

Application for an Environmental Assessment Certificate/ Environmental Impact Statement for the KSM Project



Preface

The KSM Project (the Project) is subject to a review under the British Columbia *Environmental Assessment Act* (BC EAA; 2002) and to a comprehensive study under the *Canadian Environmental Assessment Act* (CEAA; 1992). This report (hereafter referred to as “the Application/EIS”) represents both the Application for an Environmental Assessment (EA) Certificate (Application) pursuant to the BC EAA, and an Environmental Impact Statement (EIS) pursuant to the CEAA. The Application/EIS is being submitted to the British Columbia Environmental Assessment Office (BC EAO) and the Canadian Environmental Assessment Agency (CEA Agency) to meet the requirements of the BC EAA and CEAA.

The CEA Agency and BC EAO have committed to coordinate their respective environmental assessment review processes, where possible, to be consistent with the terms of the 2004 Canada-British Columbia Agreement for Environmental Assessment Cooperation.

The BC EAO initiated the EA process on April 25, 2008, with the issuance of a Section 10 Order under the BC EAA (2002). This Order confirmed that the KSM Project is a reviewable project under Part 3 of the Reviewable Projects Regulation (BC Reg. 370/2002) as its annual production capacity would be 75,000 tonnes or more. The Section 10 Order was followed by the issuance of a Section 11 Order on November 6, 2009, which defined the scope of the Project review, as well as the procedures and methods for conducting the EA. The BC EAO issued Section 13 orders to amend and/or add sections to the Section 11 Order on September 29, 2011 and November 30, 2012.

The CEA Agency initiated a federal EA process for the KSM Project on July 23, 2009, with the issuance of a Notice of Commencement. The Notice of Commencement confirmed that a federal EA was required for the KSM Project pursuant to Section 5 of the CEAA (1992), and that the Project would be subject to a comprehensive study type of EA because Project components met the requirements of the Comprehensive Study List Regulations (SOR/94-638). These Project components include constructing a metal mill with an ore capacity of 4,000 tpd or more, and constructing and operating a gold mine with an ore production capacity of 600 tpd or more.

The BC EAO approved the Application Information Requirements (AIR) on January 31, 2011, after comments from federal and provincial government agencies, Nisga’a Nation, First Nations, and the public were considered. The AIR identify the federal and provincial information that must be included in the Application/EIS. The CEA Agency issued a Comprehensive Study Scope of Assessment on May 26, 2010, which identifies the proposed scope of the Project, factors to be considered in the EA, and the proposed scope of factors to be considered pursuant to the CEAA(1992). The Application/EIS has been compiled to meet the requirements of the AIR and of the Comprehensive Study Scope of Assessment. It also complies with the relevant instructions of the Section 11 Order.

Project components fall within the Nass Area as defined by the Nisga’a Final Agreement (NFA; NLG, Province of BC, and Government of Canada 1998). Accordingly, the Province of British Columbia and Government of Canada, in undertaking the EA of the Project, are

required to comply with Chapter 10 of the NFA. Other Aboriginal groups involved in the EA include the Tahltan Nation, Gitksan Nation, Gitksan wilp Skii km Lax Ha, Gitanyow First Nation, Gitanyow wilp Wii'litsxw, and the Métis Nation of British Columbia.

The KSM Project Technical Working Group, which includes representatives of Canadian and United States federal government agencies, British Columbia and Alaska State government agencies, Nisga'a Nation, First Nations, and local governments, was involved in developing the Application/EIS over an 18-month period. The working group commented on proposed Project design, proposed environmental and socio-economic baseline study workplans and results, and proposed mitigation measures; reviewed and commented on various drafts of the AIR and Comprehensive Study Scope of Assessment; and attended and participated in working group and one-on-one meetings related to the Project. Stakeholders have been involved in developing the Application/EIS through participation in interviews to confirm their interests in the Project area. The public's contribution has been through opportunities to participate during public comment periods and open houses on the Notice of Commencement and AIR documents. Additional consultation and public comment periods will be provided during the review of the Application/EIS.

