BRITISH COLUMBIA

ENVIRONMENTAL ASSESSMENT OFFICE

MINE PROPONENT'S GUIDE

How to Prepare Terms of Reference and an Application for an Environmental Assessment Certificate

June 2006

WORKING DRAFT

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GLOSSARY OF ACRONYMS

BC	British Columbia
BCEAA	British Columbia *Environmental Assessment Act*
CEA Agency	Canadian Environmental Assessment Agency
CEAA	*Canadian Environmental Assessment Act*
CEE(s)	Cumulative Environmental Effect(s)
EA	Environmental Assessment
Application	Application for an Environmental Assessment Certificate
EAO	Environmental Assessment Office
EEMP	Environmental Effects Monitoring Plan
EMP	Environmental Management Plan
EMS	Environmental Management System
MEMPR	Ministry of Energy, Mines and Petroleum Resources
MMER	Metal Mining Effluent Regulations
RA	Responsible Authority
RMDRC(s)	Regional Mine Development Review Committee(s)
RPE(s)	Residual Project Effect(s)
VEC(s)	Valued Environmental Component(s)

1. INTENT OF THIS GUIDE

In British Columbia, certain mine projects are required to obtain an environmental assessment certificate from the provincial government under the *Environmental Assessment Act* (BCEAA). Mine projects may also be subject to the *Canadian Environmental Assessment Act*.

An application for an environmental assessment certificate (Application) must be made by the mine project proponent to the Environmental Assessment Office (EAO) and must comply with the Terms of Reference formally approved by the EAO.

The proponent is expected to prepare the draft Terms of Reference. This Guide is intended to provide mine proponents with recommended approaches for preparing, and developing the content, the expected format for the Terms of Reference for an Application.

The Guide also provides guidance on key aspects of the environmental assessment (EA) process including scoping issues and information requirements, along with a description of the relationship between formal Terms of Reference and baseline study work plans.

A flowchart of the EA process is shown in Chart 1. A summary of the BC and Canada EA processes are outlined in Chapter 3. More detailed information on the BC EA process and the BCEAA can be found on the EAO website at: http://www.eao.gov.bc.ca. A separate set of appendices have been gathered into a companion document to this guide, "Mine Proponent's Guide: Supplemental Appendices."

2. WHO SHOULD READ THIS GUIDE?

The Guide should be used by mine proponents who are developing Terms of Reference for an Application.

The Guide is also a useful reference for the general public, interest groups and stakeholders, First Nations, local governments, and federal and provincial government agencies in their:

- issue-scoping discussions with mine proponents at the pre-application stage of the EA process; and
- review of the Application and in follow-up discussions with mine proponents at the Application review stage.

CONTACT US

For more information and assistance in developing Terms of Reference, please contact the EAO at:

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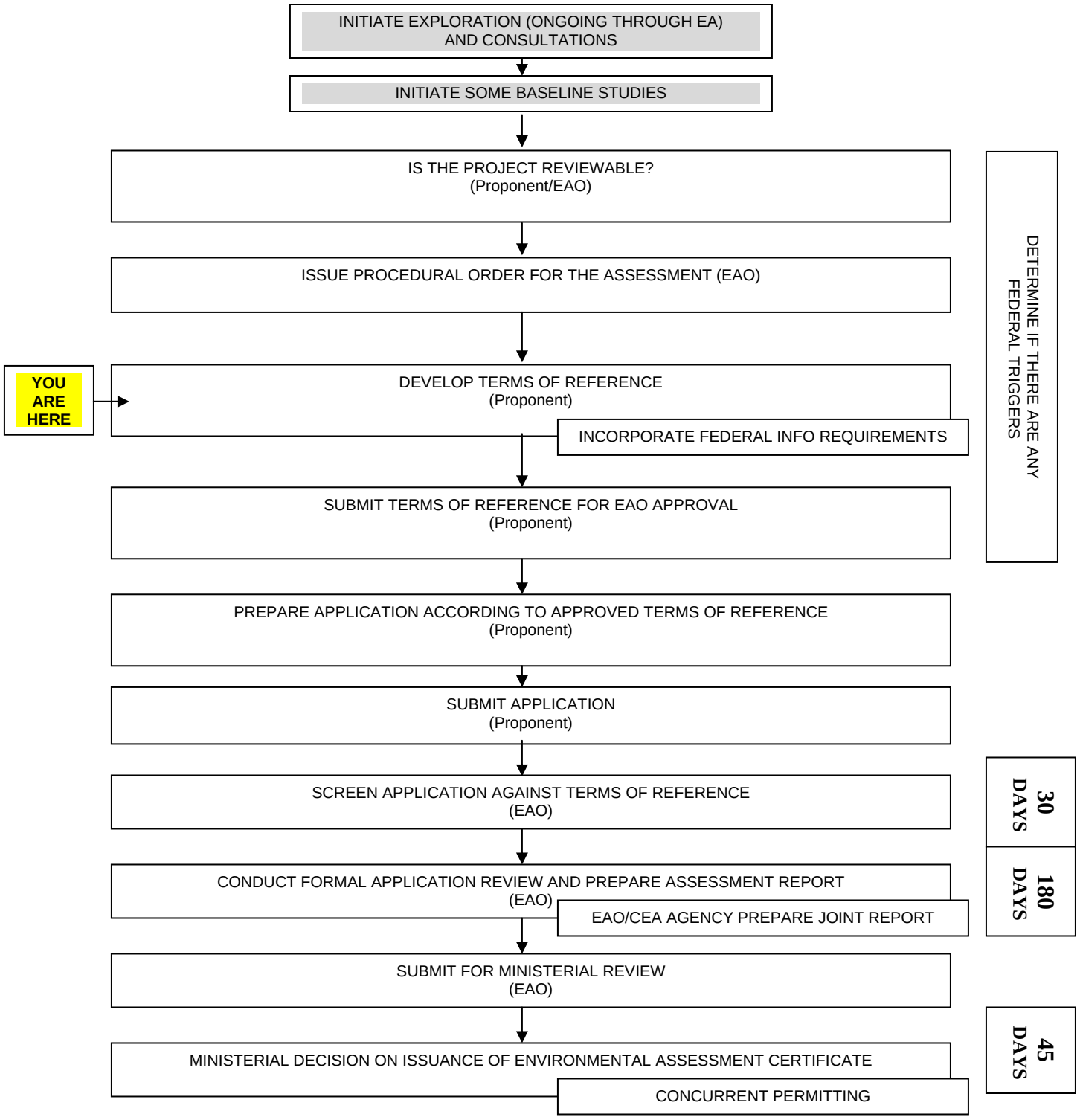
Chart 1 – Steps in BC's Environmental Assessment Process[1]



[1] Key steps in the federal process are identified in the event the CEA Act is triggered and a harmonized review is undertaken.

3. BC's ENVIRONMENTAL ASSESSMENT PROCESS AND FEDERAL/PROVINCIAL REVIEW HARMONIZATION

3.1 SUMMARY OF BC'S ENVIRONMENTAL ASSESSMENT PROCESS

The environmental assessment (EA) process provides a framework to address a broad range of environmental, health and safety, socio-economic, community and First Nation issues through a single, integrated process, ensuring that the issues and concerns of all interested parties are considered together. Through the process of EA, potential effects of a proposed project are identified and evaluated early, providing the opportunity for the project to be modified before irreversible project design and construction decisions are made. This results in improved project design and helps to avoid costly mistakes for proponents, governments, local communities and the environment.

There are two stages in BC's EA process: Pre-application and Application review.

3.1.1 Pre-Application Stage

The pre-application stage begins when a mine proponent files an initial project description. The pre-application stage focuses on:

- determining whether the project is reviewable;
- determining a review path which is typically led by Environmental Assessment Office (EAO) staff;
- identifying issues (or "issue scoping"); and
- developing Terms of Reference for the Application.

Issue scoping is achieved through the submission of an adequately defined project description and consultations with interested and potentially affected parties – federal and provincial agencies, local governments, First Nations, and the public. The mine proponent subsequently prepares a first draft of the Terms of Reference for its Application. Following a review by the public, First Nations and government agencies the EAO signs off on the final Terms of Reference. The pre-application stage includes the proponent conducting baseline studies and impact assessments to address the issues identified in the Terms of Reference and preparing the Application.

3.1.2 Application Review Stage

This stage is initiated when the proponent files an Application for an initial screening by the EAO, often assisted by its working groups (government agencies and First Nations). The intent is to determine whether or not the information required by the Terms of Reference has been provided. The Application must be complete before it can be accepted for formal review. Incomplete applications are returned to the proponent tp be revised to address deficiencies. The proponent's submission of the accepted report triggers the start of a legislated 180-day review period. All interested parties are provided an opportunity to review and comment on the completed application.

Based on the feedback received on the Application, and further discussions with the proponent and other parties with respect to any identified outstanding issues, the EAO prepares an assessment report summarizing the findings. The report is submitted to the Minister of Environment and the Minister of Energy, Mines and Petroleum Resources, accompanied by recommendations and their rationale. The Application review stage concludes with a certification decision by the two Ministers.

Appendix A identifies the types of projects and thresholds that are subject to the *Environmental Assessment Act* (BCEAA). Appendix B provides a listing of statutory authorizations which mine

proponents may or may not need to acquire to construct and operate their projects, following the granting of an EA Certificate. Appendix C provides a checklist of baseline data needs.

3.2 FEDERAL/PROVINCIAL HARMONIZATION

3.2.1 *Canadian Environmental Assessment Act*

Federal EA requirements and procedures are set out in the *Canadian Environmental Assessment Act* (CEAA) and its Regulations. There is some overlap in the respective applicability of CEAA and BCEAA to mine developments; however, it is likely that a mine project in British Columbia will be reviewable under both the federal and provincial EA processes.

The CEAA process focuses primarily on environmental effects of projects, and other types of effects which occur as a result of environmental effects. This focus contrasts with the broader focus of the BC EA process that considers effects of all types within provincial jurisdiction, including those not linked to environmental effects.

CEAA applies to projects where the Government of Canada has decision-making authority – whether as a proponent, land manager, source of funding or regulator. These four functions are the CEAA "triggers". CEAA is administered by the Canadian Environmental Assessment (CEA) Agency, with individual reviews by whichever federal agency (the "Responsible Authority" or RA) has decision making authority. Depending on the project, there may be several triggers, and therefore, several RAs.

Four types of EA review are possible depending on project size and the potential significance of the predicted environmental effects: screening, comprehensive study, mediation and review panel. Historically in BC, most mine projects have been subject to comprehensive study or screening level assessments.

If a project is potentially subject to CEAA, federal agencies may require additional detail and assessment in a project description from which to make a decision on federal triggers and involvement. Mine proponents should contact the CEA Agency and review the CEAA Operational Policy OPS-EPO/5-2000, *Preparing Project Descriptions under the Canadian Environmental Assessment Act,* which is available on the CEA Agency website.

Proponents are advised to meet with federal agencies, facilitated by the CEA Agency, prior to submitting a project description under BCEAA to determine the potential for federal involvement. For matters related to the potential for a CEAA review, mine proponents should seek advice directly from the CEA Agency and its website.

3.2.2 Mine Projects Listed in the Comprehensive Study List Regulations

If CEAA is triggered, mine developments are subject to either a screening or, if the quantitative thresholds specified for mine projects in the *Comprehensive Study List Regulations* are equaled or exceeded, then at least a comprehensive study level of review. Proponents should discuss the project scoping subject to meeting CEAA requirements as part of early pre-application consultations with federal agencies.

3.2.3 Canada-British Columbia Agreement for Environmental Assessment Cooperation

Canada and British Columbia are both signatories to the *Canada-wide Accord on Environmental Harmonization* and the supporting *Sub-agreement on Environmental Assessment*, developed by the Canadian Council of Ministers of the Environment in the late 1990s. The Sub-agreement seeks to promote consistency of joint review procedures, and the timely and efficient use of resources in conducting environmental assessments. Under the umbrella of the Sub-agreement, a co-operation

agreement, entitled *Canada-British Columbia Agreement for Environmental Assessment Cooperation*, (Agreement) was entered into by the provincial and federal governments in 1997, and was renewed in 2004 to reflect the new BCEAA and the amended CEAA. The main goal of the Agreement is to avoid duplication by subjecting individual projects to a single coordinated review process which meets the needs of both governments. At the conclusion of a cooperative project review, however, both governments retain their respective decision-making responsibilities and authority.

Under a cooperative joint review, the EAO works closely with the CEA Agency, RAs and other federal agencies to ensure that the legislated EA requirements of both levels of government are met. In accordance with the Agreement, the two levels of government develop a project-specific work plan that sets out:

- review staging and procedures for a cooperative review (including working group arrangements);
- information requirements and analysis necessary to meet the requirements of each party; and
- target timelines.

The two governments generally follow the staging of the provincial process, with federal agencies participating in working groups set up by the EAO. They rely on consolidated reporting by proponents to address the information needs of both governments, and operate within a mutually agreed set of target timelines based on the legislated timelines set under BCEAA. Both governments work with the proponent during development of the Terms of Reference and preparation of the Application. The EAO, CEA Agency and RAs produce a report summarizing the results of the EA at the end of the legislated 180-day review period.

4. PURPOSE AND IMPORTANCE OF THE TERMS OF REFERENCE

The purpose of the Terms of Reference is to identify the issues to be addressed and the information to be provided by the proponent in the Application. Proponents are responsible for drafting their own Terms of Reference in consultation with government agencies, First Nations, other tenure holders and local governments. Draft Terms of Reference are also made available for public review and comment. BC's Environmental Assessment Office is responsible for approving and issuing the final Terms of Reference.

