residual effects
11.4	Geochemistry						
11.4.1	Baseline Study	A comprehensive geochemical prediction program will be conducted in order to characterise the ML/ARD potential of all geological units that will be exposed, disturbed or excavated by the proposed KSM Project during the three phases of the proposed Project. Geological materials that are part of the geochemical prediction program will include:					
		• Deposit geological materials (bedrock);	10	10.1.2.2		10-A, 10-C	
		• Non-deposit geological materials (overburden and bedrock); and	10	10.1.2.4		10-A, 10-C	
		• Tailing generated from lock cycle and pilot scale testing of ore recovery processes.	10	10.1.2.3		10-A, 10C	

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11.4.1	Baseline Study	• The samples will collectively represent waste rock, ore, low grade ore, pit wall, tunnel wall, tailing, cyclone sand tailing dam materials, road cut and fill material, overburden, and borrow pits.	10	10.1.2		10-A, 10-C	
		• Sampling will consider spatial and volumetric distribution of these materials to ensure that materials with potential for significant effects are assessed.	10	10.1.2, 10.2.2, 10.2.3		10-A, 10-C	
11.4.1.1	Test Methods	The geochemical prediction program developed for preparation of the Application will include the following test methods:					
		• Static testing including both Sobek neutralization potential and modified Sobek neutralization *potential* (consistent with methods recommended in Guidelines For Metal Leaching and Acid Rock Drainage at Minesites in British Columbia).	10	10.1.1		10-A, 10-C	
		• Elemental and whole rock oxide analyses.	10	10.1.1		10-A, 10-C	
		• Mineralogical analyses.	10	10.1.4		10-A, 10-C	
		• Particle size analyses.	10			10-A, 10-C	
		• Laboratory kinetic testing.	10	10.1.2, 10.2.3		10-A, 10-C	
		• Field kinetic testing.	10	10.1.2		10-A, 10-C	
		• Acute and chronic toxicity testing on tailing supernatant.	14	14.7.3		14-D	
		• Groundwater seep monitoring to characterize the geochemistry of natural ML/ARD occurring at and surrounding the KSM deposits.	10	10.1.2.		10-A, 10-C	
11.4.2	Project Setting and Characterization	The Application will:					
		• Characterize the geochemistry of all geological materials to be exposed, disturbed or excavated by proposed mine plan.	10	10.1.2		10-A, 10-C	
11.4.3	Spatial Boundary	• The spatial boundary will encompass all aspects of the proposed Project that could potentially generate ML/ARD including pits, tunnels, tailing, low grade ore stockpiles, rock storage facilities, borrow pits, access road cut and fill slopes and tailing dams.	10	10.1.2		4-M, 10-A, 10-B, 10-C	Geochemistry is a cause-effect pathway to surface water quality, groundwater quality, fish and aquatic habitat. Previously discussed with BC EAO and CEA Agency; significance analysis not undertaken for geochemistry.
11.4.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	10	10.1.2, 10.2			Geochemistry is a cause-effect pathway to surface water quality, groundwater quality, fish and aquatic habitat. Previously discussed with BC EAO and CEA Agency; significance analysis not undertaken for geochemistry.
11.4.5	Valued Components	• Metal leaching and acid rock drainage (ML/ARD) potential of all geological units that will be exposed, disturbed or excavated by the proposed Project, will be identified.	10 37	10.1		10-A, 10-C	Geochemistry is a cause-effect pathway to surface water quality, groundwater quality, fish and aquatic habitat. Previously discussed with BC EAO and CEA Agency; significance analysis not undertaken for geochemistry.
		• ML/ARD and water quality predictions will be used in the assessment of potential affects to VCs including: surface water quality, aquatic habitat, groundwater quality, and human health presented in other sections of the Application. Cumulative impacts on these relevant VCs will also be assessed.	10 14 37	10.2 12.5 14.7			Geochemistry is a cause-effect pathway to surface water quality, groundwater quality, fish and aquatic habitat. Previously discussed with BC EAO and CEA Agency; significance analysis not undertaken for geochemistry.

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.4.6	Assessment of Potential Effects	The Application will:					
		• Identify and predict the expected geochemical behaviour, including lag times, of geological materials that have the potential for ML/ARD.	10	10.1.2		10-A, 10-C	
		• Predict the geochemical behaviour of geological materials to be used for construction of the proposed Project.	10	10.1.2		10-A, 10-C	
		• For a range of potential scenarios that considers expected site-specific conditions, predict drainage quality from source components including: waste rock, pit walls, pit lakes, low grade ore, overburden, borrow material, tailing and tunnel walls.	10 14	10.2 14.7		10-A, 10-B, , 10-C 14-F, 14-G, 14-H	
		• Develop criteria, applicable to potential mining scenarios, for the management of waste rock materials during the proposed mining activities that avoid, minimize or otherwise mitigate potential effects of the proposed Project on the receiving environment.	26		26.14		
		• Define the source terms and describe the methodology (including assumptions and rationale) used for water quality modelling, and where appropriate, include the use of relevant analogues.	10	10.2		10-A, 10-C14-F, 14-G, 14-H	
		• Integrate the water quality modelling with ML/ARD prediction (source term) information, hydrogeology, surface hydrology and water balance information to develop water quality predictions that will in turn be used to assess the potential effects to VCs.	10 14	10.2 14.7		10-A, 10-C, 14-F, 14-G, 14-H	
11.4.7	Mitigation and Environmental Management	The Application will provide:					
		• a waste management plan for the handling and where practical segregation criteria for waste rock and/or *tailing* to prevent or minimize the likelihood of ML/ARD from occurring.	26		26.14	4-S, 4-T,4-V	
		• mitigation or management plans to control, capture and if necessary, treat seepage and runoff to protect the receiving environment.	26		26.4, 26.14		
		• if waste rock segregation is proposed: geochemical segregation criteria, identification of methods that will be used for geochemical characterization during operations; and identification of operational plans and procedures for segregation.	26		26.3, 26.14		
		• if a water cover is proposed: identification of the types and volumes of mine waste to be flooded; an assessment of geochemical stability under flooded conditions; the lag time to ML/ARD onset; the disposal methods and location(s); the time until full flooding will occur; design and contingency that support geochemical stability during extreme climatic events; mitigation measures to minimize soluble constituents that could affect water quality; and a monitoring and maintenance plan to ensure geochemical and physical stability of the flooded mine wastes.	10 26	10.2.3	26.4, 26.14	10-A, 10-C	
		• if an engineered dry cover system is proposed: design objectives along with the characteristics and volumes of cover materials required; construction methods and preliminary cost estimates; an assessment of expected performance and long-term effectiveness under the expected range of climatic conditions; identification of monitoring and maintenance requirements; contingency plans; and costs of long-term monitoring and maintenance.	N/A	N/A			N/A
		• if drainage collection and treatment is proposed: collection system location and design information; characterization of influent and effluent chemistry and flows to be treated; design criteria for the drainage collection and holding system; conceptual design of the treatment process; predicted reagent use; design criteria to manage the expected range of flow and climatic conditions; sludge disposal plans; identification of the operating, monitoring and maintenance requirements; capital and operating costs; and available information to support the feasibility of effectively operating a water treatment system at the proposed scale.	4 14 26	4.5.1.11 14.7	26.14, 26.17	4-J, 4-R,4-S, 4-T, 4-V, 4-U, 14-I	
		• mitigation and environmental management strategies for pertinent Project components to address ML/ARD concerns in the event of temporary closure or early permanent closure.	26		26.14		

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.4.7	Mitigation and Environmental Management	• a conceptual operational waste rock characterization and handling plan for access road and tunnel construction, to be finalized during the permitting process.	10 26	10.1.2	26.14	10-B	
		• This section of the Application will also describe the Proponent's commitments, including those related to implementation of best practices.	14 26	14.7	26.14		
11.4.8	Potential Residual Effects and their Significance	• Where ML/ARD predictions indicate that after mitigation, a component of the predicted seepage or surface runoff from source components will reach the receiving environment, an effects assessment will be completed to determine the significance. This will include an effects assessment for the following VCs: including: surface water, groundwater quality, aquatic habitat, and human health in other sections of the Application.	12 14 15 16 25	12.8 14.8 15.8 16.8 25.7			Geochemistry is a cause-effect pathway to surface water quality, groundwater quality, fish and aquatic habitat. Previously discussed with BC EAO and CEA Agency; significance analysis not undertaken for geochemistry.
11.4.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	37				Geochemistry is a cause-effect pathway to surface water quality, groundwater quality, fish and aquatic habitat. Previously discussed with BC EAO and CEA Agency; significance analysis not undertaken for geochemistry.
11.5. Groundwater Quantity and Quality							
11.5.1	Baseline Study	The Application will include a groundwater quantity and quality baseline study. This study will include the following:				11-A, 11-B, 11-C	
		• Methods used to install groundwater monitoring wells. Logs will be included for geologic materials encountered, and tested.	10 11 12	11.1.2 12.1.2		11-A, 11-B, 11-C	
		• Methods used for hydraulic testing, both during the advancement of the boreholes (packer testing) and in the monitoring well installations (slug testing and Theis recovery).	11 12	11.1.2 12.1.2		11-A, 11-B, 11-C	
		• Methods for groundwater sampling from the monitoring well installations (the sampling methodology used ensured that the samples obtained are representative of the groundwater). The results of the quarterly groundwater quality analysed at an approved laboratory.	11 12	12.1.2		11-A, 11-B, 11-C	
		• Methods and results of groundwater level monitoring throughout the study period.	11 12	11.1 12.1		11-A, 11-B, 11-C	
		• Inferred groundwater flowpaths.	11	11.1.3, 11.1.4		11-A, 11-B, 11-C	
		• Inferred groundwater recharge and discharge zones based on observed vertical gradients in well pairs.	11	11.1.3, 11.1.4		11-A, 11-B, 11-C	
		• Review and summary of available information and data from other investigations.	11 12			11-A, 11-B, 11-C, 11-E	
		The baseline information will be used to generate the following:					
		• A *conceptual* hydrogeological model, based on the available data, to represent the baseline hydrogeological system in the proposed development areas.	11 12			11-E	
		• A calibrated regional groundwater model, based on the conceptual model and using industry standard software. The model will be used for the simulation of the baseline groundwater flow regime and as a predictive tool to simulate effects to the groundwater system from the development of the proposed Project.	11 12			11-E	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.5.2	Project Setting and Characterization	The Application will:					
		• Describe the geologic and hydrogeologic setting within which the proposed Project development lies;	11 12	11.1 12.1		11-A, 11-B, 11-C	
		• Provide baseline characterization of groundwater quality, including alkalinity, temperature, pH, Eh and electrical conductivity (EC), as well as standard drinking water parameters including major cations, major anions, nutrients, relevant minor and trace constituents, metals;	12	12.1		11-A, 11-B, 11-C	
		• Characterize the interactions of surface water and groundwater in and around the study areas and indicate potential surficial receiving waters; and	11 12 13 14	11.1 12.1 13.1 14.1		11-E, 11-F, 11-G, 11-I	
		• Indicate the regional groundwater flow regime showing how flows within the study boundaries interact.	11 12	11.1, 11.4.1 12.1		11-E	
11.5.3	Spatial Boundary	• The spatial boundaries of the study will include areas where effects to groundwater quantity or quality can be reasonably predicted and/or anticipated. These areas will include the area around the proposed mine developments (Kerr, Mitchell, Sulphurets and Iron Cap), the waste rock storage facilities, tunnels, the runoff water and seepage collection dams and other facilities in Mitchell and Sulphurets valleys and the TMF and process plant locations.	11 12	11.4.1 12.4.1		11-A, 11-B, 11-C, 11-E	
		• The study will include all likely receiving waters downstream of the proposed developments.	11 12	11.4.1 12.4.1		11-A, 11-B, 11-C, 11-E	
11.5.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	11 12	11.4.2 12.4.2			
		• The boundaries between these phases, and their individual durations, will be defined in the Application as additional information becomes available and following a review of the mine plan.	11 12	11.4.2 12.4.2			
11.5.5	Valued Components	• The Application will identify potential effects on:					
		• Groundwater quantity; and	11	11.5			
		• Groundwater quality.	12	12.5			
11.5.6	Assessment of Potential Effects	• The Application will assess the potential effects of the proposed Project on the groundwater quantity and quality using a representative hydrogeological model.	11 12 14	11.6, 11.7 12.6, 12.7		11-E, 11-F, 11-G, 11-I	
		• The model will include input parameters from meteorology, topography, geomorphology, hydrology, geology, hydrogeology and other appropriate studies. These input parameters will allow the predictive simulations to be as representative as possible in terms of effect magnitude, duration and spatial extent.	11 12	11.7 12.7		11-E, 11-F, 11-G, 11-I	
		• Potential effects to be assessed for proposed Project activities will include changes of water levels, hydraulic gradients, flow directions, groundwater recharge and discharge, groundwater-surface water interactions, as well as the possible changes of groundwater and surface water quality.	11 12	11.7 12.7		11-E	
11.5.7	Mitigation and Environmental Management	• The Application will provide potential mitigation or management plans for effects identified.	11 12 26	11.7 12.7	26.15		