Organization of the Application/EIS

The Application/EIS is organized into the following sections:

- **Document Map:** This section provides information to the reader on how the Application/EIS is organized and where information can be found.
- **Preface:** This section identifies the purpose of the Application/EIS and describes the organization of the Application/EIS.
- **Disclaimer:** This section provides a statement identifying the scope of limitations and assumptions associated with the Application/EIS.
- **Acknowledgements:** This section identifies the personnel who contributed to, or provided information for, the Application/EIS.
- **Executive Summary:** This stand-alone document provides sufficient information to provide the reader with an overview of the proposed Project and the findings of the EA.
- **Acronyms:** This section includes a list of commonly used abbreviations and acronyms used in the Application/EIS.
- **Glossary:** This section includes a list of commonly used terms and phrases and their definitions used in the Application/EIS.
- **Table of Concordance:** This table indicates how the information provided in the Application/EIS meets the requirements specified in the approved AIR.
- **Table of Contents:** This section provides a detailed listing of the major content headings of the Application/EIS.

- **Part A: Introduction and Background**
 - **Chapter 1. Overview of the Proposed Project:** This chapter presents general information on the Project Proponent, scope of the proposed Project, geographic setting, mineral exploration history, mineral tenures held by the Proponent, benefits of the Project, and the need for and purpose of the Project.
 - **Chapter 2. Assessment Process:** This chapter describes the federal and provincial regulatory framework that applies to the Project, including EA obligations as described in the NFA.
 - **Chapter 3. Information Distribution and Consultation:** This chapter describes the information distribution and consultations that were undertaken with the Nisga'a Nation, First Nations, local governments, the Province of British Columbia, the Government of Canada, the State of Alaska, United States federal government agencies, and the public, as well as consultations planned during the Application/EIS review.
 - **Chapter 4. Project Description:** This chapter presents details about the proposed Project facilities and the activities associated with their construction, operation, closure, and post-closure phases, including construction procedures, maintenance activities, and scheduling.
 - **Chapter 5. Effects Assessment Methodology:** This chapter describes the methods used to assess the potential direct and indirect, Project-related, and cumulative environmental, economic, social, heritage, and health effects of the proposed Project.
- **Part B: Assessment of Potential Environmental Effects**
 - **Chapters 6 through 19:** Each of these 14 chapters includes the following: a description of the existing environment (i.e., baseline setting) of the proposed Project as it pertains to a specific environmental discipline (e.g., air quality, surface water quality and quantity, fish and aquatic habitat, and wildlife or wildlife habitat); identification of the spatial and temporal boundaries used for the specific discipline; identification of the valued components that will be used to evaluate the Project's potential effects; and recommended measures to avoid or mitigate potential adverse effects. Assessments of Project-related residual effects (i.e., those remaining after mitigation) and cumulative residual effects (Project-related residual effects in combination with residual effects from other projects and human actions) are also included. Each chapter ends with a significance determination for all residual effects and with final conclusions.
 - Chapter 6: Greenhouse Gas Emissions (Climate Change)
 - Chapter 7: Air Quality
 - Chapter 8: Terrain, Surficial Geology, and Soils
 - Chapter 9: Geohazards
 - Chapter 10: Geochemistry
 - Chapter 11: Groundwater Quantity

- Chapter 12: Groundwater Quality
- Chapter 13: Surface Water Quantity
- Chapter 14: Surface Water Quality
- Chapter 15: Fish and Aquatic Habitat
- Chapter 16: Wetlands
- Chapter 17: Terrestrial Ecosystems
- Chapter 18: Wildlife and Wildlife Habitat
- Chapter 19: Noise
- **Part C: Assessment of Potential Economic Effects**
 - **Chapter 20. Economics:** This chapter describes the existing economic conditions in the local and regional study areas of the Project, describes the Project’s potential economic effects, and identifies measures to avoid or mitigate potential adverse effects, as well as measures to enhance potential benefits. Project-related residual effects and cumulative residual effects are assessed, and the significance of residual effects is determined.
- **Part D: Assessment of Potential Social Effects**
 - **Chapters 21 through 24:** Each of these four chapters describes the existing human environment in the local and regional area of the proposed Project (as it pertains to heritage, social conditions, land use, or visual and aesthetic resources); identifies the spatial and temporal boundaries used for each specific discipline; identifies the valued components that will be used to evaluate the Project’s potential effects; and recommends measures to avoid or mitigate potential adverse effects, as well as measures to enhance potential benefits. Assessments of Project-related and cumulative residual effects are also included. Each chapter ends with a significance determination for all residual effects and with final conclusions.
 - Chapter 21: Heritage
 - Chapter 22: Social
 - Chapter 23: Land Use
 - Chapter 24: Visual and Aesthetic Resources
- **Part E: Assessment of Potential Health Effects**
 - **Chapter 25. Human Health:** This chapter describes existing human health conditions in the local and regional study areas of the Project; identifies the spatial and temporal boundaries used to assess potential effects on human health; identifies the valued components that will be used to evaluate the Project’s potential effects; and recommends measures to avoid or mitigate potential adverse effects. The assessments of Project-related and cumulative residual effects are also included. Each chapter ends with a significance determination for all residual effects and with final conclusions.