The timing for finalizing the Terms of Reference may vary since it is influenced by how long it takes to confirm the components and activities associated with the project. For mine projects, the results of exploration programs and sometimes pre-feasibility studies typically affect these decisions.
While the Terms of Reference will provide an overview of proposed studies, proponents should have more detailed follow-up discussions with government agencies and other interested parties on the details of individual study programs. Baseline studies often begin before developing Terms of Reference. For these studies, proponents, with their consultants, typically develop work plans, which are based on preliminary baseline surveys and discussions with review participants.

Work plans establish study areas, setting temporal and spatial boundaries, as well as data collection, assessment and reporting methodologies and/or Quality Assurance/Quality Control procedures. Work plans do not need to be incorporated into the Terms of Reference - an overview of the proposed studies is usually sufficient.

The government decision to accept an Application will be based on whether or not the Application provides the information required by the approved Terms of Reference. The decision to accept the Application is based on this initial screening of the Application against the approved Terms of Reference. The government decision to issue an Environmental Assessment (EA) Certificate will be based on how effectively the Application addresses the issues identified in the Terms of Reference and the ability of proposed measures to mitigate environmental effects, which is determined during the formal review stage of the Application.

Ideally, the Canadian Environmental Assessment (CEA) Agency will be able to determine if the project is subject to a *Canadian Environmental Assessment Act* (CEAA) review from the Project Description. If not, proponents should try to determine if the project will trigger a CEAA review while preparing the draft Terms of Reference. They should also determine whether or not neighbouring jurisdictions may be involved in the review. Most importantly, the proponent should make every effort to ensure the draft Terms of Reference address the range of key issues and information requirements that will need to be addressed in the Application.

5. CONSULTATION

5.1 ROLE AND IMPORTANCE OF FIRST NATIONS ENGAGEMENT

The Crown has a legal duty to engage in meaningful consultation whenever it has real or constructive knowledge of the potential existence of aboriginal rights and contemplates conduct that might adversely affect that right. Government will discharge its duty for each project review and, at the same time, will expect mine proponents to make every reasonable effort to engage in consultation and relationship building with potentially affected First Nations, minimize the potential for their projects to negatively impact on aboriginal rights , aboriginal title or treaty rights, and to work with First Nations to help them understand the benefits the mine could bring to aboriginal communities.

Engagement approaches need to be tailored to reflect project-specific circumstances, aspirations and interests of individual First Nations. As First Nations typically have unique community-based knowledge and information to contribute to assessments of potential project impacts ("effects"), early outreach and engagement beginning at the exploration stage is important. This unique knowledge is sometimes referred to as "traditional knowledge" (or "aboriginal traditional knowledge" or "traditional ecological knowledge"). Traditional knowledge is a body of knowledge built up over time, mainly through oral history, and continuing into the present, which is held by people living in close contact with the natural environment. It includes an understanding of plants and animals, the functioning and management of ecosystems, and may entail knowledge of uses of certain species of flora and/or fauna for food, medicines, fuel or shelter. It may provide valuable insights into the conservation, management and sustainability of biological diversity.

It is important that First Nations and their concerns are treated with respect, and that they are heard and considered before decisions are made. Early contact, communication and relationship building can assist the understanding of respective areas of interest and concern. This should lead to both parties working together to find accommodations that could be mutually beneficial, and that can be incorporated into early-stage project planning. It is important, however, for mine proponents to be realistic in their promotion of projects and benefits where there is risk that the project may not proceed. It may also be beneficial for mine proponents to endeavor to develop impacts and benefits agreements with First Nations to help build capacity within First Nations to benefit from the mine project. Such agreements can contribute significantly to a smooth review process. Some First Nations in northeastern BC, southern Vancouver Island and the Nass Valley have existing treaties that define their land and resource rights. Most other First Nations in BC are currently negotiating those interests with Canada and BC in the BC treaty process. Still others have no connection with a treaty, and rely entirely on asserted aboriginal rights. It is very important that mine proponents know the position of each of the First Nations that may be affected by the project.

Traditional knowledge and community information may be introduced into the EA process by First Nations themselves, through existing studies and information, or by undertaking new studies, such as archaeological overview/impact assessments and current and traditional use studies, or as components of the proponent's proposed wildlife, socio-economic and other studies. Mine proponents, the EAO and First Nations usually work together to plan current and traditional use studies (sometimes called "aboriginal interest and use studies"), which are one of several ways of collecting community knowledge. Such studies should be performed in consultation with the First Nations potentially affected, wherever those First Nations are agreeable, and must be conducted in a professional way to ensure credibility. Ideally, to avoid disputes about the findings, they should be conducted with direct First Nations participation, or by someone mutually acceptable to the First Nations and the proponent.

First Nations are often concerned about how their knowledge will be used or put into practice. They may suggest principles such as the following to create a mutual framework, or as preconditions for imparting their traditional or community knowledge:

- respect for the rights of the holders of the knowledge;
- involvement of the holders of knowledge; and
- beneficial use to the interests of the holders of the knowledge.

5.1.1 Engagement Features Preferred by First Nations

Key features that First Nations have identified as demonstrating respect in the engagement process include:

- *Early Engagement* - Engagement should occur as early as possible in the planning of any development, and should initially focus on building relationships. In the mining sector, contact should be made during the pre-EA exploration phase. The purpose of the first meeting is often limited to making introductions, providing an overview of the project, and beginning discussions of how relationship building should be approached.
- *Adequate Time* – Bearing in mind First Nations capacity issues and conflicting priorities, mine proponents need to be realistic and reasonable in their timing expectations for individual steps such as scheduling the next meeting or soliciting comments on documentation. Community decision making mechanisms and other factors may affect how quickly First Nations representatives can respond to a proponent.
- *Focus* - Engagement should encompass a range of considerations such as:
  - involving First Nations in relevant studies;
  - incorporating community/traditional knowledge into baseline studies;
  - identifying First Nations interests which may be potentially affected by a project; and
  - identifying and developing prevention, avoidance, and mitigation measures to address any potentially significant adverse effects on First Nation interests.
- *Flexibility* - Each engagement process is different, influenced by both the nature and setting of the project under review, and the political, traditional and social structure, and organization of the First Nation(s) potentially affected by the project. Mine proponents should involve First Nations in the design of the consultation process to increase the likelihood of an effective working relationship.
- *Inclusiveness* - Engagement should involve elected (Chiefs and Councils) and/or hereditary officials (as acknowledged by the elected officials as representing the First Nation's interests), and with their cooperation, may involve community-level input as well.
- *Input to and Participation in Studies* – First Nations often welcome the opportunity to have input into the design of studies conducted for baseline inventory and impact assessment purposes. First Nations may also be interested in participating in some of these studies. Making initial contacts with First Nations prior to commencing major study programs is recommended, since this approach is likely to result in more informed mine assessments from a First Nations perspective.
- *Impact Management* - Proponents should attempt to address First Nations interests and concerns through project design modifications which avoid or mitigate effects. Where the use of First Nations reserve land is proposed, mine proponents must obtain First Nations agreement and federal government approval. Some First Nations in BC have taken over the full federal land management jurisdiction though the First Nations Land Management initiative. These include Lheidli T'enneh, McLeod Lake Indian Band, Sliammon, Ts'kw'aylaxw, Kitselas and Westbank, with the list growing annually.
- *Provision of Understandable Information* - Project information should be provided in an appropriate and understandable form, and may be conveyed by means of site tours, visual graphics and large-scale maps to facilitate identification of locations and sites. There should be opportunities to ask questions and obtain answers.

- *Follow-up* - First Nations may want time to reflect on the information they receive, and then schedule follow-up meetings to discuss concerns. Often First Nations require time to consult with community members in order to provide accurate information. It is important to provide time for such activities. It may be necessary to provide opportunities for both written and oral feedback.
- *Protocol Agreements* - Protocol agreements may be negotiated that include provisions covering such matters as resources to participate in the EA process, time frames, dispute resolution, the involvement of First Nations in the selection of consultants conducting research on topics of interest to them, and the role of First Nations in project monitoring.
- *Ongoing Engagement* - Must not only begin early, but may continue into the post-EA permitting stage and may include such matters as compliance monitoring and adaptive management.
- *Informed decision-making* – The collective goal of proponent and government engagement and consultations with First Nations should be to ensure that potential project effects on First Nations interests are avoided or minimized, and that project decisions are as fully informed as possible with respect to the potential impacts of a project on those interests.

5.1.2 First Nation Capacity

Participation in the assessment of major projects may pose significant resource and capacity issues to any First Nations that may affect the ability of First Nations to participate in the EA review in a timely and comprehensive manner. This is one reason why early outreach and provision of adequate time to complete each engagement step are important. First Nations appreciate being given as much time as possible to participate in EA reviews.

To make meaningful participation possible, First Nations may request funding to:

- develop their understanding of the EA process and the project;
- participate in meetings, committees or workshops, etc., including travel to attend meetings;
- cover ceremonial costs;
- pay for the hiring of professional technical expertise to review proposed baseline studies and the EA Application;
- provide the resources necessary for internal Council and community-level consultation and decision making; and
- discuss and negotiate proposed participation agreements.

The amount of funding varies depending on the specific needs of a First Nation and the nature and complexity of the project and the issues it raises. Mine proponents are generally expected to provide the majority of funding required by First Nations to help them participate in the EA process. Other potential sources of funding are the EAO (subject to budget appropriations) and the federal government.

5.2 INVOLVEMENT OF NEIGHBOURING JURISDICTIONS

In the spirit of transboundary cooperation on matters of common environmental interest, British Columbia and other jurisdictions are developing approaches to ensure that transboundary issues are identified, assessed and accounted for in project decisions. One example is the 2003 *Memorandum of Understanding between the Washington State Department of Ecology and the British Columbia Environmental Assessment Office* intended to facilitate notification and information exchange regarding major project proposals in the vicinity of the other jurisdiction. Other examples are the mutually agreed procedures developed by the province and federal agencies on a project-by-project basis to meet both *Environmental Assessment Act* (BCEAA) and the *Canadian Environmental Assessment Act* (CEAA) requirements in cases where potential transboundary effects are identified.

These approaches adhere to the principles of transboundary environmental assessment as outlined in the United Nations Economic Commission for Europe *Convention on Environmental Impact in a Transboundary Context* (Espoo, Finland, 1991 - updated 2004) to which Canada and the USA are signatories. The Convention's provisions cover matters such as notification, scoping, information exchange, consultation, accounting for comments received in final decisions, communicating final decisions, and post-EA follow-up.

Details of the approach to be taken for a specific project, the timelines set, and the respective roles and responsibilities of the proponent, the EAO, the CEA Agency and other government agencies, are stipulated in the EAO's procedural order and the federal/provincial work plan developed for each review. To facilitate participation in some reviews, neighbouring jurisdictions may be represented on project-specific technical working groups set up by the EAO.

In the context of a transboundary review, and in identifying issues, work plans, developing draft Terms of Reference and the Application, a mine proponent's responsibilities may generally include:

- identifying the potential for transboundary issues that are relevant to the project, as well as the associated information and assessment requirements and proposed impact management plans to be included in the Application;
- providing the Application and supporting documentation to an identified list of neighboring State, US federal and/or territorial review agencies, as well as BC, federal and local government agencies, the public and First Nations;
- conducting consultation within neighbouring jurisdictions that may be potentially affected by the project proposal;
- addressing transboundary issues based on comments received from neighbouring jurisdictions that are within the scope of the project assessment and relevant to the project; and
- engaging in follow-up and monitoring programs, reporting results, and addressing any identified issues through further efforts to reduce or eliminate impacts.

5.3 ROLE AND IMPORTANCE OF GOVERNMENT AGENCY CONSULTATION

Government agencies are the primary source of policy and technical expertise on issues raised in the course of a project assessment. Agency staff conducts their review in alignment with their agency policies and mandates. Proponent consultation with relevant government agencies is essential to ensure that projects are planned in a way which reflects current government policy and regulatory expectations. Proponents should consult with agencies when they begin to develop project specific work plans outlining environmental baseline studies. These discussions may occur before a project enters the EA process. These discussions continue in the pre-application stage through technical working groups coordinated by the EAO, if they involve more than one agency. This ensures that issues and information requirements are identified and addressed in the Terms of Reference.

5.4 ROLE AND IMPORTANCE OF PUBLIC CONSULTATION

Public and stakeholder consultation contributes to the gathering and sharing of all relevant information on the potential effects of a proposed mine development. Stakeholders may include tenure holders, guide outfitters and trappers in the vicinity of a project, and interest groups and organizations.

Proponents should contact local communities at the exploration stage to understand community issues, to seek information and to begin relationship building. This ensures that community perspectives and public issues are identified and considered. By the time a proponent is prepared to enter the EA process, the

proponent's information exchange and relationship building activities with communities should be well advanced.

Early consultation activities facilitate effective issue identification and the development of thorough Terms of Reference. This leads to more complete issue identification at an early enough stage to influence project planning decisions, before irreversible project location or design decisions are made. Consultation conducted as part of the EA process should be a continuation of that begun during the exploration stage and should continue after certification.