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11.5.7	Mitigation and Environmental Management	• These plans will identify the requirements to which the proponent must adhere in order to reduce and/or eliminate the degree of magnitude of any effect and will be submitted to the applicable regulatory agencies for their review and approval prior to the commencement of construction.	26		26.6, 26.7, 26.15, 26.10, 2614, 26.17		
		• This section of the Application will also describe the Proponent's commitments, including those related to implementation of best practices.	26		26.6, 26.7, 26.15, 26.10, 2614, 26.17		
11.5.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects from the proposed Project on groundwater quality and quantity after mitigation measures and environmental management strategies have been applied; and	11 12	11.7 12.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	11 12	11.8 12.8			
11.5.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	11 12 37	11.9 12.9			
11.6. Surface Water Quantity and Quality							
11.6.1	Baseline Study	The Application will include a surface quantity and quality baseline study. This study will include the following:					
		• Summary of on-site hydrometric monitoring which has been occurring since the fall of 2007. Currently, the monitoring network includes 16 automated gauging locations in the Unuk, Sulphurets, *Teigen*, and Treaty watersheds;	13	13.1		13-A	
		• Characterization of the spatial and temporal variability of the surface water quality of lakes, streams and rivers in the proposed Project area, with reference to federal and provincial water guidelines for the protection of aquatic life. Studies have been conducted throughout 2008 and 2009. These studies include:	14	14.1		14-A, 14-B, 14-C	
		• Stream and lake water quality (general parameters, anions, nutrients, cyanides, total organic carbon, and total and dissolved metals); and	14	14.1		14-A 14-B 14-C	
		• Water toxicity.	14	14.1		14-D	
11.6.2	Project Setting and Characterization	The Application will:					
		• Provide an overview of surface water quantity including estimates of annual and return period runoff, peak flow, and low flows as well as seasonal distribution of flows for several points of interest;	13	13.1		13-A	
		• Provide deterministic hydrologic modelling for watersheds of specific interest;	13	13.1		13-B	
		• Provide a characterization of the Mitchell Glacier following a two year field and office program designed to determine the current mass balance and dynamics of the glacier as well its role in producing surface runoff to the proposed Mitchell deposit open pit;	13	13.1 13.1.5		13-C	
		• Provide an overview of background information, environmental setting and characteristics of water quality and water quantity; and	13 14	13.1 14.1		13-A 14-A, 14-B, 14-C	
		• Provide a characterization of the baseline surface water quantity and quality in conjunction with the baseline characterization of the site meteorology, ML/ARD and groundwater conditions.	6 10 11 12 13 14	 13.1 14.1		13-A 14-A, B, C	

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.6.3	Spatial Boundary	• Spatial boundaries for the surface water quantity effects assessment will follow baseline watershed boundaries and will consider watersheds over a range of spatial scales from local (i.e. immediately downstream of proposed Project components) to regional (i.e. Unuk River at the international boundary, Bell-Irving River below Treaty Creek).	13	13.4.1			
		• The surface water quality assessment will focus on the watersheds that could potentially be affected by mine development and operation (i.e., Mitchell/Sulphurets/Unuk, Teigen/Snowbank/ Bell-Irving and Treaty/Bell-Irving).	14	14.4.1		14-A, B, C	
11.6.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	13 14	13.4.2 14.4.2			
11.6.5	Valued Components	The Application will identify potential effects on:					
		• Surface water quantity; and	13	13.5			
		• Surface water quality.	14	14.5			
11.6.6	Assessment of Potential Effects						
11.6.6.1	Surface Water Quantity	• The Application will apply the proposed Project description to the baseline hydrologic regime in order to identify potential effects on surface water quantity.	13	13.6 13.7			
		• The assessment will examine potential effects to annual runoff, seasonal distribution of flow, timing and magnitude of peak and low flow events, and potential changes to groundwater-surface water interactions, and will consider the potential effects of climate change.	13	13.7.3 13.7.4		13-B	
		The assessment will take into consideration all components of the proposed Project that could affect surface hydrology including:	13			13-D	
		• Alteration to runoff conditions by land disturbance;	13	13.6 13.7			
		• Alteration of existing drainage pathways and catchment areas; and	13	13.6 13.7			
		• Discharges from the TMF, collection ponds, process plant, water treatment facilities, tunnels, settling ponds, open pits (i.e. pit dewatering and sumps) and other mine workings.	13	13.6 13.7			
		• Site water balances will be developed for the proposed mine areas as well as the proposed TMF area and will be used to facilitate the effects assessment on the hydrologic regime within and downstream of these areas.	13	13.6 13.7			
		• The Application will assess how the proposed Project will affect flows and levels on the Unuk River at the border with the United States in order to determine the applicability of the *International River Improvements Act*.	13	13.7			Only flows were assessed because they were determined to be a more robust measurement for the Unuk River at the border.
		• The Application will assess the potential effects of the proposed Project on the Mitchell Glacier.	13	13.6.5		13-C	
11.6.6.2	Surface Water Quality	• The Application will apply the proposed Project description to the baseline surface water quality in order to identify potential effects on surface water quality during the three phases of the proposed Project.	14	14.6		14-E	
		• Predictions of water quality will be provided for discharges from pits, pit lakes, rock storage facilities, ore stockpiles (including low grade ore), road cuts, tunnels, borrow pits, tailing, dams, site surface water discharges, groundwater seepages and relevant receiving environment locations in local and regional watersheds.	14	14.7.1		14-F, 14-G, 14-H	

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11.6.6.2	Surface Water Quality	• The Application will assess water quality and effects for key flow conditions and relevant time steps in the mine life (including time frames for future pit lake discharging and steady state conditions).	14	14.7		14-F, 14-G, 14-H	
		The assessment will take into consideration the components of the proposed Project that could affect surface water quality including:					
		• Waste streams and containment ponds throughout the proposed Project area, including mine water, seepage and surface runoff;	14	14.7		14-F, 14-G, 14-H	
		• Discharges from the TMF, collection ponds, process plant, water treatment facilities, tunnels, settling ponds, open pits and other mine workings; and	14	14.7		14-F, 14-G, 14-H	
		• Blasting and its associated residues, in particular, nitrogen, nitrate, nitrite and ammonia.	14	14.7		14-F, 14-G, 14-H	
		• The Application will provide an assessment of water quality (metals, nutrients, major anions, physical parameters, and process chemicals) within and downstream of the proposed mine areas, including the pit lake post closure, as well as the proposed TMF area with comparisons to provincial water quality guidelines and federal discharge requirements.	14	14.7		14-F, 14-G, 14-H	
		• Adverse effects to the receiving environment will take into consideration seasonal flow changes and effects modelling will include extreme low and high flows at relevant timeframes/milestones during the construction, operation and post closure phases of the mine life.	14	14.7		14-F, 14-G,	
		• Any proposals to request site specific water quality objectives from the Ministry of Environment will be clearly described, with rationale provided.	n/a				N/A
11.6.7	Mitigation and Environmental Management	• Water management will be fully documented in the Application. Throughout the effects assessment process, mitigation measures will be identified to minimize, or otherwise mitigate potential effects of the proposed Project on surface water quantity and quality conditions.	13 14 26	13.7 14.7.2	26.14, 26.17	4-N, 4-S, 4-V, 4-AA, 14-F, 14-G, 14-I	
		• The effectiveness and limitations of identified mitigation measures and environmental management strategies will be discussed.	13 14 26	13.7 14.7.2	26.14, 26.17, 26.18	4-N, 4-S, 4-V, 4-AA, 14-I	
		• All identified measures will be described and used to determine the potential for residual effects.	13 14	13.7 14.7.3			
		• This section of the Application will also describe the Proponent's commitments, including those related to implementation of best practices.	13 14 26	13.7 14.7.2	26.14, 26.17, 26.18		
11.6.8	Potential Residual Effects and Their Significance	The Application will:					
		• Identify potential residual effects from the proposed Project on surface water quality and quantity after mitigation measures and environmental management strategies have been applied; and	13 14	13.7 14.7.3			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	13 14	13.8 14.8			
11.6.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	13 14 37	13.9 14.9			

Application Information Requirements			Application / Environmental Impact Statement				
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11.7. Fish and Aquatic Habitat							
11.7.1	Baseline Study	The Application will include fish and aquatic habitat baseline studies. These studies will include the following: • Characterization of the aquatic environment including such variables as:					
		• Sediment quality (moisture, particle size, cyanides, nutrients, organic carbon, and total metal concentrations);	15	15.1.5.2.1 15.1.5.3.3		15-B 15-D 15-F 15-J	
		• Stream periphyton community (genus richness, density, relative abundance, evenness, diversity and biomass as chlorophyll);	15	15.1.5.2.2		15-B 15-D 15-F	
		• Lake phytoplankton community (genus richness, density, relative abundance, evenness, diversity and biomass as chlorophyll);	15	15.1.5.3.4		15-B 15-D 15-F	
		• Lake zooplankton community (genus richness, relative abundance, evenness and diversity); and	15	15.1.5.3.5		15-B 15-D 15-F	
		• Stream and lake benthic invertebrate community (genus richness, relative abundance, evenness, diversity and biomass).	15	15.1.5.3.6 15.1.5.2.3		15-B 15-D 15-F	
11.7.1	Baseline Study	• Characterization of fish and fish habitat, including such variables as:					
		• Fish presence, community, distribution and barriers to fish movement for watercourses within the study area;	15	15.1.4.2 15.1.4.3 15.1.4.4 15.1.4.5		15-A 15-C 15-E 15-G 15-I 15-S 15-T	
		• Fish habitat of watercourses within the study area, with a detailed emphasis on streams within the footprint of the proposed tailing management facility;	15	15.1.4.4		15-A 15-C 15-E 15-G 15-I	
		• Fish community composition and fish habitat quality of lakes and wetlands within the study area;	15	15.1.4.2 15.1.4.3 15.1.4.4 15.1.4.5		15-A 15-C 15-E 15-G 15-I	
		• Whole body fish tissue metals levels, fish diet, fish health, fish energy and reproductive investment at potential monitoring sites that may be required under the Metal Mining Effluent Regulations (MMER); and	15	15.7.4.1.1		15-A 15-C 15-E 15-G 15-I	
		• Potential fish habitat compensation locations and assess fish and fish habitat within these locations for potential future development of a preliminary fish habitat compensation plan.	15	15.8.4.1.2 15.8.4.1.3		15-H 15-Q 15-R	
		• Unuk River salmonid catch data provided by Alaskan state and US federal agencies.	15	15.1.4.2.3		15-A, 15-C	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.7.2	Project Setting and Characterization	The Application will:					
		• Describe freshwater fish and aquatic habitat within the proposed Project area. Aquatic habitat includes aquatic resources (i.e., biological values including periphyton, phytoplankton, zooplankton, and benthic invertebrate, and sediment quality for stream and lake habitats) and fish habitat (i.e., stream, wetland and lake fish habitat, including fish passage and riparian habitat); and	15 16	15.1.4 15.1.5 16.1		15-A 15-C 15-E 15-G 15-I 15-S 15-T	
		• Provide an overview of background information, environmental setting and characteristic of the fish and aquatic habitat.	15	15.1.4 15.1.5			
11.7.3	Spatial Boundary	The LSA will encompass watersheds in the immediate area potentially directly affected by the proposed Project (i.e., streams that are located within areas near the proposed mines, rock storage facilities, process plant, and TMF, as well as ancillary components such as buildings, roads, tunnels, power generation, and transmission lines). These watersheds will include: • Teigen Creek (including South Teigen and West Teigen creeks); • Treaty Creek (including North Treaty Creek); • Snowbank Creek; • Sulphurets Creek; • Mitchell Creek; • Coulter Creek; and • Unuk River. • Regional Study Area (RSA) – the portion of the watersheds downstream of those potentially directly affected as well as watersheds upstream of those potentially directly affected will be included. Specific downstream extents of the RSA for the proposed Project are anticipated to be immediately downstream of the Treaty Creek confluence on the Bell-Irving River and Unuk River at the Canada/US Border.	15	15.4.1			
Note that, while the study areas do not formally encompass areas in the United States, the Application will incorporate information provided by US state and federal agencies.							
11.7.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	15	15.4.2			
11.7.5	Valued Components	The Application will identify potential effects on fish and aquatic habitat VCs. Aquatic habitat is defined as the periphyton, phytoplankton, zooplankton, benthic invertebrates and sediment quality of the study area lakes, streams and rivers, and associated fish habitat. The identified valued components (VC) for the Application are: • Dolly Varden; • Bull trout; • Rainbow trout/steelhead; • Pacific salmon (pink, chum, sockeye, chinook and coho) ; and • Aquatic habitat.	15	15.5.1			
11.7.6	Assessment of Potential Effects	The Application will identify potential effects, such as potential impacts from predicted water and sediment chemistry changes, on fish and aquatic habitat during all phases of the proposed Project with regard to:					
		• Footprint of development;	15 16	15.6, 15.7 16.6			

Application Information Requirements			Application / Environmental Impact Statement				
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11.7.6	Assessment of Potential Effects	• Infrastructure development activities;	15 16	15.6, 15.7 16.6			
		• Dewatering activities;	15	15.6, 15.7			
		• Flow changes from water management and diversions; and	15	15.7.5.1.3		15-N 15-O 15-P	
		• Impacts from habitat compensation activities.	15	15.7.5.1		15-Q 15-R	
		The application will identify potential harmful alteration, disruption or destruction (HADD) of fish habitat and will describe:					
		• The locations and estimated areas of fish habitat potentially affected;	15	15.7.5		15-Q 15-R	
		• Types of fish habitats that would potentially be affected (e.g. wetlands, stream channels, riparian habitat, etc) as well as the use by fish (e.g. spawning/incubation, rearing, food/nutrient, overwintering, migration, etc) including habitats that would potentially be affected by flow changes;	15 16	15.7.5 16.7		15-Q 15-R	
		• Fish habitat types and areas of each type of habitat affected by the proposed Project, in a tabular format; and	15	15.7.5		15-Q 15-R	
		• Estimated population size or numbers of fish that use the habitat that would potentially be affected by the proposed Project (particularly for the TMF and the tributaries of Teigen and Treaty Creeks that drain the tailing facility area);	15			15-C, 15-E, 15-G, 15-I 15-Q 15-R	
		The analysis of potential effects will consider:					
		• Creeks and rivers that may experience changes to fish resources including, but not limited to Unuk River, Sulphurets, Mitchell, McTagg, Treaty and Teigen creeks, and streams along access road corridors;	15	15.7			
		• Sulphurets and West Teigen Lakes (potential exposure), and Knipple Glacier Lake and Todedada lakes (reference lakes);	15	15.7			
		• Any rare and/or sensitive fish species and their habitat and provincially and COSEWIC/SARA-listed species and their habitat;	15	15.7			
		• Fish species of heritage or traditional importance to the Nisga'a Nation or First Nations (e.g., salmon);	15	15.7			
		• Mortality (includes fishing);	15	15.7.1			
		• Mitigation and/or habitat compensation requirements (based on DFO's Policy for the Management of Fish Habitat and the related principle of no net loss of the productive capacity of fish habitat);	15 26	15.7 15.7.5	 26.18		
		• Aquatic organisms including primary producers (algae) and secondary producers (zooplankton and benthic invertebrates) and habitat, including lakes, streams and rivers;	15 16	15.7			
		• Creeks, rivers and lakes and associated food webs and water use potential that may be impacted by changes in water chemistry (suspended solids, nutrients, major ions, metals) due to runoff or discharges from the proposed Project;	15	15.7		15-M	
		• Potential physical and chemical changes to sediment quality, including total metals, general physical parameters, total organic carbon, nutrients and cyanide;	15	15.7		15-L	
		• Potential acute and chronic toxic effects in the downstream receiving environment will be considered;	15	15.7			