- **Part F: Summary of Environmental Management Plans and Reporting**
 - **Chapter 26. Summary of Proposed Environmental Management Plans:** This chapter outlines plans for environmental management (including mitigation and monitoring activities) during the construction and operation phases of the proposed Project.
 - **Chapter 27. Closure and Reclamation:** This chapter outlines plans for closure and reclamation of the proposed Project.
 - **Chapter 28. Reporting:** This chapter provides the framework for reporting requirements associated with environmental management plans and as prescribed by relevant legislation in support of the proposed Project.
- **Part G: Nisga’a Nation Interests**
 - **Chapter 29. Nisga’a Nation Interests:** This chapter provides background information on Nisga’a Nation and Nisga’a Lands, Nass Wildlife Area, and Nass Area as defined in the NFA. It summarizes the consultations undertaken with Nisga’a Lisims Government and the issues raised during these consultations. The chapter assesses the potential effects of the proposed Project on residents of Nisga’a Lands, Nisga’a Lands, and Nisga’a interests as set out in the NFA. The chapter summarizes any residual effects of the Project on Nisga’a treaty rights and interests and determines their potential significance.
- **Part H: First Nations and Métis Interests**
 - **Chapter 30. First Nations Interests:** This chapter provides background information on each of the First Nations specified in the Section 11 Order and the Métis. It summarizes the consultations undertaken with each First Nation and the issues raised during these consultations. This chapter assesses the potential effects of the proposed Project on First Nations. The chapter summarizes any residual effects of the Project on First Nation interests and determines their potential significance.
- **Part I: Federal Requirements**
 - **Chapter 31. Navigable Waters:** This chapter considers the Project’s potential effects on navigable waters.
 - **Chapter 32. Need for and Alternatives to the Proposed Project:** This chapter considers the need for and alternatives to the proposed Project, and evaluates alternative ways of meeting the Project’s needs.
 - **Chapter 33. Alternative Means of Undertaking the Proposed Project:** This chapter describes the various technically, environmentally, and economically feasible ways to implement the Project that were evaluated during its development.
 - **Chapter 34. Effects of the Environment on the Proposed Project:** This chapter assesses the effects of the environment on the proposed Project as a whole and on physical activities related to the Project.

- **Chapter 35. Environmental Effects of Accidents and Malfunctions:** This chapter evaluates the risk of potential environmental effects of accidents and malfunctions that may affect key Project components, following implementation of design standards and mitigation measures.
- **Chapter 36. Capacity of Renewable Resources:** This chapter considers how the capacity of renewable resources may be affected by the proposed Project.
- **Chapter 37. Cumulative Environmental Effects Assessment:** This chapter identifies cumulative effects that are anticipated to arise from the interaction of residual Project-related effects of the Project with other activities and projects in the area. Cumulative residual effects are identified, additional mitigation is described (if available), and a significance determination on cumulative residual effects is made.
- **Chapter 38. Follow-up Program:** This chapter provides the framework for a follow-up program to be undertaken in support of the proposed Project.
- **Part J: Conclusions**
 - **Chapter 39. Conclusions:** This chapter provides a conclusion to the Application/EIS, including the following: (1) summaries of the residual Project-related and cumulative adverse environmental, economic, social, heritage, and health effects; (2) summaries of the environmental, economic, social, heritage, and health benefits predicted to occur as a result of the construction and operation of the Project; (3) a Table of Conditions; and (4) a final conclusion with respect to whether the Project is predicted to result in significant adverse residual environmental, economic, social, heritage, or health effects.
- **Appendices:** The appendices provide materials in support of the main body of the Application/EIS, including volumes of baseline information for all aspects of the biophysical and human environment, detailed effects assessment modelling reports, and engineering design reports.

References

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

2002. *Environmental Assessment Act*, SBC. C. 43.

Reviewable Projects Regulation, BC Reg. 370/2002.

Comprehensive Study List Regulations, SOR/94-638.

NLG, Province of BC, and Government of Canada. 1998. *Nisga'a Final Agreement*. Nisga'a Lisims Government, Province of British Columbia, and Government of Canada: New Aiyansh, BC.