6. ASSESSING MINE PROJECTS

6.1 ATTRIBUTES UNIQUE TO THE MINING SECTOR

Mining activity progresses through many stages: from basic prospecting, mapping and geoscience; through the acquisition of mineral tenures; preliminary and advanced exploration; mine planning and feasibility assessment; acquisition of government approvals to mine; mine construction, operation to progressive reclamation to mine closure, decommissioning and final reclamation. Exploration is an iterative process with activities starting, stopping and restarting even before seeking mining approvals. Throughout this iterative cycle, mine proponents migrate through a continuum of permitting review and approval processes. Unlike other project categories subject to the *Environmental Assessment Act* (BCEAA), mining is unique in that mineral tenures obtained during the exploration stage grant subsurface exploration and surface use rights, and preliminary exploration is undertaken which may disturb the land before a project enters the environmental assessment (EA) process.

Mineral tenure acquisition and maintenance and exploration activity approvals are administered by the Ministry of Energy, Mines and Petroleum Resources (MEMPR). Interagency involvement in the review and approval of mining-related activities is coordinated through a system of regionally-based Mine Development Review Committees (RMDRCs). Mining projects subject to the BCEAA Reviewable Projects Regulation are reviewed through the EA process managed by the Environmental Assessment Office (EAO). For such projects however, pre-EA exploration and post-EA permitting, monitoring and reporting activities continue to be managed by the RMDRCs.

During the exploration stage and at the preliminary mine planning stage the proponent should be developing relationships with regional government agencies, local communities and First Nations, and have conducted sufficient work to determine whether a potential mine exists to be prepared to enter the pre-application stage. In particular, there should be a reasonable level of preliminary mine planning to adequately scope the project's onsite and offsite components and activities to reasonably identify the potential for effects. This is particularly important if there is a potential for the project to trigger the federal *Canadian Environmental Assessment Act* (CEAA).

Mine proponents are strongly encouraged to develop a close ongoing working relationship with the local RMDRC for their projects, and to continue to work with the committees during the permitting process, if an EA Certificate is granted.

6.2 ASSESSING THE POTENTIAL EFFECTS OF A MINE PROJECT

6.2.1 Nine Basic Steps and Table Formats for Summarizing Assessment Data

The 9-step process outlined below is suggested as a logical approach to assessing a project's impacts. The goal is to ensure the:

- interactions between the various project components and the project setting are adequately described;
- likely effects are identified and properly assessed;
- effective and feasible impact management measures are available; and
- significance of any residual effects is determined.

These steps can form a useful framework for assembling both the Terms of Reference and the Application.

There are **five table formats** for summarizing assessment data (See Appendix D). **Table 1** is for presenting information by mine component on issues, relevant valued environmental component(s) (VECs), and the rationale used to decide which project components and VECs are carried forward for assessment. **Table 2** is a companion to Table 1 to provide a summary of how issues were identified, by whom, and the rationales for including or not including issues in the EA review. **Table 3** can be used to present rating criteria for VECs. **Table 4** is for convenient summary reporting of issues, proposed impact management measures, residual effects assessments and significance ratings. It can be modified to compare and analyze impacts by project-specific components (e.g. mine, mill, tailing pond, access road), by components of the project setting (biophysical and technical, socioeconomic, heritage, health) or by VEC. It can also be used to provide an overall summary. **Table 5** can be used to provide a summary report of a project's cumulative environmental effects (CEEs) based on an analysis of identified significant residual effects in combination with other past, present or foreseeable future projects.

Step 1 - Describe Project
Develop a description of the project's component facilities and activities in sufficient detail to identify potential issues and information requirements. Include a preliminary mine plan as per the *Health, Safety and Reclamation Code for Mines in British Columbia.* (See Appendix D, Tables 1 and 2.)

Step 2 – Scope Issues
Based on the project description, conduct pre-application-stage issue-scoping discussions with the public, First Nations other tenure holders and government agencies, and undertake at least preliminary baseline surveys of key aspects of the project setting. It is essential to have an informed group involved in the scoping session, both in terms of the project and the environmental setting. (See Appendix D, Tables 1 and 2.)

Step 3 - Confirm Issues
Itemize and describe those components of the project setting (environmental, socio-economic, heritage, and health) that will be or could be affected by mine development, and therefore warrant an impact assessment (See Appendix D, Tables 1 and 2.)

Step 4 – Select VECs
Select the VECs that will be a focus of the impact assessment. Any component of the project setting (environmental, social, economic, heritage, health) may be designated a VEC (i.e. an important or significant part of the project setting). VECs are determined, in part, on the basis of expressed public, First Nations and government concerns, and in part, on the basis of the proponent's own scientific and professional knowledge (e.g. determined through preliminary baseline investigations). VECs are parameters of the project setting that are considered suitable indicators of the significance of a project's potential effects (See Appendix D, Tables 1 and 2.)

Step 5 – Conduct Baseline Studies
Identify, survey, compile and describe those components of the project setting that could be affected by project development.

Step 6 – Identify Potential Effects
Describe the nature and extent of the potential impacts of interactions between the project and the existing project setting.

Step 7 – Develop Impact Management Proposals
Describe proposed measures (avoidance, mitigation, compensation) to manage the impacts identified in Step 6.

Step 8 – Define Residual Effects Rating Criteria
Develop rating criteria for the potential residual effects of the project on each VEC (i.e. criteria for the magnitude, geographical extent, duration, frequency and reversibility of predicted residual effects (See Appendix D, Table 3.)

Step 9 - Estimate Potential Residual Effects with Mitigation
Rate the magnitude, geographical extent, duration, frequency and reversibility of any residual effects of the project after mitigation measures are applied, assess the significance of identified residual effects, and estimate the level in confidence of the impact predictions. **Note** – The Terms of Reference should specify that when a CEAA review is triggered, the responsible authorities (RAs) will make a final determination of the likelihood of causing significant adverse effects as provided for under CEAA. While there are various examples of residual effects ratings criteria in the EAs of other mine projects, these criteria need to be developed on a project-specific basis. Mine proponents, as part of their early-stage discussions with review agencies and other interested parties, should discuss ratings definitions for residual project effects.

In setting residual effects rating criteria, the following is noted:
- Typically, no one standard definition of the criteria is suitable. Some criteria are set differently for biophysical and socio-economic VECs, and criteria may even vary between biophysical VECs.
- Magnitude levels need to be defined explicitly, and may be qualitative or quantitative.
- Geographic extent is typically expressed quantitatively for biophysical VECs (e.g. expressed in ranges of distances over which effects are experienced). Ratings for socio-economic VECs are also based on distance, but may be expressed qualitatively (e.g. local, regional, national, international).
- Duration is typically expressed quantitatively (e.g. ranges of months or years).
- Frequency may be expressed quantitatively in terms of number of events during a set period (e.g. during one month or one year).
- Reversibility, residual effects ratings and level of confidence are usually expressed qualitatively.

6.2.2 Estimating Cumulative Environmental Effects
For all residual effects identified under Step 9, when a project is subject to CEAA, rate the magnitude, geographical extent, duration, frequency and reversibility of any residual cumulative environmental effects (CEE) of the project which act in combination with the effects of past or present projects or relevant future projects, assess the significance of any identified residual CEE, and estimate the level of confidence in the impact predictions. Relevant future projects include those which are either certain to proceed or at least reasonably foreseeable (i.e. the project may proceed, although this is not certain). CEE assessment is not required for purely hypothetical projects, where there is considerable uncertainty about the likelihood that they will proceed, and their future is conjectural, based on current information. Proposed projects which are the subject of approval applications submitted to government at the time of the assessment would be examples of projects which are considered at least reasonably foreseeable. (See Table 5.)

6.3 SUMMARY OF ADVICE TO MINE PROPONENTS
Presented below are checklists that outline the key steps proponents should undertake when preparing draft Terms of Reference and an Application for an EA Certificate.

6.3.1 Terms of Reference Checklist

- Meet with EAO staff to determine if the project is reviewable under the BCEAA.
- Undertake early pre-application stage consultations with all interested and potentially affected parties to better ensure complete scoping of project issues and to help define the content of the project-specific Terms of Reference.
- Meet with government agencies identified by the EAO to find out what specific information and methodologies may be required, and to take this into account in preparing the Application.
- Develop a good understanding of First Nations' issues and expectations respecting participation in developing both the Terms of Reference and the Application.
- Undertake preliminary investigations, including resource inventory work, to identify current conditions at the project site and in the surrounding, potentially affected area to serve as "baseline" or "benchmark" information.
- Work with key agencies to develop issue-specific work plans to address the primary issues of those agencies to provide greater certainty over government's baseline information and assessment expectations and to facilitate drafting the Terms of Reference, which will include an overview of the proposed studies.
- Work closely with the Canadian Environmental Assessment (CEA) Agency for projects that are subject to both the BCEAA and CEAA to coordinate project review under an EA cooperation agreement and to identify CEAA information requirements in the Terms of Reference.

6.3.2 Application Checklist

- Undertake preliminary investigations to identify current conditions at the project site and in the surrounding, potentially affected areas, ensure major baseline data collection programs, particularly field collection of biophysical data, is agreed to by the review agency and reflected in the finalized Terms of Reference and ensure monitoring studies during exploration (i.e. as a water license requirement), baseline studies for EA purposes, and environmental monitoring programs for operations and closure are all harmonized.
- Meet with government agencies and other interested parties during the impact assessment and preparation of the Application to provide a "perception check", and an opportunity to fine-tune the approach to assessment and reporting.
- Involve other parties (e.g. First Nations, communities of interest) in studies as a means of ensuring the studies are responsive to their concerns.
- Provide drafts of sections of the Application to key agencies for an informal review prior to formally filing the completed Application.
- Ensure the elements of the Terms of Reference have been fully addressed and that no reporting requirements have "fallen between the cracks" and that a table of concordance has been included in the Application to facilitate EAO's screening of the Application.
- Schedule the filing of the Application to ensure that there is enough time to review and understand the Terms of Reference, and to collect and analyze the information required by the Terms of Reference.

7. STRUCTURING TERMS OF REFERENCE AND APPLICATION

A proponent has significant flexibility to structure the Terms of Reference in various ways. The structure adopted for the Terms of Reference should also be adopted for the Application. This will make it easier to screen the Application to ensure the information required by the Terms of Reference is contained in the Application.

There are four possible alternative structures (or combination of alternative structures), as noted below. Adopting Alternative Structures 2 and 3 will likely mean reconfiguring the suggested tables (Tables 1 through 5). Proponents should refer to the Environmental Assessment Office (EAO) website to review and assess applications which may have presented information and analyses in one of the following structures. Proponents should discuss the issue of structuring their Application and their preferred approach with the EAO to ensure that review participants are in agreement.

Alternative Structure #1 – Organized by Step in Assessment Process
One suggested basic outline for the Terms of Reference that will guide the development of an Application is shown in Chart 2.

CHART 2
SUGGESTED OUTLINE FOR MINE PROJECT TERMS OF REFERENCE AND APPLICATION – ORGANIZED BY STEP IN THE ASSESSMENT PROCESS

Preface
Executive Summary
Table of Contents
List of Abbreviations
Section 1 - Introduction
Section 2 - Information Distribution and Consultation
Section 3 - Project Description and Scope of Project
Section 4 - Scope of Assessment and Study Areas
Section 5 - Project Setting and Characteristics
Section 6 - Assessment of Project Impacts, Mitigation Requirements and Residual Effects
First Nations Considerations (optional separate section)
Section 7 - Environmental Management System
Section 8 - Conclusions
Section 9 - List of References and Supporting Documentation

This structure is organized by key steps in the review and assessment procedure, as outlined in Section 3 of this guide. For each identified issue of concern, Sections 5 and 6 in Chart 2 contemplate the separate reporting of baseline conditions (Section 5) and impact assessment and impact management (Section 6), with both sections organized by components of the project setting. **Note** – This is the structure which has been used as the basis for Section 6 of this guide.

Alternative Structure #2 – Organized by Project Component
Baseline information and impact assessment could be organized by project component, especially where there are substantial differences in the effects of individual project components on the project's setting. This is often the case with mining projects, where the effects of pits, waste dumps, mined product

processing plants, tailing ponds, access roads, worker accommodation and other components can vary significantly.

Alternative Structure #3 – Organized by Issue or Valued Environmental Component (VEC)

The structure could be built around the consolidated reporting of baseline setting and impact assessment for each major issue topic (e.g. presenting a complete baseline/assessment/mitigation account for topics such as water quality or wildlife or archaeology), rather than reporting the baseline setting, impact assessment and mitigation components in separate chapters. This may make it easier for review participants to review an Application.

For example, each chapter or section for each component of the project setting could include a description of:

- how the issues were identified and scoped, and the methods and approaches used in the assessment of impacts on each component of the project setting (e.g. each VEC or focal parameter);
- the baseline conditions for that setting VEC, focal parameter, etc.;
- within this framework, the project effects assessment, presented for each project component or phase of project development (construction, operation, closure and post closure), and the setting and component interactions;
- the proposed impact mitigation and management strategies, presented either by project component or phase of the project;
- the significance of residual effects after impact mitigation/management; and
- the potential for the project to contribute to cumulative environmental effects (CEEs), the CEE assessment, and the potential for significant residual CEEs.

Considerations related to First Nations - Reporting related to First Nations should be captured under Sections 2 through 7. It may be desirable to consolidate all reporting on First Nations issues in a single section dedicated to "First Nations Considerations", particularly if a preference for this is expressed by First Nations for their review convenience.

Considerations for Reporting on Potential Human Health Effects – Reporting on potential human effects should bring together information pertaining to health-based effects gathered from other sections, such as air, water, noise, fauna and flora used as country foods), along with socio-cultural issues.