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11.7.6	Assessment of Potential Effects	• For key receiving environments, the relationship and partitioning of trace elements between water and sediment media; and	15	15.7			
		• Examining these potential effects and relating them to the surface water quality and quantity sections of the report.	15	15.7			
11.7.7	Mitigation and Environmental Management	• The Application will identify mitigation measures and environmental management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on fish and aquatic habitat.	15 26	15.7	26.10 26.14 26.17 26.18.1 26.18.3		
		• Where required, a fish habitat compensation program to offset potential effects to fish and aquatic habitat, will be outlined.	15 26	15.8.4.1	26.18.1	15-Q 15-R	
		• The effectiveness and limitations of identified mitigation measures and environmental management strategies will be discussed.	15 26	15.7	26.10 26.14 26.17 26.18.1 26.18.3	15-Q 15-R	
		• This section of the Application will also describe the Proponent's commitments, including those related to implementation of best practices.	15 26	15.7	26.10 26.14 26.17 26.18.1 26.18.2 26.18.3	15-Q 15-R	
		• Separate fish habitat compensation plans should be developed for:					
		• The HADD of fish habitat resulting from the project (including the dams and associated infrastructure required for the tailing impoundment area (TIA) and loss of habitat due to downstream flow impacts, transmission lines, road building, etc.);and	15 26	15.8.4.1.2		15-R	
		• The impacts to fish habitat resulting from the deposit of a deleterious substance in the TIA. Both plans should be prepared in consultation with DFO and accordance with the DFO's national *Policy for the Management of Fish Habitat* (1986) and consistent with DFO's *Practitioners Guide to Habitat Compensation*.	15	15.8.4.1.3		15-Q	
11.7.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects from the proposed Project on fish and aquatic habitat VCs after mitigation measures and environmental management strategies have been applied; and	15	15.8			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	15	15.8			
11.7.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	15 37	15.9 37.6.6			
11.8 Wetlands							
11.8.1	Baseline Study	• Wetlands in the footprint of proposed development features within the local assessment boundary will be summarized and classified according to MacKenzie and Moran (2004).	16			16-A	
		Wetlands will be classified by:					
		• field evaluation;	16	16.1.1.2		16-A	
		• federal and provincial classification protocols in conjunction with the ecosystem mapping component;	16	16.1.1.3		16-A	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.8.1	Baseline Study	• calculating wetland area; and	16	16.1.1.3		16-A	
		• compiling biophysical data to describe wetland functions.	16	16.1.1.4		16-A	
		• The field description of wetlands will adhere to the methods identified by MacKenzie (1999) and classification will follow Mackenzie and Moran (2004). These methods are provincially focused and comprehensive, combining both the wetland classification system as identified by the Canadian Wetlands Classification System (Warner and Rubec, 1997) and the biogeoclimatic classification system (Pojar et al, 1987). The method of classification is compatible with the Terrestrial Ecosystem Mapping (TEM) mapping procedures described in Section 11.9.	16	16.1.1		16-A	
		• Results of the wetland hydrology survey will be used to describe the movement of water within large wetland complexes in the Local Assessment Boundary.	16	16.1.1.4		16-A	
		• Wetland functions as identified by Environment Canada (2003) will be described in terms of:	16				
		• Hydrological function– contribution of the wetland to the quantity of surface and groundwater;	16	16.1.2.3		16-A	
		• Biogeochemical function – contribution of the wetland to the quality of surface water and groundwater;	16	16.1.2.3		16-A	
		• Habitat function – terrestrial and aquatic, including dependence of salmonid species;	16	16.1.2.3		16-A	
		• Ecological function – role and uniqueness of the wetlands with respect to the surrounding ecosystem;	16	16.1.2.3		16-A	
		• Social / cultural / commercial values;	16	16.3, 16.5			
		• Aesthetic / recreational values;	16	16.3, 16.5			
		• Education and public awareness; and	16	16.3, 16.5			
		• General considerations.	16	16.3, 16.5			
		• Wetland class determination will be based on general site characteristics such as soil type and the extent and quality of predominant vegetation cover.	8 16 17	 16.1.2.1 17.1.3			
		• Wetland ecosystem information will be used to assign wetlands to a site association, defined as “all sites capable of supporting a similar plant association at climax” (Mackenzie and Moran 2004).	8 16 17	 16.1.1.3 17.1.3		16-A	
		• Wetland site associations observed in the study area will be verified with wetland communities recognized by the British Columbia Conservation Data Centre (CDC) as ecosystems of special concern.	8 16 17	 16.1.1.3 17.1.3		16-A	
11.8.2	Project Setting and Characterization	The Application will include:					
		• Classification and description of wetland ecosystems following MacKenzie and Moran (2004);	16	16.1.1.3 16.1.2.1		16-A	
		• Mapping of wetland area; and	16	16.1.1.3		16-A	
		• Discussion of wetland function.	16	16.1.1.1 16.1.2.3		16-A	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.8.3	Spatial Boundary	The spatial boundary for the effects assessment will include: • The Local Assessment Boundary will include all areas of potential development and a buffer surrounding development features, established to include any foreseeable environmental effect beyond the footprint; and • The Regional Assessment Boundary will include Biogeoclimatic Zones/sub-zones within the same forest district such that potential effects to wetlands within the region can be assessed, particularly ecosystems of concern as identified by the BC Conservation Data Centre.	16	16.4.1			
11.8.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	16	16.4.2			
11.8.5	Valued Components	The Application will identify potential effects on:					
		• Wetland extent, which is defined as the size of individual wetlands, total wetland area, the distribution of wetlands, and the types of wetlands within the study area. Wetland extent includes aspects such as a wetland's classification, position in the landscape, and area; and	16	16.5			
		• Wetland functions, which are specific processes that wetlands carry out such as regulating an area's hydrology, contribution to surface and groundwater quality, wildlife habitat provided, and the role and uniqueness of wetlands within a region.	16 17 18	16.5 17.5 18.5			
11.8.6	Assessment of Potential Effects	• The Application will identify and evaluate potential effects of the proposed Project on wetland extent and wetland function in relation to the Federal Policy on Wetland Conservation (1991).	16	16.6			
11.8.7	Mitigation and Environmental Management	The Application will:					
		• Identify mitigation measures and environmental management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on wetland extent and function;	16 26	16.7.1.1 16.7.2.1	26.19		
		• Discuss the hypothesized effectiveness of identified mitigation measures and environmental management strategies;	16 26	16.6	26.19		
		• List the commitments that the Proponent will make with respect to wetlands, based on proposed mitigation and environmental management strategies; and	16 26	16.7 (Tbl 16.7-4)	26.19		
		• Develop a conceptual wetlands compensation plan based on concepts in the *Federal Policy on Wetland Conservation*.	16 26	16.8	26.19	16-B	
11.8.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project on wetland ecosystems, after mitigation measures and environmental management strategies have been applied; and	16	16.7 16.8			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	16	16.8			
11.8.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	16 37	16.9			
11.9. Ecosystems and Plant Communities							
11.9.1	Baseline Study	The Application will include an ecosystems and plant community baseline study. This study will include the following:					
		• Results of a literature review, including searches of the BC CDC websites for identified rare ecosystems, plants and potentially invasive plants in this region.	17	17.1.3		17-A	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.9.1	Baseline Study	• Searches will also be performed of academic, government and previous industrial reports, as well as interviews with knowledgeable persons in the field, for information on ecosystem types and properties, rare plants and potentially invasive species. Identified rare ecosystems will be reported.	17	17.1.3		17-A	
		• Results of Terrestrial Ecosystem Mapping (TEM), which will be from aerial photographs. The TEM will be used to characterize the local study area. Air photo interpretation will be conducted using 1:20,000 scale 2008 colour aerial photographs. Mapping methods will include those for digital data capture. Mapping will be guided by the following relevant provincial standards:	17	17.1.2		17-A, 17-B	
		• Howes, D. E., and E. Kenk. 1997. Terrain Classification System for British Columbia. Version 2. Victoria: BC Ministry of Environment.	17			17-A	
		• RIC. 1998. Standard for Terrestrial Ecosystem Mapping in British Columbia. Victoria, BC: Terrestrial Ecosystem Task Force Ecosystem Working Group, Resources Inventory Committee.	17			17-A	
		• RIC. 1999. Standard for Predictive Ecosystem Mapping in British Columbia. Victoria, BC: Terrestrial Ecosystem Mapping Alternatives Task Force, Resources Inventory Committee, Version 1.0.	17			17-A	
		• Results of Predictive Ecosystem Mapping (PEM), which will be conducted using the Landmapper program, which uses digital elevation models (DEM) and satellite images to produce a raster-based vegetation map of the area. Each cell in the map will include data on both structural stage and site series within BEC sub-zones.	17	17.1.2		17-A	
		• TEM and PEM will be ground-truthed through ecosystem surveys. The ecosystem mapping fieldwork will focus on general characterization of the ecological community structure and diversity in collaboration with the wildlife and soils researchers. Data will be collected using standard Ground Inspection Forms (GIF) in accordance with provincial standards and regional field guides:	17	17.1.2		17-A	
		• British Columbia Ministry of Forests and Range. 2007. Biogeoclimatic Ecosystem Classification Program Website. Victoria, BC: Ministry of Forests Research Branch. http://www.for.gov.bc.ca/hre/becweb/index.htm (accessed January, 2009); and	17			17-A	
		• Banner, A., W. MacKenzie, S. Haeussler, S. Thomson, J. Pojar and R. Trowbridge. 1993. A Field Guide to Site Identification and Interpretation for the Prince Rupert Forest Region. Land Management Handbook 26. Victoria, BC: Ministry of Forests.	17	17.1.2, 17.1.3		17-A	
		• Field data will be entered into the provincial data entry program VENUS (version 5.0).	17	17.1.2		17-A	
		• Rare plant surveys will be conducted in concert with ground-truthing fieldwork.	17	17.1.3.3			
		• Plant samples will be collected for metals analysis in collaboration with the country foods baseline. Principal wildlife forage species and berry plants will be chosen, as well as alpine plants. Plants will be collected close to potential dust-sources such as the proposed open pits and TMF and at a greater distance (~5 km) to serve as controls.	17 26		26.20.2.4	17-A	
11.9.2	Project Setting and Characterization	The Application will:					
		• Describe the ecosystem and plant communities (i.e., BEC zones and subzones, structural stages, and general ecosystem types) within the proposed Project area.	17	17.1.3		17-A	
		• Describe any rare ecosystems or plants identified through mapping or field studies in the proposed Project area.	17	17.1.3.1		17-A	
		• Provide an overview of background information, environmental setting and characteristics for each ecosystem and plant community VC.	17	17.1.3 17.5.1		17-A	
		• Develop both TEM and PEM for the proposed Project area. TEM will be conducted at 1:20,000 scale and PEM will be conducted using 90 m2 pixel sizes.	17	17.1.2		17-A, 17-B	

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11.9.3	Spatial Boundary	The spatial boundaries of the assessment will include:					
		• The LSA will include a buffer extending at least to the height of land or 1.5 km around the outer limits of the proposed infrastructure (i.e. for the process plant, mine sites, and TMF), whichever comes first. This boundary will match the Terrestrial Ecosystem Mapping area studied in the baseline. For the access road, pipelines, and transmission line, the LSA will include a buffer extending at least to the height of land or 1.5 km along either side of the centre line of the linear development, whichever comes first.	17	17.4.1 Fig 17.1-1		17-A	
		• The RSA will include the area used to assess potential effects for regional wildlife VCs. This area will match the Predictive Ecosystem Mapping area, studied in the baseline.	17 18	17.4.1 18.4.1			
11.9.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	17	17.4.2			
11.9.5	Valued Components	The Application will identify potential effects on:					
		• Local ecosystems and plant communities (identified by TEM and PEM mapping as Biogeoclimatic Ecosystem Classification (BEC) subzones or variants and by general ecosystem type; a more *intuitive* way of looking at the ecosystems with groups such as “wetlands, dry forest, wet forest, alpine tundra, etc.”);	17	17.6			
		• Rare or listed plant communities or ecosystems, as defined by the BC CDC and COSEWIC;	17	17.6			
		• Plant species identified by the Nisga’a Nation and First Nations as being important (either directly as food, or indirectly as country foods for important harvested wildlife species, or for medicinal use); and	17 29 30	17.5 29.4.6.3 30.8.3		17-C	
		• Sensitive plant communities (e.g., riparian areas, old forest, and other plant communities as determined through analysis).	17	17.6			
11.9.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on ecosystem and vegetation VCs. Potential effects assessed will include, but are not limited to:					
		• Permanent removal of ecosystem and plant community VCs;	17	17.7			
		• Temporary removal of ecosystem and plant community VCs;	17	17.7			
		• Disturbance of ecosystem and plant community VCs through edge effects (e.g., windthrow), clearing activities, etc.	17	17.7			
		• Use of herbicide along transmission line and access road rights of way to manage vegetation;	17	17.7.2	26.20		
		• Increased dusting from operations; and	17	17.7	26.20		
		• Introducing and providing disturbed habitat for invasive species, as defined by the British Columbia’s *Weed Control Act*.	17	17.7.2	26.20		
11.9.7	Mitigation and Environmental Management	The Application will:					
		• Identify mitigation measures and environmental management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on ecosystem and plant community VCs;	17 26	17.7.1.1 17.7.2.2 26.20.4	26.20		
		• List the commitments that the Proponent will make with respect to ecosystem and plant community VCs, based on proposed mitigation.	17 26 28	17.7.1.1 17.7.2.2 28.3	26.20		

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11.9.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project on ecosystem and plant community VCs and the related consequences, after mitigation measures and environmental management strategies have been applied; and	17	17.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	17	17.8			
11.9.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	17 37	17.9			
11. Wildlife and Wildlife Habitat							
11.10.1	Baseline Study	The Application will include a wildlife and wildlife habitat baseline study. This study will include the following:	18			18-A 18-B 18-C 18-D	
		• Literature review of wildlife and wildlife habitat in the study area. The review will include information from provincial resources (MOE and Ministry of Agriculture and Lands [MAL]), websites, databases, scientific literature, grey literature, and Aboriginal traditional use and ecological knowledge (TU/TK);	18	18.1 18.2 18.3			
		• Winter ungulate aerial surveys will be conducted during mid to late winter using the following method:	18	18.1		18-A	
		• Aerial-based Inventory Methods for Selected Ungulates – Standards for Components of British Columbia Biodiversity No 32. March 2002. Version 2.	18	18.1.5.1		18-A	
		• Spring surveys (variable radius point counts, stand watches, northern goshawk call playbacks, bear baited hair capture and DNA analysis, waterfowl and riverine bird aerial survey), will be conducted using the following methods:	18	18.1.4 18.1.6 (birds)		18-A 18-C (grizzly bear)	
		• Inventory Methods for Raptors – Standards for Components of British Columbia's Biodiversity No 11. October 2001. Version 2;	18	18.1.6		18-A	
		• Inventory Methods for Bears – Standards for Components of British Columbia Biodiversity No 21. May 1998;	18	18.1.5.2		18-A	
		• Inventory Methods for Riverine Birds: Harlequin Duck, Belted Kingfisher, American Dipper – Standards of Components of B.C.'s Biodiversity No. 12. March 1998; and	18	18.1.6.2		18-A	
		• Inventory Methods for Waterfowl and Allied Species: Loons, Grebes, Swans, Geese, Ducks, American Coot and Sandhill Crane. Standards for Components of British Columbia's Biodiversity No. 18. May 1999.	18	18.1.6.2		18-A	
		• Summer surveys (aerial habitat reconnaissance, ground-based amphibian searches, bear baited hair capture and DNA analysis, waterfowl and riverine bird aerial survey, habitat suitability assessment, marmot aerial and ground based survey, small mammal trap transects, ultrasonic bat detection and live mist net capture), will be conducted using the following methods:	18	18.1.7 Amphibian 18.1.5.2 Bears 18.1.5.4 sm. mammal 18.1.5.6 bats 18.1.6 birds 18.1.5 Mammal habitat suitability models		18-A 18-B 18-C	
		• Inventory Methods for Pond Rearing Amphibians and Painted Turtle – Standards for Components of British Columbia's Biodiversity No. 37. March 1998. Version 2.0;	18	18.1.7		18-A	
		• Standard Methods for Inventory and Monitoring of Pond Breeding Amphibians in the Pacific Northwest – Society for Northwest Vertebrate Biology (Eds., W.P. Leonard, R.B. Bury, and D.H. Olson). 1997;	18	18.1.7		18-A	

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11.10.1	Baseline Study	• Inventory Methods for Bears – Standards for Components of British Columbia Biodiversity No 21. May 1998;	18	18.1.5.2		18-C	
		• Inventory Methods for Riverine Birds: Harlequin Duck, Belted Kingfisher, and American Dipper – Standards of Components of B.C.'s Biodiversity No. 12. March 1998;	18	18.1.6.2		18-A	
		• Inventory Methods for Waterfowl and Allied Species: Loons, Grebes, Swans, Geese, Ducks, American Coot and Sandhill Crane – Standards for Components of British Columbia's Biodiversity No. 18. May 1999;	18	18.1.6.2		18-A	
		• British Columbia Wildlife Habitat Rating Standards – Resources Inventory Committee Standard. May 1999. Version 2.0;	18	18.1.5		18-B	
		• Inventory Methods for Pikas and Sciurids: Pikas, Marmots, Woodchuck, Chipmunks and Squirrels – Standards for Components of British Columbia Biodiversity No. 29. December 1998;	18	18.1.5.5		18-A	
		• Inventory Methods for Small Mammals: Shrews, Voles, Mice & Rats – Standards for Components of British Columbia Biodiversity No. 31. May 1998; and	18	18.1.5.4		18-A	
		• Inventory Methods for Bats – Standards for Components of British Columbia's Biodiversity, No. 20. 1998.	18	18.1.5.6		18-A	
		Fall surveys (bear baited hair capture and DNA analysis, waterfowl and riverine bird aerial survey), using the following methods:					
		• Inventory Methods for Bears – Standards for Components of British Columbia Biodiversity No 21. May 1998;	18	18.1.5.2		18-C	
		• Inventory Methods for Riverine Birds: Harlequin Duck, Belted Kingfisher, and American Dipper – Standards of Components of B.C.'s Biodiversity No. 12. March 1998; and	18	18.1.6.2		18-A	
		• Inventory Methods for Waterfowl and Allied Species: Loons, Grebes, Swans, Geese, Ducks, American Coot and Sandhill Crane – Standards for Components of British Columbia's Biodiversity No. 18. May 1999.	18	18.1.6.2		18-A	
		• Habitat suitability modelling will be conducted for mountain goat, moose, grizzly bear, marten, and fisher.	18	18.1.5.1.2 (mountain goat) 18.1.5.1.1 (moose) 18.1.5.2.1 (grizzly bear) 18.1.5.3 (marten)		18-B	Habitat suitability models are considered accounted for by relying on models of grizzly bear and marten habitat as well as ecosystem mapping of mature cottonwood within riparian areas. Fisher habitat use and potential effects of the Project are reflected in the American marten and bear effects assessments and mitigation for black bears (e.g., avoiding den sites). See Table 18.5.2 for rational for exclusion, and Section 18.11 for the effects assessment conclusion for fisher.
		• Results of the literature review, field surveys and habitat suitability modelling will be presented in the baseline report.	18	18.1		18-A 18-B 18-C	
11.10.2	Project Setting and Characterization	• The Application will:					
		• Provide an overview of wildlife and wildlife habitat background information, wildlife management direction, and current pressures on wildlife in the area;	18	18.1 18.2 18.3			
		• Describe existing terrestrial wildlife populations, important wildlife habitat, features and characteristics for each wildlife VC in the proposed Project area; and	18	18.1			

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11.10.2	Project Setting and Characterization	• Describe any wildlife species at risk potentially present or identified through field studies and existing literature in the proposed Project area.	18	18.1.8 18.1.9			
11.10.3	Spatial Boundary	The spatial boundaries of the study will include:					
		• The LSA will include a buffer extending at least to the height of land or 1.5 km around the outer limits of the proposed infrastructure (i.e. for the process plant site, mine sites, and TMF), whichever comes first. This will match the Terrestrial Ecosystem Mapping area studied in the baseline. For the access road, pipelines, and transmission line, the LSA will include a buffer extending at least to the height of land or 1.5 km along either side of the centre line of the linear development, whichever comes first.	18	18.4.1			
		• The RSA will include the area used to assess potential effects for regional wildlife VCs. This area will match the Predictive Ecosystem Mapping area, studied in the baseline.	18	18.4.1			
11.10.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	18	18.4.2			
11.10.5	Valued Components	The Application will identify potential direct and indirect effects on the habitat of species or groups of wildlife species. Wildlife VCs may be selected based on one or more of the following sources:					
		• *Federal Species at Risk Act* (SARA) Registry and Provincial Red or Blue Listed Wildlife Species;	18	18.5 Table 18.5-1			
		• Species or groups of regulatory importance under the *Migratory Birds Convention Act* (1994), *BC Wildlife Act* (1996), *BC Forest and Range Practices Act* (2002);	18	18.5 Table 18.5-1			
		• Species or groups requiring enhanced consideration under the mandates of regulatory agencies, such as the BC Ministry of Environment (MOE) and Canadian Wildlife Service (CWS);	18	18.5 Table 18.5-1			
		• Species or groups identified within land and resource management plans;	18	18.3 18.5 Table 18.5-1			
		• Species or groups identified as having a strong biological importance for the functioning of the ecosystem, including importance as keystone, indicator, and/or umbrella species;	18	18.5 Table 18.5-1			
		• Species identified by the Nisga'a Nation or First Nations groups to be of heritage or traditional importance; and	18	18.5 Table 18.5-1			
		• Species important to local peoples for hunting, trapping and recreation.	18	18.5 Table 18.5-1			
11.10.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on wildlife VCs. Potential effects will include, but are not limited to:	18	18.6 18.7		18-E	
		• Direct habitat loss or alteration for each wildlife VC using the results of habitat suitability modelling and field surveys to map and rate habitat quality;	18	18.7.1			
		• Direct habitat loss or alteration for each wildlife VC using existing Wildlife Habitat Areas (WHAs) and Ungulate Winter Ranges (UWRs) as defined under FRPA;	18	18.7.1			
		• Disturbance to wildlife populations or avoidance of important wildlife habitats from noise, increased human presence, access, development activities, etc.;	18	18.7.3			
		• Increased predator access due to development activities;	18	18.7.5.3.1 18.9.2.5			
		• Direct wildlife mortality from clearing activities, machinery, vehicle traffic, transmission line structures, increased hunting pressure and increased potential for wildlife-human conflicts, etc.; and	18	18.7.4 18.7.5 18.7.6	26.21		

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
11.10.6	Assessment of Potential Effects	• Health risk to wildlife from access or exposure to elevated metal concentrations.	18	18.7.7			
11.10.7	Mitigation and Environmental Management	The Application will:					
		• Identify mitigation measures and environmental management strategies (e.g. wildlife-human conflict) to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on wildlife VCs and habitats;	18	18.7.1.1 18.7.2.1 18.7.3.1 18.7.4.1 18.7.5.1 18.7.6.1 18.7.7.1	26.21		
		• Provide a table with the commitments that the proponent will make with respect to wildlife VCs, based on proposed mitigation; and	28	28.2			
		• Provide a framework for a detailed monitoring plan which will be produced prior to construction. This framework will list the study objectives, study review procedures and adaptive management goals.	26	26.21.3	26.21		
11.10.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project on wildlife VCs, after mitigation measures and environmental management strategies have been applied.	18	18.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	18	18.8			
11.10.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	18 37	18.9			
11.11. Noise							
11.11.1	Baseline Study	The Application will include a noise baseline study. This study will include the following:					
		• Review and report on baseline noise measurements in similar remote areas; and	19	19.1			
		• Identify sensitive noise receiver locations.	19			19-A	
11.11.2	Project Setting and Characterization	• The Application will summarise the available noise baseline information for the proposed Project region.	19	19.1			
11.11.3	Spatial Boundary	The spatial boundaries of the study will include:					
		• The LSA will include areas within 1.5 km of the proposed Project footprint or disturbance area	19	19.4.1			
		• The RSA will include an area within 10 km of the proposed Project footprint or disturbance area. Noise is generally considered a local effect due to the tendency to diminish with distance from a source. Most human generated noise has been found to attenuate to below background levels or be undetectable within 5 km for a large industrial source. A 10 km range is expected to encompass all potential acoustic effects of the proposed Project.	19	19.4.1			
11.11.4	Temporal Boundary	The temporal boundaries will include the following two phases: • Construction Phase – estimated 3 to 4 year period; and • Operations Phase – approximately 50 to 55 year life of the mine.	19	19.4.2			
		• As the model is a snapshot in time, the period of site activity with the greatest potential to generate noise will be used. This may coincide with the period of greatest production or the period when activity is closest to the sensitive noise receivers.	19	19.4.2		19-A	