Potential for Transboundary Issues – The potential for transboundary issues and management strategies, where identified in the approved Terms of Reference, may warrant a separate section of the Application. Mine proponents should discuss this option with the EAO.

8. CONTENTS OF TERMS OF REFERENCE AND APPLICATION

The structure of an Application should correspond to the structure of the Terms of Reference, although proponents, in discussions with the Environmental Assessment Office (EAO), could propose changes to the structure of the Application after the Terms of Reference are set. The following points are provided for each section of the Terms of Reference identified below:

- the purpose of the section in the Application and any relevant background policy advice or interpretation;
- content requirement for Terms of Reference; and
- content requirement for Application.

PREFACE SECTION

The preface indicates in general terms why the document is being prepared and how it has been developed.

Content Requirement for Terms of Reference

The proponent should commit to provide the information listed below in the preface of the Application.

Content Requirement for Application

The proponent should provide the following:

- an indication that the project is subject to review under the *Environmental Assessment Act* (BCEAA) (pursuant to the procedural order issued under Section 11 of BCEAA);
- affirmation that the Application has been developed in accord with the Terms of Reference approved by the EAO, and complies with the relevant instructions in the EAO's procedural order;
- identification of the agencies, First Nations and other parties involved in the development of the Application; and
- a table of concordance which cross-references the information presented in the Application with the information requirements in the Terms of Reference.

EXECUTIVE SUMMARY SECTION

The executive summary concisely presents sufficient information to provide the reader with an overview of the mine development and the findings of the environmental assessment (EA). It briefly describes the project (include location and site maps) and the proponent, and summarizes the consultations undertaken, key issues and impact concerns identified, recommended mitigation measures, and the proponent's conclusions about the impact potential of the project. Ideally, the Executive Summary should be suitable for use as a stand-alone overview of the Application (e.g. in consultations on the Application).

Content Requirement for Terms of Reference

The proponent should commit to provide the information listed below in the executive summary of the Application.

Content Requirement for Application

The proponent should provide the following:

- a concise description of all key facets of the project (on-site and off-site facilities and associated activities);
- a succinct description of the proponent's information distribution activities, the First Nations, public, stakeholder, local government and government agency consultation measures it has undertaken, and a summary of the issues raised, and solutions suggested, during these consultations;

- an overview of proposed proponent consultations on the Application;
- a general overview of key impact issues and proposed impact management measures; and
- the proponent's conclusions from the EA.

TABLE OF CONTENTS SECTION

The table of contents is the outline followed in the Application, and indicates the organization and order of presentation of the information provided.

Content Requirement for Terms of Reference

The Terms of Reference will recommend a basic outline for the table of contents to be followed in the Application. In the Terms of Reference, the proponent should commit to itemizing all of the elements noted below in the table of contents for its Application, and should also commit to a structure for its Application which corresponds as closely as possible to that recommended in the Terms of Reference.

Note - The Terms of Reference document will require its own table of contents, which will likely be similar to that being recommended for the Application, and actually used for the Application.

Content Requirement for Application

The table of contents should include all document components, including volumes, sections, sub-sections, lists of references, appendices, figures, tables and photographs. If the proponent wishes to adopt a different structure in its Application from that proposed in the Terms of Reference, this should be discussed with the EAO.

LIST OF ABBREVIATIONS SECTION

Abbreviations and acronyms are in common usage in impact assessment reports, and a list of abbreviations will be helpful to readers.

Content Requirement for Terms of Reference

The proponent should commit to providing in the Application a list of all acronyms and abbreviations used in that document.

Note - The Terms of Reference may itself make use of acronyms and abbreviations, and if so, it may be appropriate to include a list of abbreviations for the Terms of Reference.

Content Requirement for Application

The proponent should provide a list of all acronyms and abbreviations used in the document. If a list of acronyms and abbreviations were provided in the Terms of Reference, then this list will form a useful starting point for the list to be presented in the Application, with any required additions.

SECTION 1 – INTRODUCTION

The introduction provides contextual background on the project and the proponent, on the preparation and filing of the Application, and on the regulatory regime which applies to the project.

Content Requirement for Terms of Reference

The proponent should commit to provide the information itemized below in the introduction to its Application.

Content Requirement for Application

The proponent should identify the following:

1. ***Proponent Identification***
   - proponent history, description and contact information (i.e. name, address, phone, fax, email); and
   - name of the firm/individual managing the project.
2. ***General Application Background***
   - structural components of the Application;
   - summary of project planning and project review history to date; and
   - summary of any legal orders or agreements applying to the review of the project.
3. ***Project Overview*** (**Note** – summary only – details in Section 3)
   - briefly describe the mine development and its purpose;
   - describe the project's location, size and main features;
   - clearly identify and list those project elements that are included in the "Project Scope";
   - indicate whether the project is located on Crown land or private land, or partly on both;
   - include maps showing both regional context and site-specific setting;
   - estimate the total labor force required (direct jobs only) during:
     - mine construction (in person years), and
     - mine operation (total permanent, temporary, full-time and part-time jobs per year at full-scale operation);
   - estimate capital cost of the project (total front-end pre-production mine construction costs, in Canadian dollars); and
   - itemize predicted project benefits.
4. ***Regulatory Framework***
   - summarize relevant provincial and federal legislative and policy requirements governing the project, identify the local government and any applicable local government Official Community Plan, applicable local government planning body and zoning requirements, and applicable international treaties, agreements and conventions;
   - list statutory licenses, permits and other authorizations required for project construction and operation; and
   - indicate whether or not a request for concurrent review of permit applications is being requested.

Note – ***Concurrent Approvals*** - A mine proponent may request that certain applications for provincial statutory authorizations required to implement a project be processed concurrently with the review of the Application. Providing that the request complies with provisions set by regulation, the applications are reviewed while the EA process is ongoing, and the agency responsible for the approval, following the granting of an EA Certificate, must then make a decision on the approval application within 60 days. Proponents may also submit permit applications without adhering to this procedure, but then the legislated timelines do not apply. On that basis, agencies are normally willing to review and discuss these applications while the EA review is ongoing.

SECTION 2 - INFORMATION DISTRIBUTION AND CONSULTATION

This section summarizes the proponent's past and proposed public consultation initiatives. Documentation of First Nations consultations are also included in this section, as well as consultations with federal, provincial and local government agencies, stakeholders, and where relevant, with neighbouring jurisdictions. These consultations should have been carried out in accordance with the relevant consultation provisions of the EAO's procedural order and other relevant requirements.

Under the *Public Consultation Policy Regulation*, the EAO will assess the adequacy of past and proposed public consultation, based on the report provided in the Application, prior to accepting the application for formal detailed review. The EAO will also undertake a similar assessment of past and proposed First Nations consultation. The procedure to be followed for these assessments will be indicated in the EAO's procedural order.

Content Requirement for Terms of Reference
The proponent should commit to provide the information itemized below in the Application.

Content Requirement for Application
The proponent should present the following information:

1. Consultation Overview

- briefly describe the proponent's consultation efforts undertaken with the public, stakeholders, local governments, First Nations and government agencies at the pre-application stage, both before and after entering the EA process;
- describe any consultation agreements reached with First Nations potentially affected by the project (exclude confidential information); and
- list any significant consultation events and measures, and summarize the results.

2. Pre-application Consultation

- outline consultation undertaken during the pre-application stage, including the exploration stage, and covering the preparation of both the Terms of Reference and the Application, and describing:
  - consultations with the public and other key stakeholders;
  - consultations with federal, provincial, and local government representatives, and, where relevant, with neighbouring jurisdictions;
  - consultations with First Nations;
  - in summary form, the responses provided on issues raised by the public, First Nations and government agencies; and
  - the degree to which issues are considered resolved or addressed by the proponent and other parties.

3. Consultation Planned during Application Review

- describe the public, stakeholder and First Nations consultation programs proposed for the application review stage, following screening and acceptance of the Application for formal detailed review;
- explain the process proposed for attempting to resolve outstanding issues; and
- indicate the proposed program for consultation with government agencies.

SECTION 3 - PROJECT DESCRIPTION AND SCOPE OF THE PROJECT
All key project components and activities should be identified and clearly explained in this section, including the project's on-site and off-site facilities and the activities associated with these facilities for all stages of the mine development – construction, operations/maintenance, and decommissioning/closure/reclamation. The description is presented in sufficient detail to allow a meaningful assessment of potential project effects. A clear project description assists reviewers in assessing the project and its impacts, and reduces the risk that reviewers will require additional information during the application review stage to understand the project and its interactions with its surroundings.

Level of Mine Project Design Detail
The EA process typically relies on a preliminary level of project design information to determine the scope of the project, and as a basis to conduct the assessment. The project description should include a

preliminary mine plan developed in accordance with the *Health, Safety and Reclamation Code for Mines in British Columbia*. The exact required level of detail reflects the degree of challenge posed in managing any adverse effects. Using the preliminary project description, the assessment focuses on strategic issues in determining whether a project should proceed (i.e. whether there are any "show-stoppers"). If issued, an EA Certificate represents an "approval-in-principle", signaling the overall public acceptability of a project. All strategic policy issues have been resolved, and all identified technical issues are either resolved or known to be resolvable by technically and economically feasible means.
Details of how best to implement the project will still have to be addressed at the post-EA stage, when proponents submit detailed or final design information in support of permit applications. Providing that the EA review has been comprehensive and technically thorough, permitting should be relatively routine, entailing no major "surprises". Detailed project design information, while not normally required for an EA review, will be needed once the Application is accepted for review if the proponent requests concurrent review of a provincial permit application.

Scope of the Mine Project – For What Facilities and Activities is EA Approval Sought?
Based on the project description provided by the mine proponent, the EAO (and, if the *Canadian Environmental Assessment Act* (CEAA) is triggered, federal agencies) determine the scope of a project for which approval is to be considered. The scope of the project for EA review purposes is confirmed in the EAO's procedural order. That order is revised if the proponent amends the project description later in the EA process.

Defining the Scope of the Mine Project - Typically, in its Application, a proponent is seeking approval for a combination of:

- *facilities* - proposed on-site and off-site facilities which are exclusively dedicated to, and intrinsically form part of, the project; and
- *activities* - proposed project-related activities which intrinsically form part of the project, being carried out to construct, operate, maintain and decommission the project.

Note - Relevant activities may be associated with use of existing, already-approved facilities or proposed facilities which, when constructed, may or may not be dedicated primarily to the project.

Using Dedicated Facilities Which Already Exist – Mine Modifications - Where a proponent intends to expand, extend or otherwise modify an existing mine development, and the changes are reviewable under BCEAA, some of the facilities at the existing mine operation will be incorporated into the modified operations (e.g. the mill or preparation plant or the access road). In such cases, those facilities are already approved, and, in their current approved form, do not fall within the scope of the project. However, any changes to those facilities (e.g. adding additional processing circuits to a mill) or to the activities associated with them (e.g. additional mine traffic along the mine access road) will be deemed to be part of the proposed mine modification for review and approval purposes.

Activities Associated with Non-dedicated Facilities - Non-dedicated facilities are generally independently operated, and serve other users besides the project (e.g. a public highway, trunk electrical transmission line or community sewage system). Non-dedicated facilities may already exist at the time of the proponent's Application and be in use by the existing mining operations or they may themselves be planned for the future. In either case, the facilities are not normally scoped into the definition of the project. However, any proposed mine-related activities associated with non-dedicated facilities may be included in the scope of the project, while the impacts of such activities on non-dedicated facilities (or on other facets of the project setting) would be included in the scope of the assessment, where deemed potentially significant (See Section 4, Scope of the Assessment and Study Areas.)

Life Cycle of the Mine Project Included in the Scope of the Project - For mining projects, all development phases except initial exploration activities are always included in the scope of the project for review and decision-making purposes – as required by the *Reviewable Projects Regulation*. Thus, for all facilities and activities of a project, the impact assessment needs to cover the construction, operations/maintenance and decommissioning/closure phases.

Exploration Activities Not Included in Scope of Project - The intent of BCEAA is to assess proposed projects. The exploration which precedes mine development is considered an essential research activity, similar to other baseline surveys, needed to ensure that a reliable mine plan is available to form the basis of the Application. Thus, exploration activities are not reviewed and approved under BCEAA, but instead, are subject to regulatory approval procedures and codified rules of practice implemented under the *Mines Act* and other relevant statutes.

The environmental effects of past, current or future exploration activities may be included in the scope of the EA as part of a required cumulative environmental effects assessment, if these effects are deemed to overlap and combine with the effects of the proposed mine.

No "Project Splitting" - The EAO includes in the project definition all components (facilities and activities) which are essential for the mine to proceed on an economically viable "stand-alone" basis. "Project splitting", where different components of the same project are reviewed in separate EA reviews on separate timetables, is not generally considered. Such an approach makes it difficult to develop a comprehensive understanding of a project's overall effects. Moreover, earlier decisions on certain project components tend to compromise later decisions.

Federal EA Scope - The scope of project determined by an RA under CEAA is not necessarily the same scope of project adopted by the EAO under BCEAA. The CEAA scope of project may be narrower and limited to federal regulatory triggers that may not necessarily include the mine component itself, but could include associated but independent project components like required stream locations or explosives factories. Less commonly, the CEAA scope of project may be broader than that of the provincial EA process. Where the CEAA scope is narrower, and a joint federal/provincial assessment is undertaken, the Terms of Reference may call for the Application to provide some stand-alone reporting of the EA on the narrower scope of the project to facilitate review and decision making by federal agencies.