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11.11.5	Valued Components	• The noise model predictions will be used in the assessment of potential effects to VCs including: wildlife and human health, presented in other sections of the Application. Selection of wildlife and human health VCs are presented in Sections 11.10 and 15 of this AIR.	19	19.5			
11.11.6	Assessment of Potential Effects	The Application will:					
		• Establish major sources of noise from the proposed Project;	19	19.6 19.7		19-A	
		• Determine sound emissions from major sources using proposed Project description information, vendor data and empirical formulae. Typical noise sources will include blasting, crushing, mobile and stationary equipment operation including drills and haul trucks, helicopters, etc. Tonal and impulsive noise from the various point and mobile sources will be included in the assessment;	19	19.6 19.7		19-A	
		• Generate a noise model of the proposed Project to predict daytime and night time noise propagation from the site. The model will consider terrain, spatial layout of the proposed Project and sensitive noise receiver locations;	19	19.7		19-A	
		• Analyze for potential noise effects from proposed Project traffic at sensitive wildlife and human receptor locations; and	19	19.7 19.8		19-A	
		• Use predicted values to determine the expected change in noise levels and compare to Criteria. The “percent highly annoyed” metric will be used for quantitative assessment of the noise effects for humans.	19	19.7.4 19.8.2.5		19-A	
		• The application will identify and evaluate potential noise effects of the proposed Project on the VCs listed above.	19	19.7 19.8		19-A	**1.**
11.11.7	Mitigation and Environmental Management	The Application will:					
		• Identify mitigation measures and management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on baseline noise levels; and	19	19.7	26.22	19-A	
		• Provide a list of the commitments that the proponent will make with respect to noise, based on proposed mitigation.	19 39		26.22	19-A	
11.11.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project on selected wildlife VCs and human health VCs after mitigation measures and management strategies have been applied.	19	19.7		19-A	
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	19	19.8		19-A	
11.11.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	19 37	19.9			
12. Potential Heritage Effects							
12.1. Heritage							
12.1.1	Baseline Study	The Application will include an archaeological baseline study. This study will include the following:				21-A 21-B	
		• Review and report on existing archaeological and heritage data, literature and maps;	21	21.2		21-A 21-B	
		• Archaeological Impact Assessment Surveys (AIA);	21	21.2.8		21-A 21-B	
		• Completion of Heritage Conservation Act (HCA) permit obligations; and	21	21.2 21.1.1		21-A 21-B	

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
12.1.1	Baseline Study	• Review of Nisga'a Final Agreement Appendices F and L.	21	21.2		21-A 21-B	
12.1.2	Project Setting and Characterization	The Application will include:					
		• Summary of the existing archaeological data and literature and identification of heritage and archaeological sites and/or areas with the potential for heritage and archaeological sites within the proposed Project area;	21	21.1 21.2		21-A 21-B	
		• The Application will contain the results of an AIA, consistent with existing provincial guidelines and in accordance with permitting provisions of the *Heritage Conservation Act*, R.S.B.C. 1996, c. 187; and	21	21.2.8		21-A 21-B	
		• The objectives of the AIA will be to search for and document protected sites in potential conflict with the proposed Project.	21	21.2.8 21.6		21-A 21-B	
12.1.3	Spatial Boundary	• The spatial boundary for the effects assessment will include the area described under the Heritage Inspection Permit #2008-0128.	21	21.5.1			
12.1.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	21	21.5.2			
12.1.5	Valued Components	• The Application will identify potential effects on Archaeological and Heritage Sites protected by the *Heritage Conservation Act*. The *Heritage Conservation Act* (HCA) automatically protects all archaeological sites that predate AD 1846, whether on Provincial Crown or private land. Burial sites and rock art sites are protected regardless of age.	21	21.6		21-A 21-B	
12.1.6	Assessment of Potential Effects	• The Application will identify and evaluate potential effects of the proposed Project on protected archaeological and heritage resources. The effects assessment will include a determination of the significance of identified heritage and archaeological sites and will assess potential proposed Project impacts on the identified sites. The threshold for determining the significance of residual effects is identified by the Archaeology Branch during the approval process.	21	21.7		21-A 21-B	
12.1.7	Mitigation and Heritage Management	The Application will:					
		• If protected archaeological/heritage sites are identified as a result of the AIA, outline mechanisms for avoidance or appropriate mitigation of potential adverse effects of the proposed Project.	21 26	21.8.1.1	26.23		
		• Provide procedures to be followed in the event that archaeological materials are unexpectedly encountered during proposed Project development. Archaeological impact management measures may include monitoring, if necessary, to ensure that potential adverse impacts to archaeological resources which could not be predicted or evaluated prior to construction are addressed.	21 26	21.8.1.2	26.23		
		• Describe permitting requirements for mitigation or site alteration (if any).	21 26	21.8.1	26.23		
		• List the commitments that the Proponent will make with respect to archaeological resources, based on proposed mitigation.	21 28	21.8.1.1 21.8.1.2 28.2			
12.1.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of construction, operation and closure/post closure activities on archaeological and heritage resources, and the related consequences, after mitigation measures and environmental management strategies have been applied.	21 26	21.8			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	21 26	21.9			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
12.1.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	21 37	21.10			
13. Potential Economic Effects							
13.1. Economic							
13.1.1	Baseline Study	The Application will include an economic baseline study. This study will include the following:	20			20-A 21-A	
		• Review of Statistics Canada and BC Stats data (community profiles, aboriginal population profiles and economic reports).	20	20.1		20-A	
		• Review of Institute of Chartered Accountants of BC (e.g. BC Economic Checkup Reports).	20	20.1		20-A	
		• Review of Regional/local government economic planning documents and bylaws.	20	20.3		20-A	
		• Review of the Proponent company policies.	20	20.7.2.1			
		• Expected proposed Project expenditures and workforce requirements provided by the Proponent.	20	20.6			
		• Informant interviews with key government and community representatives to further clarify and gather information on economic issues. Informants include (but may not be limited to) government economic development officers, local and regional economic development associations, employment and training officers; business associations, chambers of commerce; NGOs/community-based organizations and elected officials.	20	20.1		20-A	
13.1.2	Project Setting and Characterization	The Application will:					
		• Describe the economies within the local, regional and provincial study area; and	20	20.1.3 20.1.4 20.1.5			
		• Provide an overview of background information, economic setting and characteristics of the economy within the proposed Project area.	20	20.1			
13.1.3	Spatial Boundary	The study area takes into consideration the Aboriginal and non-Aboriginal communities which are likely to experience Project-related effects on VCs. Communities were selected based on proximity to the proposed Project and related haul routes, potential downstream effects, and communities' expected role in proposed Project development and operations. These include:					
		• The LSA will include the communities of Terrace, Stewart, the Hazeltons, Dease Lake and Smithers and the Tahltan, Nisga'a Nation, Gitxsan Wilp Skii km Lax Ha and Gitanyow Wilp Wiiltsx-Txawokw (e.g. Village of Gitanyow) territories and communities.	20 22 23	20.4.1 22.4.1			
		• The RSA will include Northwest BC (including the Kitimat-Stikine Regional District, the Stikine Region and Electoral Area A of the Bulkley Nechako Regional District).	20	20.4.1			
		• A Provincial study area is also included due to the broad economic implications in terms of provincial economic and natural resource development.	20	20.4.1			
13.1.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	20	20.4.2			
13.1.5	Valued Components	The Application will identify potential effects on the economy and employment as identified by:					
		• Employment and income opportunities; and	20	20.5			
		• Business opportunities and economic development.	20	20.5			

Application Information Requirements			Application / Environmental Impact Statement				
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13.1.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on the local and regional economies. This will include:					
		• A qualitative evaluation and characterization of identified VCs based on proposed Project characteristics, understanding of the economic characteristics of the region and local communities (as developed through the review and analysis of baseline data), and understanding how local and regional economic priorities and activities interact with construction, operations and closure.	20	20.6			
		• Potential effects will also be evaluated based on perceptions and concerns of local populations and Aboriginal communities.	20	20.6			
		• Quantitative methods will also be used including economic modelling, use of multipliers and cause and effects matrices.	20	20.7.1		20-B	
		• Indirect and induced employment, income, revenue generation and GDP effects will be predicted and measured using the BC Stats Input-Output Model (BCIOM).	20	20.7.1		20-B	An alternative model has been used in discussion with the EAO.
		• Input modelling data will be based on employment and expenditure data provided by the Proponent.	20	20.7.1		20-B	
		• All financial information, especially as it relates to job creation, multipliers and broad predictions of economic impacts, will be signed off by a qualified professional, such as a Certified General Accountant or Certified Management Accountant.	20	20.7.1.1		20-C	
		• Public, Nisga'a Nation and First Nations consultation findings as they pertain to economic issues will be reviewed and considered in the economic effects assessment results.	20	20.6 20.7			
		• Consideration for the potential to use local services and supply companies currently underutilized.	20	20.7			
13.1.7	Mitigation and Economic Effects Management	The Application will:					
		• Identify mitigation measures and management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on local, regional and provincial economies.	20	20.7.2.1 20.7.3.1 20.7.4.1 20.7.5.1			
		• List the commitments that the proponent will make with respect to the local and regional economies, based on proposed mitigation.	20	20.7.2.1			
13.1.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project after mitigation measures and management strategies have been applied.	20	20.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	20	20.8			
13.1.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	20	20.9			
14. Potential Social Effects							
14.1. Social							
14.1.1	Baseline Study	The Application will include a social baseline study, including community infrastructure. This study will include the following:	22	22.1		22-A	
		• Review of Statistics Canada and BC Stats data (community profiles, aboriginal population profiles and economic reports).	22	22.1 22.1		22-A	
		• Review of BC Ministry of Health, Ministry of Education and other provincial ministry data (community profiles, health and educational services capacity, trends, and issues).	22	22.1			
		• Review of Institute of Chartered Accountants of BC (e.g. BC Economic Checkup Reports).	20	20.1.2			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
14.1.1	Baseline Study	• Review of Regional/local government economic planning documents and bylaws.	20 22	20.1 22.3		22-A	
		• Review of the Proponent's company policies.	20 22	20.7.2.1 22.7.1.1 22.7.3.1			
		• Identification of expected proposed Project expenditures and workforce requirements provided by the Proponent.	20 22	20.6		20-A 22-A	
		• Review of Health Canada's guide to health impact assessments.	25	25.7.1 25.7.4			
		• Informant interviews with key government and community representatives to further clarify and gather information on social issues as well as community infrastructure and capacity. Informants include (but may not be limited to) government economic development officers, employment and training officers; business associations, chambers of commerce; health and education services representatives, Non-Government Organizations (NGOs)/community-based organizations and elected officials.	22	22.1		22-A	
14.1.2	Project Setting and Characterization	The Application will:					
		• Describe the historical and current state of local communities and society within the local and regional spatial boundaries.	22	22.1.2 22.2		22-A	
		• Provide an overview of background information, social setting and characteristics of the communities within the proposed Project area.	22	22.1.2		22-A	
14.1.3	Spatial Boundary	The spatial boundary will take into consideration the communities, both Aboriginal and non-Aboriginal, which are likely to experience proposed Project-related effects on VCs. Communities will be selected based on proximity to the proposed Project and related haul routes, potential downstream effects, and the communities' expected role in proposed Project development and operations. These areas will include: • The LSA will include the communities of Terrace, Stewart, the Hazeltons, Dease Lake and Smithers and the communities of the Nisga'a Nation. • The RSA will include Northwest BC (including the Kitimat-Stikine Regional District, the Stikine Region and Electoral Area A of the Bulkley Nechako Regional District).	22	22.4.1			
14.1.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	22	22.4.2			
14.1.5	Valued Components	The Application will identify potential effects on: • Community demographics and infrastructure; • Education, skills development and training; and • Community well-being.	22	22.5.1			
14.1.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on the local and regional communities and society. This assessment will include:					
		• Evaluation and characterization of identified VCs based on proposed Project characteristics, understanding of the social characteristics of the region and local communities (as developed through the review and analysis of baseline data), and understanding how local and regional social priorities and activities interact with construction, operations and closure. Potential effects will also be evaluated based on perceptions and concerns of local populations and Aboriginal communities.	22	22.6			
		• Public, Nisga'a Nation and First Nations consultation findings as they pertain to social issues will be reviewed and considered in the social effects assessment.	22	22.6			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
14.1.7	Mitigation and Social Effects Management	The Application will:					
		• Identify mitigation measures and management strategies, including the use of local training programs to build capacity of local work force, to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on local and regional communities and society.	22	22.7.1.1 22.7.2.1 22.7.3.1 22.7.4.1 22.7.5.1			
		• List the commitments that the proponent will make with respect to local and regional communities and society, based on proposed mitigation.	22	22.7.1.1 22.7.2.1 22.7.3.1 22.7.4.1 22.7.5.1			
14.1.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project after mitigation measures and management strategies have been applied.	22	22.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	22	22.8			
14.1.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	22 37	22.9			
14.2. Land Use							
14.2.1	Baseline Study	The Application will include a land use baseline study. This study will include the following:	23			23-A	
		• Review of relevant land use management plans, the Integrated Land and Resource Registry (ILRR), as well as OCPs, Neighbourhood Plans, Area Plans, Regional Plans, and Zoning Bylaws;	23	23.1			
		• Mapping of data from local governments and regional districts;	20 22 23	23.1		20-A 22-A	
		• GIS analysis to identify sites of anticipated land use change and disruption;	20 22 23	 23.1		20-A 22-A 23-A	
		• Assessment of potential land use conflicts through selected site visits, as needed;	23	23.1			
		• Interviews with local industry, government agencies and staff, the Nisga'a Nation and First Nations; and	23			3-J, 3-N, 23-A	
		• Interviews with potentially affected commercial and forest tenure holders.	23			23-A	
14.2.2	Project Setting and Characterization	The Application will:					
		• Describe the land use and tenures within the study area;	23	23.1.4			
		• Identify land management plans that guide activities in the proposed Project area;	22 23	22.3 23.1.4			
		• Identify overlapping/adjacent protected areas, and	23	23.1.4			
		• Provide an overview of background information and land use characteristics within the proposed Project area.	23	23.1			