Content Requirement for Terms of Reference
The proponent should commit to provide the information itemized below in the Application.

Content Requirement for Application
The proponent should present the following information:

1. ***Project Background and Rationale***
   - project history;
   - rationale for the project and description of the project's objectives; and
   - description of any sustainability principles which may have guided project planning.
2. ***Location of Project and Mapping***
   - location of the project and the longitude and latitude of the site;
   - maps at appropriate scales that indicate both the regional setting and the site layout of project components and activities (See Note);
   - site plans/sketches/photographs with project location, site features and activities identified on maps; and

- proximity to designated environmentally sensitive areas or cultural sites, such as national/provincial/regional parks, ecological reserves, heritage sites and other sensitive areas.
  Note - Mapping of the project footprint has been presented at the 1:1,000 to 1:5,000 scale to focus on the values relevant to reclamation planning. Regional-scale mapping is normally presented at scales ranging from 1:20,000-1:100,000 to place the project and its potential effects into a regional perspective. Proponents should contact the relevant government agency and the EAO to discuss appropriate mapping scales.

3. Project Facilities

- describe proposed on-site project components and associated on-site and off-site infrastructure and other facilities to be developed for the project;
- summarize results of studies leading to selection of sites for on-site and off-site facilities; and
- summarize any consideration of alternative locations for the project or project components, identifying factors which led to the selection of preferred option(s). Normally only a high-level overview of the consideration of alternative locations is sufficient.
  Note - Where a proponent's preferred alternative facility/activity location may have the potential for significant adverse effects, more detailed assessment and comparison of other economically and technically feasible locations may be required to establish that the proponent's preferred alternative is preferable from a broad effects perspective.

4. Construction-Phase Activities

- describe construction activities, such as site-clearing and preparation, foundations, utilities and building structures;
- estimate construction scheduling (in year-by-year detail, if possible), using best available information; and
- describe intended approaches for delivery of services required for the construction phase, and the associated logistics.
  Note - depending on the project, this may include such items as water supply, waste disposal, material requirements, energy supply, construction-stage transportation/traffic, construction workers' accommodation and/or food services, emergency procedures and maintenance procedures.

5. Operations-Phase Activities

- describe operations-phase resource extraction and associated activities, including maintenance activities – estimate scheduling (in year-by-year detail, if possible), using best available information; and
- describe intended approaches for delivery of services required for the operations phase and associated logistics – depending on the project, this may again include water supply, waste disposal, energy supply, operations-stage transportation/traffic, operating workforce services, emergency procedures and maintenance procedures.

6. Decommissioning Activities

- expected lifetime of the project and of any temporary project components; and
- conceptual decommissioning or reclamation plans, removal of structures and ancillary equipment, site remediation, etc.

Relevant CEAA Information Requirements

The following components are only required if the project is a comprehensive study under the CEAA:

7. ***Need for and Purpose of the Project***

- Identify the "need for" (i.e. the problem or opportunity the project is intending to solve or satisfy) and the "purpose of" (i.e. what is to be achieved by carrying out the project) the project. These

should be described from the perspective of the project proponent and provide context for the consideration of alternatives (as described in the following section).

8. Alternative Means of Carrying Out the Project

- Describe alternative economically and technically feasible means of undertaking the project, including a description of the alternatives, the general environmental effects associated with the alternatives, and the rationale for selection of preferred alternatives. This should be consistent with the principles of alternatives assessment required under BCEAA.

SECTION 4 – SCOPE OF THE ASSESSMENT AND STUDY AREAS

This section of the Application indicates how the consultations with interested parties – the public, stakeholders, local governments, First Nations and government agencies – have influenced the identification of the issues and impact concerns which are assessed in the Application, and in particular, the definition of valued environmental components (VECs), which serve as the framework for the assessment. This section also identifies the study areas (both spatial and temporal) used for individual components of the assessment.

Note – The following provides context and guidance on identifying the scope of the assessment and study area boundaries.

Addressing Land Use

The EA process is strictly a project-specific review mechanism. It has not been designed as a land use planning mechanism, and has no jurisdiction to perform this function. The interface between the EA process and land use planning processes is that the EA process assesses projects within the context of the prevailing land use policy and planning framework of an area. Where a recognized land use plan exists, the EA process evaluates the degree of compatibility of a development proposal with any specific land use planning objectives set in the vicinity of that development, whether set by the province or by local government. The weight given to this part of the assessment would depend on the status of the plans in question – Are they confirmed government policy? Do they have the force of law? The EA process, in reviewing projects, does not await the outcome of planning processes which have yet to be completed. In the absence of plans or where plans are incomplete, development decisions are taken using the best available information and in the context of responsible stewardship and the prevailing land use regime.

The EA process also examines the effects of projects on adjacent land uses and land or resource tenure rights determining the degree to which adjacent pre-existing land uses and rights may be affected by a proposed development. Depending on the type of mine and the type of setting – urban/residential, rural or backcountry – a wide variety of land and resource uses could be affected. These include urban residential, commercial or recreational districts, other mining activity, oil/gas development, agriculture, forestry, fishing and hunting/guiding/trapping, non-consumptive outdoor recreation resources, aesthetics and heritage resources. Land use assessments also include examination of potential project effects on First Nations aboriginal rights, as discussed in Section 5.

Managing Risk

The concept of assessing and managing risk is now widespread in environmental management. It was developed for those situations where the potential may exist for a significant human health threat, or for a serious or irreversible impact on the environment, but where a conclusive cause and effect relationship cannot be scientifically demonstrated. The principle asserts that, in such situations, the uncertainty should be acknowledged, potential impacts and impact management options assessed, and cost-effective measures implemented. Lack of full scientific certainty should not be used as a reason for postponing actions to prevent environmental or health problems. A proponent's Application should indicate how this

approach has been applied to or considered for potential effects of the project, and how it would be applied during the construction, operation, temporary closure, final closure, and post-closure phases.

Government Policy Context
Under the BCEAA, the assessment of a project's effects must take into account and reflect government policies and expectations of more general application, where they exist (for example, where outcome-based standards have been set). This helps to promote a consistent application of government expectations within separate project reviews.

Strategic vs. Permit-Level Issues
The EA review focuses on those issues that are relevant to whether or not a project should be certified by ministers (the so-called "strategic issues"). Proponent commitments are confirmed during the Application review and may include commitments to involve First Nations and/or the public in the permitting stage. These commitments have a bearing on how best to implement the project and require attention before the project can proceed. These issues are addressed during the permitting stage, after the project has received its EA certificate, either through regulatory permitting procedures or, if non-statutory in nature, by other means that may be established in conditions of the EA Certificate.

Project Feasibility
The EA process does not investigate the internal financial or economic feasibility of mine developments. This is considered the mine proponent's responsibility. Thus, for such private sector investments, financial and economic feasibility information or conclusions in a pre-feasibility assessment are not required as part of an EA review and do not become part of the criteria used in making an EA certification decision. However, project proponents should confirm that the costs of meeting the conditions of an EA Certificate decision are fully understood and will be fully accounted for in final feasibility assessments, including the costs of closure and post-closure obligations.

Scope of Mine Project Assessment – Which Issues Require Assessment?

Issue Scoping Activities - The scope of assessment is determined on the basis of the issue scoping activities undertaken during the pre-application stage and is intended to be comprehensive, incorporating all potential significant effects, including cumulative environmental effects, which may reasonably be attributed to the project. The EAO is responsible for determining which issues are included in the scope of the assessment. The EA process relies on only one formal review stage, once an Application is filed, so it is important for the application to be as complete as possible. This is why the issue scoping step is important. If key issues are missed, and are not identified until the application review stage, this can cause significant delays.

Determining Relevant Potential Effects - The scope of the assessment focuses on effects for which a reasonably direct causal link can be demonstrated between some component of the project and the resulting effect. Relevant effects are usually (but not always) those for which the proponent has the ability to implement impact management measures to mitigate or eliminate the concern. Where a reasonably direct causal link cannot be established between a project and some aspect of the project setting, the EA process will not address the issue. For example, land use planning processes are better suited to addressing the perceived potential for changes in patterns of land use where the cause/effect linkage to the project is, at most, speculative, and where other parties, such as federal, provincial or local government agencies, manage the land or resource base, and therefore control decisions about future use.

Valued Environmental Components (VECs) –The Application will explain and justify methods used to predict potential adverse effects of the project on each valued environmental component (VEC). VECs will typically include biophysical, socio-economic, heritage and health components of the project setting.

The Application describes the general criteria used to identify VECs that may potentially be affected by the project, and the role of the proponent's preliminary baseline investigations and its consultations with other parties in identifying appropriate VECs.

Defining Spatial and Temporal Boundaries for Assessment Purposes
The spatial and temporal boundaries used in the assessment may vary as appropriate, depending on the VEC. Study area boundaries set in time and space are based on the zones of influence and timeframes outside of which the effects of the project are expected to be non-detectable. Both the Terms of Reference and the Application should clearly indicate the study area boundaries used for each component of the impact assessment, and should include an explanation of the rationale adopted for establishing study area boundaries. If boundaries are modified during the period between finalizing the Terms of Reference and completing the Application, the rationale should be explained in the Application.

Multiple study area boundaries may be employed, if necessary, to reflect the range of geographic areas and timeframes within which specific effects may be experienced. The proponent may be able to simplify the process of study area definition by identifying a limited number of primary study areas – for example, separate study areas for biophysical/environmental impacts, for socio-economic/community effects and for First Nations issues.

Spatial Boundaries – Spatial boundaries are identified using the following criteria:
- the physical extent of the proposed project, including any offsite facilities or activities;
- the extent of potential effects arising from the project;
- the extent of the aquatic and terrestrial ecosystems, economic systems, communities and First Nations interests potentially affected by the project; and
- the size, nature and location of past, present and reasonably foreseeable projects and activities which could interact with the project's own effects.

Temporal Boundaries – Project assessments should take into account the timeframes over which the effects originating from project development are anticipated to occur. Assessments need to encompass the effects for all phases of the project – construction, operations/modification, closure and post-closure (both short-term and long-term). In characterizing the effects of the project on its setting, the assessment should consider, as part of the baseline characterization, any trends in the study area without the project, including past projects and activities carried out by the proponent and/or others in the study area.

Content Requirement for Terms of Reference
Provide essentially the same information as is required for the Application, albeit the information is likely to be more preliminary in advance of completion of the baseline and impact assessment work:
- a listing of the issues and impact concerns identified through issue scoping;
- a discussion of the influence of consultations on the development of the issue list; and
- a description of the spatial and temporal study areas proposed for the baseline and assessment work.

Content Requirement for Application
The proponent should present the following information:

1. Scope of Assessment

- Itemize the issues and impact concerns (i.e. the potential environmental, social, economic, heritage, health effects and effects on First Nations interests, including aboriginal rights) which have been identified during the pre-application issue scoping phase.
  Note – Depending on how the Application is structured, it may be more logical to itemize the issues in conjunction with information from Section 5 (project setting and baseline studies) and

Section 6 (impact assessment) rather than as a stand-alone list (See Section 6, Alternative Structure #3).

- Within the general framework for setting the scope of the assessment, as outlined above, discuss the influence of consultations with the public, First Nations and government agencies on the scoping of issues to be addressed in Sections 5 through 7 of the Application. Consider use of a table format such as Table 2 to summarize the inputs of interested parties, and decisions on whether or not to include issues in the EA review.

2. Study Area Boundaries

- Describe and/or identify on maps of appropriate scale the geographical areas and timeframes used for documenting the baseline setting and assessing potential project impacts, including the potential effects on First Nations.

SECTION 5 - PROJECT SETTING AND BASELINE CHARACTERIZATION

This section presents a general description of the existing biophysical environment and the socio-economic/community, heritage/First Nations and public health settings of the project, including surrounding areas within the zone of potential influence of the project. (See discussion of study areas under Section 4.)

Content Requirement for Terms of Reference

Issues that have been identified through issue scoping and preliminary baseline research should be documented and should provide an overview of the additional baseline investigations it intends to conduct to lay the groundwork for assessing the interactions between the project setting and the various project components, and the associated impact potentials. The description of the proposed baseline studies should demonstrate that the studies will satisfy the baseline reporting expectations for the Application (outlined below).

Content Requirement for Application

1. Baseline Characterization of Project Setting

- This section should report on the baseline characteristics of all relevant components of the project setting – environmental, social, economic, health, heritage and traditional and current uses of the project area by First Nations – within the spatial and temporal study areas defined in the Terms of Reference, or as they may have been modified to take account of baseline and/or assessment findings.
- The description of the baseline setting needs to 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 project, and to adequately identify and characterize the beneficial effects of the project.
- This description should include the VECs that the proponent considers likely to be affected by the project. The location and distribution of these VECs should be indicated on maps or charts.
- Describe the nature and sensitivity of the area within, and surrounding, the project (based on the results of baseline studies) and any planned or existing land use in the area (including other tenures).
- Indicate the specific geographical areas or ecosystems that are of particular concern, and their relation to the broader regional setting and its ecosystems and economy (e.g. the contribution of the area to critical habitat, bird and fish population stocks, the presence of particular species, and species at risk in the region).

2. Documenting Changes in Baseline Conditions over Time

- Typically, baseline data in the form of inventories alone is not a sufficient basis for assessing effects. Include available historical data such as trends in population stocks and other baseline

parameters. Emphasis should be placed on those species, communities and processes identified as VECs.

- In providing baseline information on the biophysical setting, the Application should include data collected over a sufficient period of time to establish norms, trends, and extremes, to the extent that predictions can be made. The Application should comment on the quality and reliability of these data and their applicability for the purposes used, and should identify gaps, insufficiencies, and uncertainties.

SECTION 6 - ASSESSMENT OF PROJECT IMPACTS, MITIGATION REQUIREMENTS AND RESIDUAL EFFECTS

In this section, the proponent describes the potential environmental, social, economic, health and heritage effects of the project, proposed avoidance or mitigation measures for potential effects, and proposed impact management measures (such as compensation) where effects cannot be mitigated. This section also: (i) describes how the project EA was performed; (ii) notes which indicators and data sources were used to consider project effects; and (iii) discusses any identified residual effects of the project, and their significance. Supporting documents are referenced and, where practicable, attached as appendices to the Application.

Content Requirement for Terms of Reference

Outline the proposed impact assessment methodology, identify the project components which will be assessed at each phase of project development (construction, operations/maintenance, closure and post-closure), and commit to providing all the above-noted assessments expected in the Application.

Content Requirements for Application

This section should include the following, unless not applicable:

1. Effects Assessment – Project Construction

- For each project component, the 9-step process previously discussed should be used to describe and assess the effects of construction activities on relevant components of the project setting.
- For assessment of project impacts, relevant construction-phase activities, depending on the project, could be wide-ranging. As appropriate, information may be required with respect to:
  - estimated construction scheduling;
  - delivery of heavy equipment;
  - temporary storage of construction equipment and materials;
  - hazardous and dangerous goods storage areas;
  - camps for construction workforce;
  - construction of permanent and temporary buildings/structures/facilities (e.g. office, warehouse and maintenance buildings);
  - installation of temporary and/or permanent power/gas/water/sewage and other waste treatment systems;
  - surveying and siting operations;
  - drilling, stripping of vegetation, and clearing and grubbing;
  - topsoil and overburden storage (location and dimensions);
  - blasting (handling procedures, frequency and size, pre-blast surveys, weather considerations);
  - construction/modification of access roads and internal on-site roads;
  - temporary construction traffic arrangements;
  - construction of parking lots;
  - dams, watercourse crossings and diversions, including wetland alteration;
  - dewatering or drawing down of water bodies prior to dam construction (e.g. timing, water quality, rate of water release, associated works, etc.);
  - excavation, transport and placement of soils in dam construction;

- erosion and sedimentation control measures;
- pilot testing of facilities; and
- risk management (e.g., contingency plans for uncontrolled release of substances, emergency response plans, etc.).

2. Effects Assessment – Project Operations and Maintenance

- For each project component, the 9-step process previously listed should be used to describe and assess the effects of operations/maintenance activities on relevant components of the project setting.
- For impact assessment purposes, relevant operations/maintenance phase activities for a project could also be wide-ranging, and could include:
  - mining plans, including year-by-year scheduling and annual average and maximum production rates;
  - explosives factory (manufacturing) and magazine (storage) facilities;
  - drilling and blasting (handling procedures, frequency and size, pre-blast surveys, weather considerations);
  - mining process, including pit design, explosives use, equipment, schedule and dewatering;
  - metallurgy and processing, including crushing, grinding/flotation circuit, reagent use;
  - water management plan for the mill, tailings facility and camp, and all mine development areas (i.e. pits, waste dump and stockpiles), including detailed water budget, covering effluent treatment, water recycling and dewatering activities;
  - preliminary wastewater treatment plans for control of any suspended solids, acidity, heavy metals and sulphate, off-site runoff, tailings supernatant, and seepage from dams or waste rock dumps;
  - waste rock management plan based on the material characterization work used to determine metal leaching/acid rock drainage potential, and with description of placement methods for sub-aerial and underwater disposal;
  - tailings management plan, based on geochemical characterization work, and supported by relevant information on dam design, seepage control, diversions operations and supernatant quality;
  - hazardous waste listing, handling, storage and disposal, including management of blasting chemicals/residues;
  - non-hazardous waste (other than waste rock and tailings) handling and disposal;
  - operation of operating workforce facilities and services (e.g. accommodation, food and health/safety services, etc.);
  - sewage and grey water treatment and disposal;
  - on-site or off-site operation of water supply, electrical generation and other utilities;
  - stockpiling of materials;
  - hazardous and dangerous goods use and waste dangerous goods management;
  - transportation (purpose [e.g. worker commute, concentrate movements, etc.], modes, routes, load size and frequency);
  - environmental controls for noise and dust;
  - maintenance activities linked to operations; and
  - risk management (contingency plans for uncontrolled release of substances, emergency response plans, etc.).

3. Effects Assessment – Project Decommissioning

- The 9-step process previously listed should be used to describe and assess the effects of decommissioning activities (e.g. dismantling of structures, site reclamation, etc.) on relevant components of the project setting.
- Describe the decommissioning phase of the mine development, including a conceptual-level decommissioning and reclamation plan which sets out:

- an overview of the proposed reclamation plan, by phase, timing and duration;
- plans for progressive reclamation, as mining advances;
- plans for permanent decommissioning of the mine (removal of equipment and structures);
- details of the long-term management of any dams and other structures;
- the long-term objectives for future use of the property following decommissioning (e.g. end land use objectives); and
- any other post closure plans and obligations.

- Evaluate the reclamation plan in terms of its probable effectiveness, assessing risks of failure and the magnitude of any environmental effects associated with the failure of the plan to achieve its objectives.
- Any potential for failures of long-term dam structures should be assessed, together with the excepted implications for public health, the environment and property in the event of a failure, and suggested remediation approaches.
- Provide an overview of the key site reclamation options which were considered and explain the rationale for selecting some and rejecting others.
- The plan should identify responsibilities for implementing site reclamation measures, and the system for accountability, including the respective obligations of the proponent and contractors, both during operations and after mine closure.

4. Potential Project Effects on First Nations

- Identify the potential effects of the project that could directly affect First Nations at any phase of project development – during construction, operations or, where relevant, decommissioning. More specifically, it should:
  - identify and describe those First Nations components of the project setting that will be, or could be, affected by project development;
  - summarize impact assessment findings, indicating the potential impacts identified; and
  - document any relevant non-confidential agreements with First Nations (e.g. any benefits agreement).

    Note - As part of this summary, the Application should address all potential effects on First Nations, and indicate how the proponent proposes to manage these effects to reduce them to acceptable levels.

Relevant CEAA Information Requirements

If a project is subject to a joint federal/provincial review, the Application will include the following additional information, as required under the CEAA. The following component is only required if the project is a comprehensive study under the CEAA: sustainability.

5. Accidents and Malfunctions

- Identify the potential for accidents or malfunctions which could lead to environmental impacts, and their likely potential effects on the environment or local community settings.
- Document any proposed mitigation measures or contingency plans.
- Commit to putting in place an EMP in time for project start-up that would address potential accidents and malfunctions.

  Note - The EMP should be described at a preliminary level, indicating general approaches (See Section 7.)

6. Effects of the Environment on the Project

- If climatic factors (e.g. global warming or extreme weather events) are relevant to project success, assess the potential for short-term and/or long-term climatic fluctuations at the project site, estimate the significance of those fluctuations for the project, and indicate any measures proposed to mitigate these effects.

- Describe the potential effects of extreme events such as avalanches, landslides, debris flows, ice storms, fires, floods and earthquakes directly on the project, and indicate any measures proposed to mitigate these effects.

7. Cumulative Environmental Effects

- Report the findings of a CEE assessment, conducted for identified residual effects.
  Note - Various guidelines provide advice on these assessments, for example, the Cumulative Effects Assessment Practitioners Guide, prepared for the CEA Agency. Consultations with the CEA Agency and responsible authorities are also recommended.

8. Effects on Navigable Waters

- Identify the impacts of the project on use of navigable waters and the options for mitigating any obstruction to navigability. Whether a water body is navigable is defined by Transport Canada under the *Navigable Waters Protection Act*. A water body may be deemed navigable if it will allow the passage of a canoe during most times of the year.

9. Sustainability

- Identify those renewable resources that may be significantly affected by the project and describe how their capacity to meet the needs of the present and those of the future will be impacted. This should include identification of the criteria used to determine whether sustainability may be affected.

Summary of Assessment for both BCEAA and CEAA

10. Summary of Project Impacts and Mitigation Measures

- Summarize impact assessment findings, including:
  - the potential environmental, socio-economic, human health and heritage impacts;
  - the potential effects on First Nations;
  - measures proposed to reduce these effects to acceptable levels;
  - the potential for residual effects, taking into account proposed mitigation measures; and
  - the significance of those residual effects.
- Include the results of the CEE assessment conducted on any residual effects.
- Estimate the significance levels of residual impacts after impact management measures have been applied and consider using summary formats such as Tables 4 and 5 to help communicate the findings.

11. Summary of Commitments

- Include a summary table or listing of proposed impact management commitments which have been made at different points in the EA Application, including timing of the actions and who will address each action.
- Include all of the significant impact management commitments in the EA Application, including commitments to any standard as well as special management practices and design features, and should be organized by impact topic.

FIRST NATIONS CONSIDERATIONS SECTION (optional separate section)

If requested by First Nations, information relative to First Nations should be presented in one section of the Application instead of identifying First Nations information as a sub-section of each major section. For completeness, and where it makes sense to do so, the proponent may also wish to discuss First Nations' issues and perspectives as part of other broader discussions.

Content Requirement for Terms of Reference

If possible, indicate the manner in which the proponent intends to report First Nations information in the Application.

Content Requirement for Application
Where the proponent consolidates all First Nations information into one section, ensure it includes the following:

- identification of local First Nations potentially affected by the proposed project;
- consultations with First Nations;
- First Nations considerations – study area(s);
- project setting – traditional use and aboriginal title or treaty right issues in vicinity of project;
- project setting – archaeological resources;
- project setting – social, community and economic considerations;
- potential project effects on First Nations interests;
- environmental management plans related to First Nations issues; and
- commitments to First Nations.

Note: The proponent is not required to provide information that, by arrangement with First Nations, is to be treated as confidential.

SECTION 7 - ENVIRONMENTAL MANAGEMENT SYSTEM
The Environmental Management System (EMS) provides a consistent approach to environmental management through resource allocation, the assignment of responsibilities, and ongoing evaluation of environmental practices, procedures and processes. EMS is part of the overall corporate management system which includes organizational structure, planning activities, staff responsibilities, practices, procedures and resources for developing, implementing, reviewing and maintaining environmental policies associated with a project. It is finalized in discussions with relevant permitting agencies before starting construction of the project.

Environmental Management Plans (EMPs) provide a framework for a proponent to address environmental concerns in an orderly and consistent manner through the allocation of resources, assignment of responsibilities, and ongoing evaluation of practices, procedures and processes. They set out in step-by-step detail the mitigation, monitoring and other measures to be implemented by the mine proponent (including all contractors, sub-contractors and employees) during each project phase to manage or avoid adverse effects. EMPs typically define roles and responsibilities for the implementation of the plan, the monitoring of results, and the reporting and review of the plan's implementation and success. Monitoring plans may specify the key parameters that need to be monitored, sampling requirements (e.g. methods, locations, frequency) and analytical procedures, impact management procedures and/or contingency plans to respond to issues and unforeseen impacts during the various mine phases, and appropriate arrangements for liaison and consultation between the proponent, contractors, government, First Nations and the public.

Some of the objectives of an EMP are:

- to provide a mechanism to track the success of environmental management measures and to determine whether the compliance levels set in the EA Certificate and subsequent permits are appropriate and effective;
- to provide government agencies, First Nations and the public with assurance that detailed design elements of the project which were not addressed during the EA process will incorporate appropriate environmental management measures;
- to integrate all environmental management activities (e.g. monitoring programs and mitigation measures) into a coordinated approach;

- to set out the details of contingency plans to be implemented within an adaptive management framework if the monitoring and evaluation determine the need for further mitigating measures; and
- to provide a vehicle to assist government to meet its commitment to act as the steward of public resources in partnership with the proponent.

During the EA review, a preliminary level of information on the proponent's proposed EMPs is expected in the Application as part of the description of the proposed EMS. Developing the final details of EMPs can be left to the post-EA stage because EMP procedures tend to be relatively routine and their detailed contents do not usually raise issues which cast doubt on whether or not a mine development should proceed. However, providing for EMPs does not obviate the need to conduct impact assessments on key issues for the Application.

Content Requirement for Terms of Reference
The proponent should commit to provide the information listed below in the Application.

Content Requirement for Application
The proponent should provide the following within the context of an EMS:

1. Environmental Management Plans (EMP)

- Provide an overview of EMPs proposed for the construction, operations/maintenance and, if relevant, decommissioning phases of the project. For example, individual or more aggregated EMPs addressing the following topics may be appropriate:
  - tailings impoundment operating plan;
  - materials handling plan;
  - acid rock drainage and water quality management plan;
  - water management, surface water quality and sediment control plans;
  - fish and fish habitat mitigation, and compensation plan;
  - wildlife/vegetation management/monitoring plan;
  - water quality/quantity monitoring plan;
  - contaminated sites management plan;
  - environmental effects monitoring program;
  - hazardous materials handling plan;
  - air quality and dust control management plan;
  - spill contingency and emergency response plan or accidents and malfunctions plan;
  - industrial, domestic and construction waste management plans;
  - *Metal Mining Effluent Regulations* environmental effects monitoring (EEM) plan[2];
  - construction plan, including provision for environmental supervision;
  - geotechnical stability monitoring plan for excavations, waste disposal sites and water management facilities;
  - traffic management plan;
  - reclamation and closure plan; and
  - others, if need identified with regulatory agencies.
- Based on discussions with relevant First Nations, identify any EMPs or other mitigation tools that can be used to minimize potential effects on First Nations. Describe how archaeological and other First Nations issues will be monitored during project construction, and outline any process for handling issues that may arise (e.g. stop work plans, modification of design). EMPs specific to First Nations concerns could include:

[2] Environmental Effects Monitoring (EEM) Program under MMER comprises a series of written plans outlining the scope of environmental monitoring required to meet the regulations requirements. Monitoring results are used for both regulations compliance reporting as well as to adjust the EMS as required to further reduce project impacts where feasible.