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
14.2.3	Spatial Boundary	• The land use study area is the same as the wildlife and wildlife habitat study area (Figure 4), which takes into consideration the species with the largest habitat range, unique ecosystems, and natural landform barriers. Like wildlife, it is assumed that human activity is heavily influenced by terrain and, therefore, naturally occurring barriers (e.g., major mountain ranges, watersheds, ecosystems) define subsets of different human land use and movement. Furthermore, many of the land uses are related to wildlife (e.g., hunting and trapping) and, as such, adopting the same study area ensures consistency and the ability to compare.	23	23.4.1			
14.2.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	23	23.4.2			
14.2.5	Valued Components	The Application will identify potential effects on:					
		• Access;	23	23.5.2			
		• Quality of experience;	23 24	23.5.2 24.6			
		• Quantity of resources;	23	23.5.2			
		• Timber supply;	23	23.5.2			Timber supply is excluded as a VC because current and historical timber activities are not located near the Project footprint. Timber supply is not anticipated to be affected as harvesting activities in both the Cassiar TSA and Nass TSA have historically been significantly below defined AAC quantities. Even with improved access, timber values are not likely to attract commercial harvesting interests.
		• Traditional/heritage value of land; and	23	23.5.1			
		• Recreational activities;	23	23.5.1			
		• Subsistence (e.g. fishing);	23	23.5.1			
		• Navigable waters; and	23 31	23.5.2 31.6		31-A	
		• Land management objectives.	23	23.5.2			
14.2.6	Assessment of Potential Effects	• The Application will identify and evaluate potential effects of the proposed Project on land use.	23	23.6			
14.2.7	Mitigation and Land Use Management	The Application will:					
		• Identify mitigation measures and land use management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on land use.	23	23.7.1.1 23.7.2.1 23.7.3.1			
		• Provide with a list of the commitments that the Proponent will make with respect to land use, based on proposed mitigation.	23 39				

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14.2.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project after mitigation measures and environmental management strategies have been applied.	23	23.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	23	23.8			
14.2.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	23 37	23.9			
14.3. Visual and Aesthetic Resources							
14.3.1	Baseline Study	The Application will include a visual and aesthetic resources baseline study. This study will include the following:					
		• A visual landscape inventory using GIS to delineate and record potentially visually sensitive areas such as protected areas, recreation sites and road and river corridors. Other sources of information will include Visual Landscape Inventory data created by the BC Ministry of Forest and Range as well as applicable Land and Resource Management Plans;	24	24.1		24-A 24-B	
		• Field studies will be undertaken to gather data on pre-selected viewpoints. The baseline information gathered will consist of photographs oriented toward the proposed infrastructure, recording the GPS point for the photograph location and direction;	24	24.1		24-A 24-B	
14.3.2	Project Setting and Characterization	The Application will:					
		• Describe visual aesthetics and viewsheds within the visual quality study area; and	24	24.1			
		• Provide an overview of background information, environmental setting and characteristics of visual quality within the proposed Project area.	24	24.1		24-A 24-B	
14.3.3	Spatial Boundary	• The visual and aesthetic resources study area will include the area surrounding the proposed Project infrastructure up to a distance of 8 km which would encompass the foreground and mid-ground view of the landscape. Particular attention will be given to the Unuk River, Teigen Creek and Mitchell Valley.	24	24.4.1			
14.3.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring.	24	24.4.2			
14.3.5	Valued Components	• The Application will identify potential effects on visual quality.	24	24.5			
14.3.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on visual aesthetics. This will include:					
		• Perspective renderings from key viewpoints using Visual Nature Studio software to show the potential visual effect of the proposed Project; and	24	24.7		24-C	
		• Identification of potential effects of construction and operation of the proposed Project using viewshed models, perspective renderings and a ratings system (Hassell Matrix) developed for assessing visual impacts (Hasell 2005).	24	24.7		24-A	
14.3.7	Mitigation and Visual and Aesthetic Management	The Application will:					
		• Identify mitigation measures and management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on visual aesthetics and viewsheds.	24 26	24.7.2.1 24.7.3.1 24.7.4.1 24.7.5.1 24.7.6.1 24.7.7.1	26.24		

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
14.3.7	Mitigation and Visual and Aesthetic Management	• List the commitments that the proponent will make with respect to visual quality, based on proposed mitigation.	24 26 39	24.7	26.24		
14.3.8	Potential Residual Effects and their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project on visual aesthetics and viewsheds after mitigation measures and management strategies have been applied; and	24	24.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	24	24.8			
14.3.9	Assessment of Potential Cumulative Impacts	• Residual cumulative impacts on relevant VCs will be assessed.	24 37	24.9			
15. Potential Health Effects							
15.1 Human Health							
15.1.1	Baseline Study	The Application will include a country foods baseline study. This study will include the following:					
		• Identification of plants and animals used for consumption purposes. A screening level risk assessment (SLRA) of the potential human health risks due to contaminants in country foods will be used as the basis for determining human health effects. The SLRA will follow Health Canada's guidelines for assessing food issues in environmental impact assessments (Health Canada 2004). The SLRA will include a Problem formulation which will: identify the most relevant country foods harvested in the proposed Project's study area, identify contaminants of potential concern (COPC), identify pathways for contaminant uptake into country foods, identify human receptors and the relevant life stages (e.g., adults and toddlers that harvest and consume the foods), and identify the relevant human exposure pathways. Potential baseline health effects will be calculated as risks.	25	25.1.5		25-A 25-B	
		This will include:					
		• Exposure assessment – COPC concentrations in country foods will be integrated with human consumption characteristics to calculate the estimated daily intake (EDI) of the COPCs.	25	25.1.5		25-A	
		• Toxicity assessment - The tolerable daily intakes (TDIs) will be identified.	25	25.1.5		25-A	
		• Risk characterization - the exposure and effects assessments will be integrated by comparing the EDIs with TDIs to produce quantitative risk estimates. In addition, the recommended maximum weekly intake (RMWI) of each country food will be calculated.	25	25.1.5		25-A 25-C 25-D	
		• Uncertainty Analysis - the assumptions made throughout the assessment and their effects on the conclusions will be evaluated.	25			25-A	
15.1.2	Project Setting and Characterization	The Application will:					
		• Reference air quality and noise level proposed Project setting sections, which will precede the human health section.	7 19 25	7.1 19.1 25.1.4 25.1.6			
		• Summarize the baseline water quality (surface water and groundwater).	12 14 25	12.1 14.1 25.1.3			
		• Summarize the results of the baseline country foods risk assessment.	25	25.1.5			

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
15.1.2	Spatial Boundary	Spatial boundaries will be determined by the various aspects of the proposed Project that affect human health:					
		• Air Quality – this spatial boundary will be consistent with the domain used in the air quality model and will include the closest receptor locations (i.e. permanent or temporary locations identified in the land use baseline and any contemporary locations identified in the TU/TK studies)	7 23 25	7.4.1 23.4.1 25.4.1.2		23-A	
		• Noise - this spatial boundary will be consistent with the domain used in the noise model and will include the closest receptor locations (i.e. permanent or temporary locations identified in the land use baseline and any contemporary locations identified in the TU/TK studies)	19 23 25	19.4.1 23.4.1 25.4.1.4		23-A	
		• Drinking Water - this spatial boundary will be consistent with the domain used in the water quality model and will include the closest drinking water locations identified in the land use baseline and any contemporary locations identified in the TU/TK studies	12 14 23 25	12.4.1 14.4.1 23.4.1 25.4.1.1		14-H 23-A	
		• Country Foods – Based on the spatial boundary for air quality effects assessment (5 km zone extending from any mine-site infrastructure), a 1 km zone extending from the centre-line of the access roads, and a zone consisting of the transmission line right of way will be used. For watercourses a zone extending from project infrastructure downstream to the first receptor will be used, on the assumption that assessment of this zone will determine the highest potential concentrations of any contaminants.	7 25	7.4.1 25.4.1			
15.1.4	Temporal Boundary	The temporal boundaries will include the following three phases: • Construction Phase – estimated 3 to 4 year period; • Operations Phase – approximately 50 to 55 year life of the mine; and • Closure and Post-Closure – mine site reclamation and post-closure monitoring	25	25.4.2			
15.1.5	Valued Components	. The Application will identify potential effects on Human Health (this includes off-duty, off-site employees, their families, the Nisga'a Nation, First Nations, land users, local stakeholders and local community members).	25	25.5			
15.1.6	Assessment of Potential Effects	The Application will identify and evaluate potential effects of the proposed Project on human health due to potential changes in air quality, noise levels, drinking water quality and country foods quality. This assessment will include the following methods:					
		• Air Quality - Health effects from baseline data and predicted levels of air contaminants will be assessed using Health Canada's guidance document on estimating number of excess deaths in Canada due to air pollution, whereby estimated health outcomes down to background levels will be calculated. A risk assessment will also be conducted for diesel particulate matter.	7 25	7.8 25.7.2			
		• Noise - The 'percent highly annoyed' metric will be used to assess the potential health effects due to increased daytime and night time noise at relevant receptor locations.	19 25	19.6 19.7 25.7.			
		• Drinking Water – Where water quality is empirically modelled, a screening level risk assessment (SLRA) of the potential human health risks due to contaminants in drinking water will be used as the basis for determining human health effects. Where water quality is not empirically modelled, a qualitative approach will be used to assess potential health effects.	20 22 23 25	 25.7.1			
		• Country Foods – Country foods will include plants and animals determined to be used for consumption purposes. A SLRA of the potential human health risks due to contaminants in country foods will be used as the basis for determining human health effects. The SLRA will follow Health Canada's guidelines for assessing food issues in environmental impact assessments (Health Canada 2004). The SLRA will include a Problem Formulation which will: identify the most relevant country foods harvested in the proposed Project area, identify contaminants of potential concern (COPC), identify pathways for contaminant uptake into country foods, identify human receptors and the relevant life stages (e.g., adults and toddlers that harvest and consume the foods), and identify the relevant human exposure pathways. Where possible, potential health effects will be calculated as risks.	25	25.1.5 25.7.3		25-C 25-D	

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
15.1.6	Assessment of Potential Effects	This will include:					
		• Exposure assessment – COPC concentrations in country foods will be integrated with human consumption characteristics to calculate the estimated daily intake (EDI) of the COPCs.	25	25.7.3			
		Toxicity assessment - The tolerable daily intakes (TDIs) will be identified.	25	25.7.3		25-C 25-D	
		• Risk characterization - The exposure and effects assessments will be integrated by comparing the EDIs with TDIs to produce quantitative risk estimates. In addition, the RMWI of each country food will be calculated.	25	25.7.3		25-C 25-D	
		• Uncertainty Analysis - the assumptions made throughout the assessment and their effects on the conclusions will be evaluated	25			25-C 25-D	
15.1.7	Mitigation and Health Management	The Application will:					
		• Identify mitigation measures and health management strategies to avoid, minimize, or otherwise mitigate potential effects of the proposed Project on human health.	25 26	25.7.1 25.7.2 25.7.3 25.7.4	26.11 26.17 26.18 26.22 26.25		
		• Provide a list of the commitments that the Proponent is making with respect to human health, based on proposed mitigation	25 26 39	25.7			
15.1.8	Potential Residual Effects and Their Significance	The Application will:					
		• Identify potential residual effects of the proposed Project on human health, after mitigation measures and management strategies have been applied.	25	25.7			
		• Determine the significance of the identified potential residual effects from the proposed Project, based on the significance criteria listed in Section 10.8.	25	25.8			
15.1.2	Assessment of Potential Cumulative Impacts	Residual cumulative impacts on relevant VCs will be assessed.	25 37	25.9			
16.	Summary of Proposed Environmental Management Plans						
16.1	Environmental Management System	• A conceptual Environmental Management System (EMS) for the proposed Project will be outlined in the Application. The objective of the EMS will be to provide a consistent approach to environmental management through resource allocation, the assignment of responsibilities and ongoing evaluation of environmental practices, procedures and processes.	26	26.1			
		• The EMS will be part of the overall corporate management system which includes organizational structure, planning and training activities, staff responsibilities, practices, procedures and resources for developing, implementing, reviewing and maintaining environmental policies associated with the proposed Project. Some aspects of the EMS may be conceptual, recognizing that Seabridge Gold, as the existing proponent, will not likely be the organization that leads the construction, operation and closure/deactivation of the proposed KSM Project, and that the lead organization may not be known at the time of submission of the Application. A detailed EMS will be developed in the future, prior to construction, to address relevant proposed Project components and activities as they commence. Furthermore, the EMS will evolve through construction and operation of the proposed Project through a process of continual improvement.	26	26.1			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
16.1	Environmental Management System	• EMPs will identify the approach to Project planning and the development of protection measures to mitigate potential environmental effects during construction, operation and closure phases to be used by Seabridge Gold or its successor organization. EMPs will describe the environmental practices and procedures to be applied during planning, construction and operation of the proposed Project. A three step process will be used for the development of EMPs: • A high level framework will be included in the Application which will commit the Proponent to specific and detailed goals, objectives and procedures for producing the EMPs. Included in this step will be a procedure for re-evaluation of the monitoring plan, methods and objectives for adaptive management goals. • The second step, production of the formal EMPs, may be initiated after the issuance of the Environmental Assessment Certificate, if a Certificate is issued, but before construction is started. This step will follow the procedures and commitments developed in the first step. • The third step will be the development of detailed standard operating procedures (SOPs) to fulfill the obligations defined in the second step.	26	26.1 to 26.25	26.2 to 26.25		
		• The Application will describe how the Project developer will ensure that commitments in EMPs will be carried forward on those acting for the Project developer, including contractors and sub-contractors.	26	26.1.3			
16.2	Construction, Operational and Post-Closure Environmental Management Plans	The Application will include a high level framework for EMPs, as described in Section 16.1, for the following activities:					
		• construction environmental management;	26		26.2		
		• dangerous goods and hazardous materials management;	26		26.7		
		• waste management;	26		26.6		
		• explosives manufacture, storage, and handling;	26		26.8		
		• spill prevention and emergency response;	26		26.10		
		• emergency response (for emergencies other than spills);	26		26.9		
		• water management;	26		26.17		
		• surface erosion and sediment control;	26		26.13.2		
		• ML/ARD management;	26		26.14		
		• tailing management;	26		26.4		
		• aquatic life and fisheries management;	26		26.18		
		• air quality and fugitive dust management at the mine site and along the access corridors;	26		26.11		
		• soil salvage and storage;	26		26.13.1		
		• reclamation and closure;	27	27.1			
		• community engagement;	22	22.7.3.1			
		• access management (including temporary glacier access road);	26		26.25		
		• heritage resource management;	26		26.23		
		• noise management;	19 26		26.22		
		• monitoring and maintenance requirements for rock storage facilities and major dams;	26		26.3 26.4		