- archaeological sites management plan;
- traditional use monitoring plan; and
- others, if need identified.

Relevant CEAA Information Requirements
The following component is only required if the project is a comprehensive study under the CEAA:

2. Follow-up Program

- Describe the follow-up program to be implemented to verify the accuracy of the assessment of the project and determine the effectiveness of mitigation measures.
- Include consideration of:
  - the potential need for a follow-up program, approach, objectives and proposed methodologies;
  - how it will be structured, including enforcement and penalties for non-compliance;
  - which elements of the EMP would be incorporated;
  - the roles to be played by the proponent, regulatory agencies, and others in such a program;
  - possible involvement of independent researchers;
  - the sources of funding for the programs; and
  - reporting.

SECTION 8 – CONCLUSION
This section presents a clear conclusion from the project impact assessment, cross-referencing the findings from Section 6 of this outline.

Content Requirement for Terms of Reference
The proponent should commit to identifying in the Application one of the conclusions noted below, based on the analysis under Section 6 of this outline.

Content Requirement for Application
The proponent should identify one of the following conclusions, based on the analysis under Section 6:

1. The project is not likely to cause significant adverse environmental, socio-economic/community, First Nations or other effects, taking into account the implementation of appropriate impact management measures and summarized in the table or listing of proposed commitments; or
2. The project is likely to cause significant adverse environmental, socio-economic/community, First Nations or other effects, even taking into account the implementation of appropriate impact management measures and summarized in the table or listing of proposed commitments; or
3. It is uncertain at the time of the review whether or not the project is likely to cause significant adverse environmental, socio-economic/community, First Nations or other effects, taking into account the implementation of appropriate impact management measures and summarized in the table or listing of proposed commitments.

Proponents are reminded that, if the project is subject to a CEAA review, it is the Responsible Authority (RA) who makes the final determination on significance and this should be stated in this section of the Application.

SECTION 9 - REFERENCES AND SUPPORTING DOCUMENTATION
This section itemizes reference documents and other information sources cited in the Application.

Content Requirement for Terms of Reference
The proponent should commit to providing the below noted information in the Application

Note - The Terms of Reference may require their own References and Supporting Documentation section, identifying references used, relevant records, list of enclosures, etc.

Content Requirement for Application
The following should be provided:

- A listing of the full reference information for cited sources;
- Documentation with respect to referenced consultations with the public, First Nations and government agencies;
- Records of meetings and discussion topics, including any relevant agreements with government review agencies and First Nations prior to filing the Application; and
- List of all enclosures (such as appendices) included with the Application.

APPENDIX A

PROVINCIAL THRESHOLDS FOR REVIEWABLE MINE PROJECTS

PREAMBLE AND DISCLAIMER

Proposed mine developments are automatically reviewable under BCEAA if they equal or exceed the thresholds for mine developments set out in Part 3, Table 6 of the *Reviewable Projects Regulation*. This Appendix outlines the thresholds in simple terms for the benefit of the readers of this guide, but in the event of a difference of interpretation between this Appendix and the provisions of the *Reviewable Projects Regulation*, the provisions in the Regulation prevail.

KEY GENERAL PURPOSE DEFINITIONS IN REGULATION

Key definitions in the *Reviewable Projects Regulation* which are of general application to the mining category of projects are as follows:

- *mine* – means a mine within the meaning of the *Mines Act*, so that a project must be subject to regulation under the *Mines Act* to be considered a mining development under the Regulation.
- *land previously permitted for disturbance* – this phrase refers to land that has been, or will be, disturbed by mining activities approved under a *Mines Act* permit or another permit already issued as part of a previous mine approval.

Reviewability thresholds for the different types of mines are summarized below.

COAL MINES

Key Definitions:

- *clean coal* - coal that requires processing in a coal preparation plant before it is transported from the minesite for marketing or testing.
- *raw coal* - coal that does not require processing in a coal preparation plant before it is transported from the minesite for marketing or testing.

New Coal Mine:

- Reviewable if, when developed, its production capacity will be at least 250 000 tonnes per year of clean coal or raw coal or both combined.

Coal Mine Modification:

- Reviewable if TWO criteria are both met:
  1. The existing operation has a production capacity of at least 250 000 tonnes per year of clean coal or raw coal or both combined; AND
  2. The modification will result in either of the following areas of disturbance of land not previously permitted for mining-related disturbance:
     - EITHER an area of at least 750 hectares,
     - OR an area that is at least 50% of the area of land previously permitted for disturbance at the existing mine.

MINERAL MINES

***Key Definitions*:**

- *mineral mine* - A mine where a mineral, as defined in the *Mineral Tenure Act,* is mined or could be mined. The definition explicitly DOES NOT INCLUDE industrial minerals listed in Appendix 3 of the *Reviewable Projects Regulation,* thus restricting the scope of the definition of 'mineral mine' primarily to base and/or precious metals mining.
-

New Mineral Mine:

- Reviewable if, during operation, its production capacity will be at least 75 000 tonnes per year of mineral ore.

Mineral Mine Modification

- Reviewable if TWO criteria will both be met:
  1. The existing operation has a production capacity of at least 75 000 tonnes per year of mineral ore; AND
  2. The modification will result in either of the following amounts of disturbance of land not previously permitted for mining-related disturbance:
     - EITHER an area of at least 750 hectares,
     - OR an area that is at least 50% of the area of land previously permitted for disturbance at the existing mine.

SAND AND GRAVEL PITS

New Sand or Gravel Pit:

- Reviewable if, during operation, its production capacity for excavated sand, gravel or both combined will equal or exceed AT LEAST ONE of the following thresholds:
  1. EITHER at least 500 000 tonnes per year during at least one year of its operation,
  2. OR, over a period of not more than 4 years of operation, at least 1 000 000 tonnes in total.

Sand or Gravel Pit Modification:

- Reviewable if TWO criteria will both be met:
  1. the existing operation has a production capacity for excavated sand, gravel, or both combined that already equals or exceeds AT LEAST ONE of the following thresholds:
     - EITHER at least 500 000 tonnes per year during one year of operation,
     - OR, over a period of not more than 4 years of operation, at least 1 000 000 tonnes in total, AND
  2. the modification will result in disturbance of land not previously permitted for mining-related disturbance that is at least 35% of the area of land previously permitted for disturbance at the existing operations.

PLACER MINERAL MINES

***Key Definitions*:**

- *placer mineral mine* - a mine where a placer mineral, as defined in the *Mineral Tenure Act*, is mined, or could be mined.
- *pay-dirt* - mined placer gravel that is processed, or could be processed, in a sluice box, wash plant or other device for extracting precious metals.

New Placer Mineral Mine:

- Reviewable if, during operations, it will have a production capacity of at least 500 000 tonnes per year of pay-dirt.

Placer Mineral Mine Modification:

- Reviewable if TWO criteria will both be met:
  - the existing operation has a production capacity of at least 500 000 tonnes per year of pay-dirt, AND
  - the modification will result in disturbance of land not previously permitted for mining-related disturbance that is at least 35% of the area of land previously permitted for disturbance at the existing mine.

CONSTRUCTION STONE AND INDUSTRIAL MINERAL QUARRIES

***Key Definition*:**

- *industrial minerals* – are those minerals listed in Appendix 3 of the *Reviewable Projects Regulation*. Other minerals within the meaning of the *Mineral Tenure Act* fall within the mineral mining category.

New Construction Stone or Industrial Mineral Quarry:

- Reviewable if it satisfies all of the following THREE criteria:
  - it involves removal of construction stone or industrial minerals or both, AND
  - it is regulated as a mine under the *Mines Act*, AND
  - during operations, it will have a production capacity of at least 250 000 tonnes per year of quarried product.

Construction Stone or Industrial Mineral Quarry Modification:

- Reviewable if TWO criteria are met:
  - The existing operation entails removal of construction stone or industrial minerals or both, is regulated as a mine under the *Mines Act*, and has a production capacity of at least 250 000 tonnes per year of quarried product; AND
  - The modification will result in either of the following amounts of disturbance of land not previously permitted for mining-related disturbance:
    - EITHER an area of at least 750 hectares,
    - OR an area that is at least 50% of the area of land previously permitted for disturbance at the existing mine.

OFF-SHORE MINES

***Key Definitions*:**

- *off-shore mine* - a platform, artificial island or other physical work or structure, including any associated facilities, that is, or will be, used for the exploration for, or production of, a mineable substance from the foreshore or submerged land along a marine coastline, or from an off-shore site located in salt water.
- *foreshore* – land in tidal or non-tidal areas that, as a result of the rise and fall of the sea or water in an estuary or stream between the natural boundary and the ordinary low water mark, is periodically covered by salt water or fresh water and periodically exposed. For off-shore mines, the definition is relevant only to marine settings.
- *submerged land* - land that lies below the ordinary low water mark of a stream, marine coast line or estuary, and that is normally covered by salt water or fresh water. For off-shore mines, the definition is relevant only to marine settings.

New Off-shore Mine:

- Any new off-shore mine facility.

Off-shore Mine Modification

- Any modification of an existing off-shore mine where the EAO's Executive Director has determined that the modification has the potential to result in a significant adverse environmental, economic, social, heritage or health effect.

SPECIFIED EXCLUSIONS

In order to ensure that a prospective mine development is not subject to BCEAA under certain other project categories thresholds when it is not reviewable as a mine project, the following exclusions are provided for in the *Reviewable Projects Regulation*.

Primary Metals Industry:

- If refining processes, precious metal distillate processes or ore roasting processes are integrated with ore milling operations at, or in the vicinity of, a minesite, and are dedicated to the mining operations at the minesite, those processes are not reviewable under the Primary Metals Industry category of projects itemized in Part 2, Table 2 of the Regulation.

Dams:

- A tailings impoundment constructed and operated solely to serve a single mine is not reviewable under the Water Management Projects – Dams category of projects itemized in Part 5, Table 9 of the Regulation.

Water Diversions:

- Works that are intended solely for a tailings pond constructed and operated to serve a single mine are not potentially reviewable under the Water Management Projects – Water Diversion Projects category of projects itemized in Part 5, Table 9 of the Regulation.

GRAND-PARENTING PROVISIONS

A mine project which is of reviewable size (i.e. which meets or exceeds a mine project threshold set in the *Reviewable Projects Regulation*) is grand-parented from being subject to BCEAA if:

- EITHER it was not a reviewable project before the current BCEAA came into force on December 30, 2002 AND it was substantially stated by that date;
- OR it was not a reviewable project before the current BCEAA came into force on December 30, 2002 and was NOT substantially stated by that date, BUT both of the following conditions set out in the *Transition Regulation* are satisfied:
  - a permit was granted under section 10 or section 11 of the *Mines Act* before the current BCEAA came into force on December 30, 2002, and
  - that permit remained in good standing as of that date.

Grand-parenting only applies to the mining activities approved under the pre-existing permit. If a mine operator applies to amend its *Mines Act* permit at any time after the current BCEAA came into effect, the proposed changes to previously approved mining plans would be reviewable under BCEAA if they meet or exceed the mine project thresholds.

APPENDIX B

COMPREHENSIVE STUDY LIST THRESHOLDS FOR PROPOSED MINE PROJECTS UNDER THE *CANADIAN ENVIRONMENTAL ASSESSMENT ACT*

PREAMBLE AND DISCLAIMER

The thresholds set for a mine project to be subject to at least a Comprehensive Study level of assessment under the *Canadian Environmental Assessment Act* (CEAA) are itemized in Part V of the *Comprehensive Study List Regulations* (Minerals and Mineral Processing). This Appendix outlines the thresholds in simple terms for the benefit of the readers of this guide, but in the event of a difference of interpretation between this Appendix and the provisions of the Regulations, the provisions in the Regulations prevail.

METAL MINES AND MILLS

Comprehensive Study thresholds for metal mines and milling facilities are set as follows:

- The proposed construction, decommissioning or abandonment of:
  - a metal mine, other than a gold mine, with an ore production capacity of at least 3,000 tonnes per day;
  - a metal mill with an ore input capacity of at least 4,000 tonnes per day; or
  - a gold mine, other than a placer gold mine, with an ore production capacity of at least 600 tonnes per day.
- The proposed expansion of:
  - an existing metal mine, other than a gold mine, that would result in an increase in its ore production capacity of at least 50%, or at least 1,500 tonnes per day, if either increase would raise the total ore production capacity to at least 3,000 tonnes per day or more;
  - an existing metal mill that would result in an increase in its ore input capacity of at least 50%, or at least 2,000 tonnes per day, if either increase would raise the total ore input capacity to at least 4,000 tonnes per day;
  - an existing gold mine, other than a placer gold mine, that would result in an increase in its ore production capacity of at least 50%, or at least 300 tonnes per day, if either increase would raise the total ore production capacity to at least 600 tonnes per day;

COAL MINES

Comprehensive Study thresholds for coal mines are set as follows:

- The proposed construction, decommissioning or abandonment of:
  - a coal mine with a coal production capacity of at least 3,000 tonnes per day.
- The proposed expansion of
  - an existing coal mine that would result in an increase in its coal production capacity of at least 50%, or at least 1,500 tonnes per day, if either increase would raise the total coal production capacity to at least 3,000 tonnes per day.