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16.2	Construction, Operational and Post-Closure Environmental Management Plans	• vegetation management; and	16	16.17.2.1	26.20		
		• wildlife management.	26		26.21		
16.2.1	Closure and Decommissioning	The Application will include a conceptual closure and reclamation plan for the proposed Project at the end of its planned life. This plan will include an overview of the applicable regulations, standards, guidelines and requirements, industry standards, best management practices and government agreements that will be included in the final closure and reclamation plan. The conceptual plan will be based on the requirements for a permit approving the mine plan and reclamation program pursuant to the *Mines Act*.	27	27.2			
		• Conceptual methods and a schedule for reclaiming identified mining units will be provided, including the creation of a post-mining stable productive landscape and research over the life of the mine.	27	27.6 27.8			
		The conceptual closure plan will include the following:					
		• long term land management objectives for the area;	27	27.3			
		• discussion on options for the use of native plants;	17 27	17.7.1 27.6			
		• plans for individual components including mine sites, tunnels, TMF and pipelines, embankments, and dams to ensure physical, waste water, chemical, and biological stability;	27	27.4			
		• opportunities for progressive reclamation;	27	27.8		17-D	
		• final closure conditions including topography, drainage, vegetation and land use; and	27	27.7			
		• post-closure obligations (such as water treatment, monitoring and maintenance), contingency plans, and emergency preparedness plan (with cost estimates).	26 27	27.9 27.10	26.3 26.4 26.5 26.9 26.14 26.17		
		• The Application will include geotechnical and ML/ARD considerations to ensure that effluent discharges from the proposed Project site will not adversely affect existing natural water quality in the receiving environment on closure, and will be consistent with current provincial policy and guidelines.	14 27	14.7.2 27.4	26.3 26.4 26.5 26.13 26.14	4-R, 4-S, 4-V	
		• The Application will clearly describe how the overall mine plan has been developed with the closure plan in mind, considering the constraints of the local topography.	27	27.4 27.5			
		• Clear phases and objectives for each phase will be presented in sufficient detail to demonstrate the merits of the closure plan in dealing with the breadth of closure obligations.	27	27.8			
		• The Application will provide a clear visual and textual description of the proposed development site at closure, and after reclamation.	27	27.7			
		• Closure, decommissioning and reclamation components and activities will be listed. An estimate of decommissioning, closure, reclamation and reclamation monitoring costs will be provided.	27	27.10			
		• The Application will provide an overview of the key site reclamation options considered and explain the rationale for selecting some and rejecting others, e.g., the removal of all material from site versus partial or total burial, including costs and associated potential environmental effects. The Application will describe methods and locations of materials disposal, both on and off-site, including the structural foundations, tailing management facility, rock storage facilities and sedimentation ponds.	27	27.4 27.10			

Application Information Requirements			Application / Environmental Impact Statement				
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16.3	Fish Habitat Mitigation and Compensation Plan	• A fisheries habitat compensation plan may be required by DFO as a condition of proposed Project approval. Such a plan would be developed in consultation with DFO and the BC Ministry of Environment, as well as First Nations and the Nisga'a Nation. The Application will include a conceptual habitat impact avoidance, mitigation and compensation plan.	15 26	15.8.4.1 26.18.1	26.18	15-Q 15-R	
17.	Reporting	• The Application will set out the reporting structure as identified within the environmental management plans, monitoring plans and commitments. The reporting structure will include the type and frequency of reports to be submitted to EAO and/ or other regulatory federal or provincial agencies.	26 28	28.2 28.3			
PART C – NISGA'A NATION INTERESTS							
18.	Background Information and Nisga'a Nation Setting	• As was noted in Section 8.3, the Environmental Assessment for the proposed Project triggers paragraphs 6 through 10 of Chapter 10 of the Nisga'a Final Agreement (NFA). As such, the Application is required to assess the effects of construction, operation and closure and post closure of the proposed Project on residents of Nisga'a Lands, Nisga'a Lands or Nisga'a interests as set out in the Nisga'a Final Agreement. The Nisga'a interests will be identified by the three parties to the NFA. Further, the Application will provide information to enable the Crown to assess the effects of the proposed Project on the existing and future economic, social and cultural well-being of Nisga'a citizens who may be affected by the proposed Project.	29	29.1 29.2 29.3 29.4			
		• The Application will provide background information, including maps, on the Nisga'a Nation and the Nisga'a Lands, Nass Area and Nass Wildlife Area as defined in the Nisga'a Final Agreement, and their potential implications (including direct overlap or downstream effects) for the Environmental Assessment of the proposed Project. This Part of the Application will describe the Nisga'a social, cultural, economic and health environments, including interests and rights identified in the NFA that are potentially impacted by the proposed Project. Using the study methods described in Part B, or other methods developed through discussions with the Nisga'a Lisims Government.	29	29.1 29.2 29.3		29-A 29-B 29-C	
		• The Application will describe relevant Nisga'a archaeology and heritage interests with regards to the proposed Project. However, environmental effects on archaeology will be discussed in Part B.	29	29.3.3 29.4.4			
		• For the purposes of the CEAA process, the Application will include a discussion of the current use of lands and resources.	29	29.3.5			
19.	Nisga'a Effects Assessment	• The EAO's Section 11 Procedural Order requires the Proponent to consult with the Nisga'a Nation.	3 29	3.2 29.2		3-J 3-K	
		• The Application will assess the effects (including cumulative impacts) of construction, operation and closure and post closure of the proposed Project on residents of Nisga'a Lands, Nisga'a Lands or Nisga'a interests as set out in the Nisga'a Final Agreement. The proponent will, in consultation with the Nisga'a Nation, identify the mechanisms by which the Project might have an impact on these interests.	29	29.4 29.5			
		• Information as it relates to rights and interests identified in the Nisga'a Final Agreement will be disseminated to assessment teams and incorporated into the Application where relevant and appropriate as determined by EAO. Information dissemination will take into consideration any confidentiality provisions required by the NLG or individual knowledge holders. The Application will describe where and how Nisga'a input is incorporated into the design and assessment of the proposed Project, including its contribution to selecting Valued Components, predicting effects, determining mitigation measures and considering alternatives. Where information is not available from the Nisga'a, or not provided to the Proponent the Application will describe efforts taken to obtain it. The information will also be used to make a preliminary assessment for consideration by the parties to the NFA, on the potential effects of the proposed Project on existing and future economic, social and cultural well-being of Nisga'a citizens.	29	29.2			

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AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
19.	Nisga'a Effects Assessment	• The Application will summarize the potential effects of the proposed Project on the Nisga'a Nation, including on Nisga'a social, cultural, economic and health (e.g. disease transfer, health infrastructure, environmental and mental health) environments, as well as use and value of the land and resources by Nisga'a people. Cumulative impacts on VCs relevant to rights and interests identified in the Nisga'a Final Agreement will be assessed in accordance with the Nisga'a Final Agreement.	29	29.4 29.5 29.6			
		• With respect to section 8(f) of the Nisga'a Final Agreement, the Proponent will provide information required for British Columbia and Canada to complete their assessment consistent with 8(f) of the NFA. Such information will be directed towards those matters identified by British Columbia and Canada as being necessary in relation to this assessment. The Proponent will submit a workplan to EAO and CEA Agency outlining a proposed method on how to meet these information needs. EAO and CEA Agency will seek comments from Nisga'a Lisims Government before EAO approves any workplan.	29	29.1.5		29-A 29-B 29-C	
20.	Overall Conclusions – Nisga'a Interests	The Application will:					
		• summarize any residual effects (direct or cumulative) of the proposed Project on the Nisga'a Nation treaty rights and interests and their potential significance; and	29	29.6			
		• identify in a table, specific commitments to address potential effects on those rights and interests.	29	29.6			
		• The Application will include a list of commonly used abbreviations and acronyms and their meanings.	29				
PART D – FIRST NATIONS' INTERESTS							
The Section 11 Order pursuant to the BCEAA requires the Proponent to consult with First Nations which are defined as the Tahltan Central Council, (on behalf of the Tahltan Nation), the Gitanyow *wilp* Wiiltsx – Txawokw, and the *wilps* of the Gitxsan First Nation (as identified by the Gitxsan Hereditary Chiefs Office), including, but not limited to, *Wilp* Skii km Lax Ha.			30	30.1			
21.	Background Information and First Nations Setting	• The Application will provide background information on the each of the First Nations specified in the Section 11 Order.	30	30.1, 30.2, 30.5			
		The Application will describe each First Nation's social, economic, heritage and health environments. Using the study methods described in Part B, or other methods developed through discussions with First Nations, the description will include relevant discussions of:	30	30.5			
		• Social • Population and demographics • Language • Family and cultural practices • Skills development and training • Contemporary education • Traditional learning • Infrastructure	30	30.5			
		• Economic • Food sources (e.g. hunting, fishing, trapping, plant harvesting) • Employment and labour force • Economic setting	30	30.5			
		• Health • Community health trends and issues	30	30.5			
		• The Application will describe relevant First Nations' health, archaeology and heritage interests with regards to the proposed Project.	30	30.5			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
21.	Background Information and First Nations Setting	• For the purposes of the CEAA process, the Application will include a discussion of the current use of lands and resources for traditional purposes by Aboriginal persons.	30	30.5			
		• A summary of Traditional knowledge and traditional use (TK/TU) information from each First Nation, or relevant *Wilp* of each First Nation, and other sources, relevant to the proposed Project and not subject to confidentiality provisions, will be presented. Full reports, containing only non-confidential information, will be provided as appendices.	30	30.5		30-A 30-B 30-C 30-D	
		• The Proponent will make reasonable efforts to ensure that TK/TU information regarding First Nations potentially affected by the proposed Project will be collected by or in collaboration with each First Nation. The geographic areas of interest are expected to extend beyond the proposed Project footprint to enable analysis of the proposed Project's potential effects on sites, watersheds and other ecosystems relevant to each First Nation. The geographic areas may be similar to that used for the land use study, where it overlaps with each individual First Nation's asserted traditional territory. Where feasible, information collection and reporting methodologies will also be determined by or in collaboration with each First Nation, and may include both a contextual overview and site-specific information collected from knowledge holders.	30	30.4			
22.	Aboriginal Rights	• The Application will summarize the Proponent's understanding of Aboriginal rights and title as outlined in the EAO's July 20, 2009 *Supplemental to Environmental Assessment Office 2009 User Guide – Application Information Requirements and Providing Non-Treaty First Nations Information*. The Application will:	30	30.1			
		• identify past, present and anticipated customs and practises of Aboriginal groups in the Project footprint as well as downstream areas (where made available by a First Nation or publically available); and	30	30.5, 30.9		30-A 30-B 30-C 30-D	
		• identify specific aboriginal customs and practises or those that could be practiced in the future (as made available by a First Nation or publically available), which are potentially impacted by the proposed Project.	30	30.9			
23.	First Nations Effects Assessment	• The Application will assess the effects of construction, operation and closure and post closure of the proposed Project on social, economic, health and heritage values, and customs and practices important to the specified First Nations.	30	30.7			
		• TK/TU information, available from specified First Nations and other sources in a timely manner, will be disseminated to assessment teams and incorporated into the Application where relevant and appropriate. Information dissemination will take into consideration any confidentiality provisions required by each First Nations' leadership or individual knowledge holders.	30	30.4		30-A 30-B 30-C 30-D	
		• The Application will describe where and how TK/TU is incorporated into the design and assessment of the proposed Project, including its contribution to selecting Valued Components, predicting effects, determining mitigation measures and considering alternatives. Where TK/TU information is not available or not provided to the Proponent in a timely manner despite reasonable diligence, the Application will describe efforts taken to obtain it.	30	30.4			
		• The information will also be used to identify potential effects and cumulative impacts on each First Nation's heritage values and practices including effects of changes on social cohesiveness or language use.	30	30.7			
23.	First Nations Effects Assessment	• The Application will also describe mitigation measures to avoid or reduce such effects, where practical.	30	30.7, 30.8			
24.	Overall Conclusions	The Application will:					
		• summarize any residual effects of the proposed Project on the aboriginal customs and practises and interests and their significance; and	30	30.830.9			

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
24.	Overall Conclusions	• identify in a table, specific commitments to address potential effects on aboriginal customs, practises and interests.	39	39.7			
PART E – FEDERAL REQUIREMENTS							
		• The application will include a section that addresses the specific federal requirements under the *Canadian Environmental Assessment Act* (CEAA). The Application will include a section that sets out the information identified in the work plan which is referred to in section 19; this information will be used by Canada when making the assessments required under the *Canadian Environmental Assessment Act* and under the Nisga'a Final Agreement.	Part I 31 32 33 34 35 36 37 38				
25.	Navigable Waters	• The Application will identify: potential effects on navigability of waterbodies that may be affected by the proposed Project; the nature of the effect; and mitigation measures to be implemented. For each affected section of waterbody, the Application will provide data on location (latitude and longitude), width, depth, and any navigation use or issues. The Application will also describe potential effects on navigation with respect to the identified access corridors.	31	31.6		31-A 31-B 31-C	
26.	Alternative Means of Undertaking the Proposed Project	The Application will include an analysis of the alternative means of carrying out the proposed Project that are technically and economically feasible, and the environmental effects of any such alternatives. Alternative means may include the following:					
		• access corridors;	33	33.7			
		• mining methods;	33	33.3			
		• ore transport from mine to process plant;	33	33.8			
		• process plant location;	33	33.6			
		• gold extraction technology;	33	33.10		33-C	
		• concentrate transport;	33	33.9			
		• materials and supplies transport;	33	33.7			
		• waste rock and tailing management;	33	33.5 33.11		33-B	
		• mine water management;	33	33.12		33-E	
		• decommissioning, closure and reclamation;	33	33.14			
		• mine production rates;	33	33.4			
		• employee work schedules;	33	33.15			
		• mine development scheduling; and	33	33.4			
		• employee/worker living conditions (e.g., living quarters, leisure facilities, food, visitors, access to outdoors).	33	33.16			
		• For further guidance see “Addressing ‘Need for’, ‘Purpose of’, ‘Alternatives to’ and ‘Alternative Means’ under the CEAA” (CEA Agency 1998).	33			33-A	
		• The discussion of tailing management alternatives will be prepared with consideration of the (Draft) Guidelines for the Assessment of Alternatives for Tailing Storage for Metal Mining Projects Proposing to use Natural, Fish-bearing Water Bodies as Tailings Impoundment Areas, (Environment Canada - Mining and Processing Division, January 9, 2009).	33	33.5		33-A 33-B	

Application Information Requirements			Application / Environmental Impact Statement				
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27.	Effects of the Environment on the Proposed Project	• The Application will assess the potential of environmental factors that may affect the proposed Project during construction, operations, decommissioning and closure and the predicted effects of those environmental factors. The full range of climate conditions (including extreme weather events, wet, dry and normal precipitation and extreme temperature spells, freeze-thaw cycles, changes in permafrost and climate change) will be considered. The Application will describe and assess how the potential for climate change, extremes in current climate, seismic activity and potential volcanic activity (e.g., Hoodoo Mountain) and other extreme events such as fires and floods could affect the integrity of the proposed development infrastructure, particularly the ore transport tunnel, tailing management facility, water diversions, pit wall stability, road operation, and rock storage facilities. Measures to mitigate these potential effects, and contingency plans and response options, will be identified.	34	34.1 to 34.5		34-A 34-B	
28.	Environmental Effects of Accidents and Malfunctions	The Application will identify the probability and potential magnitude of an accident and/or malfunction associated with the proposed Project,					
		• including a failure at the water treatment plants, water storage facility, tailing dams associated with the TMF, ore slurry and related return water pipelines, pit walls, waste rock slopes or diversion channels/tunnels, or blasting mishap, explosives factory accident or concentrate spill.	35	35.2		35-A 35-B 35-C	
		• In the case of a potential failure of a tailing dam, the Application will examine the likelihood and potential magnitude of the likely worst case accident or malfunction scenario through a dam break analysis.	35	35.3		35-C	
		• The Application will assess the probability and potential magnitude of effects of natural landslides and avalanches and glacial recession or advancement on geologic hazards, hazardous substance releases/spills and fuel spills outside of secondary containment areas. The Application will also consider potential malfunctions due to seismicity. This assessment will link and describe the outcome of accidents and/or malfunctions with a probability analysis of consequential effects to the environment.	35	35.2		35-A	
		• The Application will identify potential contingency plans and response options for probable accidents and/or malfunctions.	35	35.2.5.4		35-A	
		• Assumptions, model data sources and model outputs used for the assessment will be included in the Application.	35	35.2			
29.	Capacity of Renewable Resources	• The Application will consider the potential adverse environmental effects on the capacity of renewable resources that are likely to be significantly affected by the proposed Project, to meet the needs of the present and those of the future. Renewable resources are resources used by humans that can be continually reproduced over a relatively short period of time; renewable resources include: water, forest products and fish and animal products. The Application will identify the renewable resources that may be affected by the proposed Project and the criteria used in determining whether their sustainable use will be affected. Sustainable use may be based on ecological considerations such as integrity, productivity, and carrying capacity.	36	36.1 to 36.7			
		• To the extent that information from the Nisga'a Nation and First Nations on their sustainability objectives within the zone of influence of the proposed Project has been developed, these objectives will be discussed.	36	36.5.2 36.5.3			
30.	Cumulative Environmental Effects (CEE) Assessment	• The Application will include an evaluation of cumulative environmental effects of residual effects that are likely to result from the proposed development and how they may combine with environmental effects from other past, present and reasonably foreseeable projects and activities.	5 37		5.2, 5.3		Methods for cumulative effect assessment in 5.2.12; cumulative effects assessment in topic-specific chatpers and summarized in Chapter 37
		• The approach and methods used to identify and assess cumulative environmental effects will be explained. All methodologies used for the cumulative environmental effects assessment will follow the framework set out by the CEA Agency in the documents "Reference Guide: Addressing Cumulative Environmental Effects" (November 1994) and "Cumulative Effects Assessment Practitioners Guide" (February 1999). The operational policy statement entitled "Addressing Cumulative Environmental Effects under the *Canadian Environmental Assessment Act*" (1992) provides further guidance, as well as a summary of the evolution of the previous two guides.	5 37	5.2, 5.3 37.3 37.4 37.5			Methods for cumulative effect assessment in 5.2.12; and summarized in 37.3 through 37.5

Application Information Requirements			Application / Environmental Impact Statement				
AIRSection No.	Title	Description	Main Volumes Chapter No.	Section	Environmental Management Plan	Appendix	Comments
30.	Cumulative Environmental Effects (CEE) Assessment	• All residual effects of the proposed development will be included in the cumulative effects assessment. A table of residual effects that are not likely to result in cumulative effects and a rationale as to why they are not likely to combine cumulatively will also be included.	[7, 8, and 11 to 25] 37	[7, 8, and 11 to 25].9 37.6			Topic-specific cumulative assessment and tables including residuals with no interaction in [7, 8, and 11 to 25].9; and summarized in 37.6
		• The Application will report and describe other mines and industrial and commercial activities (including tourism operations in the region) that will be included in the cumulative effects assessment. Other activities will be excluded from the cumulative environmental effects assessment only when the environmental effects of the other projects are not likely to accumulate or interact with the residual environmental effects of the proposed Project.	5 [7, 8, and 11 to 25] 37	5.3 [7, 8, and 11 to 25].9 37.2			Other projects and activities described in 5.3 and summarized in 37.2; topic-specific cumulative assessment in [7, 8, and 11 to 25].9; describe projects are not likely to accumulate or interact with the residual environmental effects
		• As with the proposed Project effects assessments, residual cumulative effects will be characterized in terms of magnitude, geographic extent, duration and frequency, reversibility, resilience and anticipated resiliency time frame and probability of occurrence and confidence. This section will describe the basis for determining the significance of the cumulative effects and the proposed Project contribution to cumulative effects.	5 [7, 8, and 11 to 25] 37	5.3 [7, 8, and 11 to 25].9 37.6			Method for characterizing residual cumulative effects in 5.2; topic-specific cumulative effects characterization in [7, 8, and 11 to 25].9, and summarized in 37.6.
		• Avoidance measures, mitigation measures and follow-up programs to address cumulative environmental effects will be discussed.	[7, 8, and 11 to 25] 37	[7, 8, and 11 to 25].9 37.6			Topic-specific cumulative effects avoidance measures, mitigation measures and follow-up in [7, 8, and 11 to 25].9, and summarized in 37.6.
31.	Follow-up Program						
31.1	CEA Act Requirements for Effects Monitoring and Follow-up Program	• The Application will outline a conceptual program for environmental supervision, mitigation, environmental effects monitoring, and follow-up that is designed to manage the potential beneficial and adverse effects of the proposed Project through construction, operation, closure and post-closure phases, verify the accuracy of the effects assessment and determine the effectiveness of any measures taken to mitigate any adverse environmental effects of the proposed Project. The intent is to ensure that remedial actions are taken if the results of a monitoring program deviate from any established operational standards on environmental performance, or predictions on environmental effects.	38				
		• The Application will describe the approach, objectives and proposed methodologies that will be used in monitoring programs proposed as part of the overall Environmental Monitoring System. Follow-up programs will include the following:	38	38.3			
		• environmental effects monitoring as required by permits, including sediment quality, surface water quality, fish, fish habitat, and the use of fish resources (including metal levels if required), other aquatic life indicators, and effluent quality and acute and chronic toxicity;	38	38.3.2.3 38.3.2.4 38.3.2.5 38.3.3.6			
		• noise;	38	38.2.5	26.22		Excluded from follow-up program requirement
		• air quality;	38	38.2.4	26.11		Excluded from follow-up program requirement
		• hydrology, including glacier monitoring;	38	38.2.6	26.16		Glacier monitoring excluded from follow-up program requirement
		• groundwater monitoring, including quantity and quality;	38	38.2.7 38.3.2.2	26.15		Groundwater quality monitoring excluded from follow-up program requirement
		• archaeological;	38	38.2.9	26.23		Excluded from follow-up program requirement
		• vegetation;	38	38.2.8	26.20		Excluded from follow-up program requirement

Application Information Requirements			Application / Environmental Impact Statement				
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31.1	CEA Act Requirements for Effects Monitoring and Follow-up Program	• wildlife monitoring;	38	38.3.2.6	26.21		
		• geotechnical stability of pit walls and waste and water management facilities;	38	38.2.1 38.3.2	26.3 26.4 26.5	Appendix F11 of Appendix 4-C, 11-I	Excluded from follow-up program requirement
		• geochemical stability of waste rock, tailings and pit walls (ML/ARD monitoring);	38	38.2.2	26.14		Excluded from follow-up program requirement
		• overall success in meeting objectives of fish habitat compensation and reclamation programs; and	38	38.3.2.5	26.18		
		• post-construction requirements.	38	38.2.3			Excluded from follow-up program requirement
PART F – CONCLUSIONS							
32.	Summary of Residual Effects	• The Application will summarize the potential effects of the proposed Project and proposed mitigation measures. The Application will indicate whether the proposed Project is predicted to result in significant adverse residual environmental, social, economic, heritage or health effects	39	39.2, 39.3, 39.4			
33.	Summary of Cumulative Effects	• The Application will summarize the potential cumulative effects of the proposed Project.	39	39.2, 39.3, 39.4			
34.	Summary of Commitments	• The Application will include a table or list that summarizes the commitments made in the Application to avoid, reduce or otherwise mitigate the potential adverse effects of the proposed Project.	39	39.5			
35.	Conclusion	• The Conclusion will indicate whether the proposed Project is predicted to result in significant adverse residual environmental, social, economic, heritage or health effects.	39	39.2, 39.3, 39.4			
GLOSSARY							
		• A glossary will be included in the Application to define commonly used technical terms and phrases.	Glossary				Volume 1
APPENDICES							
		• The Application Appendices will include documents with all baseline technical data and reports.	2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 29, 30, 31, 33, 34, 35	Appendices			See Table of Contents for list of appendices
REFERENCES							
		• The Application will provide a list of references cited in the Application.	References				A reference section is included for each relevant chapter See Table of Contents

References for this Table of Concordance

1992. *Canadian Environmental Assessment Act*, SC. C. 37.

1994. *Migratory Birds Convention Act, RSC*. C. 22. s. M-7.01.

1996. *Wildlife Act, RSBC*. C. 488. s. 1.1.

2002. *Forest and Range Practices Act, SBC*. C. 69, BC Reg 582/2004: Government Actions Regulation. s. 149.1.

BC Resource Inventory. 1997. Howes, D.E. and E. Kenk. contributing editors. *Terrain classification system for British Columbia (Version 2)*. B.C. Ministry of Environment, Recreational Fisheries Branch, and B.C. Ministry of Crown Lands, Surveys and Resource Mapping Branch, Victoria, B.C.

Canadian Environmental Assessment Agency. 1994. *Reference Guide: Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects*.

Canadian Environmental Assessment Agency. 1998 *Addressing 'Need for', 'Purpose of', 'Alternatives to' and 'Alternative Means' under the CEAA* available at http://www.ceaa.gc.ca/default.asp?lang=En&n=5C072E13-1.

Canadian Environmental Assessment Agency. 1999. *Cumulative effects assessment practitioners guide*. Hull, Quebec: Prepared for the Canadian Environmental Assessment Agency by the Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd.

Canadian Environmental Assessment Agency. 2003. *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners*. On the worldwide web: http://www.ceaa23acee.gc.ca/default.asp?lang=En&n=A41F45C5-1 (January 15, 2009).

DFO. 1986. Policy for the management of fish habitat. Department of Fisheries and Oceans, Fish Habitat Management Branch. Ottawa, ON.

Environment Canada. 1991. *The Federal Policy on Wetland Conservation*. Environment Canada, Canadian Wildlife Service, Ottawa.

Environment Canada. 2003. *Wetland Environmental Assessment Guideline*. Government of Canada. Accessed from: http://www.cws-scf.ec.gc.ca/publications/eval/wetl/index_e.cfm.

Hassell. 2005. *Taralga wind farm landscape visual assessment website*. www.planning.nsw.gov.au/asp/pdf/taralga_app_d_hassell_report04.pdf. (accessed September 2009).

Health Canada. 2004. *Canadian Handbook on Health Impact Assessment. Volume 3: The Multidisciplinary Team*. Ottawa, ON: Health Canada.

MacKenzie, W.H. 1999. *Field Description of Wetlands and Related Ecosystems in British Columbia*. Ministry of Forest Research Program. Victoria, B.C.

MacKenzie, W.H. and J.R. Moran. 2004. *Wetlands of British Columbia: A Guide to Identification*. Ministry of Forest Research Program. Victoria, B.C. Land Management Handbook 52.

Pojar, J., K. Klinka, and D.V. Meidinger. 1987. Biogeoclimatic ecosystem classification in British Columbia. For. *Ecol. Manage*. 22: pp. 119-154.

Warner, B.G., and C.D.A Rubec (editors). 1997. *The Canadian Wetland Classification System*: The National Wetlands Working Group. Wetlands Research Centre. University of Waterloo, Waterloo, Ontario