OTHER MINES TYPES IN BC

Comprehensive Study thresholds for various types of mines which are currently found in BC, or which have been operated in BC historically, are set as follows:

- The proposed construction, decommissioning or abandonment of:
  - an asbestos mine;
  - a graphite mine with a production capacity of at least 1,500 tonnes per day;
  - a gypsum mine with a production capacity of at least 4,000 tonnes per day;
  - a magnesite mine with a production capacity of at least 1,500 tonnes per day;
  - a limestone mine with a production capacity of at last 12,000 tonnes per day;
  - a clay mine with a production capacity of at least 20,000 tonnes per day; and
  - a stone quarry or gravel or sand pit with a production capacity of at least 1,000,000 tonnes per year.
- An expansion of any of the foregoing types of mine that would result in an increase in production capacity of more than 35%.

TYPES OF MINES CURRENTLY NOT FOUND IN BC

Comprehensive Study thresholds are also set for various types of mines which are not currently found in BC, and which have not been operated in BC in the past:

- The proposed construction, decommissioning or abandonment of:
  - a potash mine with a potassium chloride production capacity of 1,000 tonnes per day.
- The proposed expansion of
  - an existing potash mine that would result in an increase in its potassium chloride production capacity of at least 50%, or at least 500,000 tonnes per year, if either increase would raise the total potassium chloride production capacity to at least 1,000,000 tonnes per year.
- The proposed construction, decommissioning or abandonment of:
  - a salt mine with a brine production capacity of at least 4,000 tonnes per day;
  - an underground salt mine with a production capacity of at least 20,000 tonnes per day; and
  - a metal mine located offshore or on the ocean bed.
- or an expansion of any of these mine types that would result in an increase in production capacity of more than 35%.

APPENDIX C

CHECKLIST OF BASELINE DATA NEEDS

Appendix C indicates in general terms the characteristic technical/biophysical and socio-economic/cultural/heritage/health issues raised by mine projects, the type of baseline investigations undertaken and potential Valued Environmental Components (VECs). The list is not intended to be exhaustive, but should function as a primer to assist mine proponents in identifying, assessing and managing potential project effects.

Component of Project Setting	Baseline Research	Potential VECs
TECHNICAL AND BIOPHYSICAL		
Aquatic Environment and Surface Hydrology		
• **Surface Hydrology**	Information on surface hydrological regimes, including quantified estimates of baseline flow regimes and proposed extraction volumes to supply surface water to the project, if planned.	Water supply for aquatic life and downstream users.
• **Surface Water Quality**	Baseline water quality information on surface water quality (e.g. for dissolved metals, suspended solids, organics, etc.); identification of data sources including data collection, analysis and reporting methods.	Water quality for downstream users.
• **Aquatic Habitats**	Documentation of wetlands, ponds, streams, lakes, rivers, and/or marine environments within the zone of influence for the project. Document aquatic species habitat and species use on based on annual cycles of use.	Streams, lakes, wetlands, water quality.
• **Aquatic Fauna**	Description of existing fisheries and fish habitat in the area; description of other aquatic life, such as benthic invertebrates and periphyton; identification of data sources, including data collection methods.	Fish species, amphibians, benthos, red and blue listed species.
• **Aquatic Vegetation**	Baseline information on aquatic vegetation; identification of data sources, including data collection methods.	
Geophysical Environment		
• **Physiography and Topography**	Description of regional/area setting and identification of key terrain features, including mountains, rivers, lakes etc.	Identified important topographical features.
• **Soils and Geology**	General geotechnical/soils/stability information for the project area, including soil classification and information on erosion potential, as required.	
• **Hydrogeology and Groundwater**	Overview of hydrogeology, groundwater flow regimes and groundwater quality, including quantified estimates of baseline flow regimes and proposed extraction volumes to supply groundwater to the project, if planned.	Community groundwater supply and quality.
• **Natural Hazards**	Background information on seismology and earthquake potential, landslides and debris flow potential, flood potential and other possible natural hazards.	
Atmospheric Environment		
• **Climate**	Description of the prevailing climate, and identification of data sources, including recording stations, used for characterizing baseline conditions.	
• **Wind**	Description of predominant wind conditions, including direction, velocity and seasonal variations; present wind roses, if possible.	
• **Precipitation**	Data on area precipitation, including volume and frequency.	

Component of Project Setting	Baseline Research	Potential VECs
• **Air Quality**	If possible, definition of air shed boundaries; background on existing ambient conditions and emissions loadings at the project site (if available); any baseline monitoring data required for project assessment.	Community/ Air Quality.
Terrestrial Environment and Wildlife		
• **Biophysical Information/Vegetation**	Terrestrial Ecosystem Mapping or other acceptable biophysical/vegetation mapping to form a framework for assessment of ecosystem impacts; other available ecosystem information; identification of data sources including data collection, analysis and reporting methods.	
• **Wildlife**	Description of existing terrestrial wildlife populations and wildlife habitat in the area; documentation of inventories and wildlife capability ratings based on habitat mapping (e.g. for mammals, amphibians, reptiles, birds etc.); identification of data sources, including data collection, analysis and reporting methods.	Identified important wildlife species such as elk, moose, deer, grizzly bear, sheep caribou, carnivores, raptors etc.
• **Threatened and Endangered Species**	Identification of red-listed and blue-listed wildlife or vegetation species that may be present in the zone of the project influence; identification of any COSEWIC-listed species and documentation of the associated requirements under the federal *Species at Risk Act* (SARA).	Red and Blue Listed species COSEWIC, SARA Species.
Land Use Context		
• **Land Use Regime**	Description of the current land use context, the prevailing land use regime, all federal, provincial and local government land use designations, and identification of any current or proposed planning initiatives.	
• **Current Land Status/Use**	Documentation of land status in the area; identification and description of current land uses (e.g. hunting, trapping, logging, preservation, urban, etc.); identification of any historic sites or special landscape features.	
• **Aesthetics**	Where key aesthetic landscape values may be impacted, baseline visual quality data may be required.	Visual landscape.
• **Proposed Land Use**	Clear indication of the spatial relationship between the proposed project and existing land status and use, including onsite and offsite facilities, and activities associated with the proposed facilities.	
• **Land Acquisition**	Crown land requirements for the project (if any), and any private land acquisition needs, noting if any Crown land is to be converted to fee simple.	
SOCIO-ECONOMIC, CULTURAL, HERITAGE AND HEALTH		
Socio-Community Conditions		
• **Socio-Community Profile and Population Demographics**	Documentation of existing population distribution, demographics and social profile in the zone of project influence.	Sustainable communities and populations.
• **Housing**	Description of the existing housing and accommodation supply – level of details depends on the project's need for accommodation.	
• **Transportation**	Description of existing transportation infrastructure and traffic patterns/volumes; identification of relevant existing pedestrian use/safety issues – level of detail depends on demands that the project will place on transportation systems.	
• **Services**	Brief description of existing services, such as such as education, justice, policing, fire protection and social support services (children/family, counseling, etc.) and emergency services in the zone of influence of the project – level o f detail depends on demands that the project will place on services.	

Component of Project Setting	Baseline Research	Potential VECs
Socio-Economic Conditions		
• **Local and Regional Economy**	Description of the local and regional economy, including economic profile; description of conditions in communities likely to be impacted by the project; summary of key economic indicators and trends in the region in the absence of the project.	Maintenance, enhancement of a local sustainable economy.
• **Labour Supply**	Labour market information (unemployment, labour supply, skills/training needs, etc.).	Maintenance of a stable and sustainable workforce at the local and regional level.
• **Businesses**	Documentation of existing economic undertakings in the area which could be affected by project development.	Maintenance of a sustainable business climate at the local and regional level.
Public Health		
• **Health Profile**	Description of the public health setting; identification of existing hospitals, clinics, ambulance stations, other emergency services, etc. - level of detail depends on demands that the project will place on services.	
• **Public Health Parameters**	Description of baseline factors affecting public health setting of the project, including existing noise levels, local landscape aesthetics, existing water, existing water quality and air quality (from a human health perspective), and existing services (e.g. water supply, waste disposal, health and emergency services).	Sustainable public health system.
Navigable Waters Issues		
• **Waterways**	Identification of waterways to be affected by the project, waterway dimensions at the points of crossing, and identification and relative position of any man-made or natural obstructions that block a waterway, and any known current or past usage of waterways.	
• **Photos**	Photographs of any proposed crossing sites – giving the dates those photographs were taken.	
• **GPS Position**	Indication of GPS position of proposed crossing points or fill locations (if any).	
• **Design Parameters**	The design flood level for structures crossing a waterway, including telephone wires, power transmission lines and bridges etc. needs to be discussed with Navigable Waters, Protection Division, Transport Canada.	Sustainable navigation access.
First Nation Setting		
• **Identification of Potentially Affected First Nations**	Identification of First Nations potentially affected by the proposed project, and their asserted traditional territories.	
• **Socioeconomic/Community Parameters**	Local and regional socio-economic, socio-community and public health profile, as required above, focused on the communities of First Nations whose traditional territory contains or is in the vicinity of the project.	Sustainable Aboriginal community socioeconomic well-being.
• **Social and Health Issues** A variety of project-related impacts, both negative and positive, have the potential to affect First Nations social and community stability and aspirations:		Sustainable aboriginal community health.
• **Economic Issues** First Nations often approach project reviews from the perspective of their potential economic interests in a project, and may view development of benefit agreements as an integral part of doing business. Issues identified by First Nations for consideration may include any of the following:	Number of jobs for which First Nations people are eligible and qualified. Training opportunities for First Nations workers. Potential income levels for First Nations workers. Lease arrangements on Indian Reserve land. Potential economic returns to aboriginal communities; obstacles to the flow through of those benefits, and mechanisms to overcome those obstacles.	

Component of Project Setting	Baseline Research	Potential VECs
	Potentially improved services to aboriginal communities in the vicinity of the project (e.g., improved ground or air access, subsidized power, health or other service provision, etc.). Opportunities to enter into supply and/or service contracts with mine operators, etc. Proponent's hiring and employment equity practices. Number of First Nations people potentially unable to continue traditional fishing, hunting and trapping activities in the area as a result of the project. Existing First Nations tourism and other business activities which could be affected. Loss of land use, foreshore use, or mineral use opportunities. Impacts on current First Nations food sources, including food which functions as an income source for the community.	
• **Environmental Issues** Given the typically close connection of First Nations to the natural environment in which they live, from both a livelihood and cultural/spiritual perspectives, issues such as those outlined to the right may be raised	See Environmental section above.	See above. Also those important VEC/s identified by First Nations.
• **Traditional Use**	Non-confidential overview of traditional use of the project area lands and resources, and the associated contemporary and traditional First Nations economy.	
• **Cultural and Archaeological Parameters** Given the importance of cultural and heritage resources to the long-term preservation and enhancement of First Nations cultures.	Potentially affected archaeological sites of interest to First Nations people. Designated First Nations cultural sites. Documented but undesignated sites. Sacred and secret sites (e.g., ritual bathing pools). Undocumented aboriginal cultural sites with no permanent physical presence (e.g., sites of temporary activities such as short-term berry picking). Means of identifying sites unrecorded on current maps. Other considerations, such as culturally modified trees, rock paintings, trails, legendary land features, wildlife and vegetation species of special significance to First Nations, and non-confidential summary of identified archaeological resources in the project area	Identified cultural and archaeological sites.
• **First Nations Rights and Land Use Planning**	Documentation of known First Nations views on the existence of Aboriginal rights and title in the vicinity of the project, and identification of any First Nations land use plans or planning objectives proposed for the areas in the vicinity of the project.	

APPENDIX D – SUGGESTED TABLE FORMATS

TABLE 1
SUMMARIZING POTENTIAL ISSUES BY PROJECT COMPONENT AND VALUED ENVIRONMENTAL COMPONENT (OR OTHER FOCAL PARAMETER)

Project Component	Relevant Key issues	Relevant VEC(s) or Other Focal Parameter(s)	Rationale
Open pit mine/UG mine, quarry, pit			
Mill, processing facilities			
Access road	Wildlife habitat availability Movement disruptions Mortality	Specified wildlife species (e.g. moose, deer, elk caribou, sheep, bear)	Linear features may disrupt movement Land clearing may remove habitat Road use may increase wildlife mortality (e.g. collisions, legal and illegal harvest) Species may avoid noise and movement (e.g. sensory disturbance affecting habitat availability)
Tailings pond			
Power line			
Airstrip			

TABLE 2
IDENTIFYING VALUED ENVIRONMENTAL COMPONENTS

VEC	Interaction With Project (yes/no)	Identified by Proponent	Identified by First Nations	Identified by Government Agencies	Identified by Public/Other Stakeholders	Included or Not Included in EA Process	Rationale

TABLE 3
PRESENTING RESIDUAL EFFECTS RATING CRITERIA

Criterion	Description		
Magnitude	Low		
	Medium		
	High		
Geographic Extent		Biophysical VECs	Socio-economic VECs
Duration	Short-term		
	Medium-term		
	Long-term		
	Future		
Frequency	Once		
	Continuous		
	Frequent/sporadic, etc.		
Reversibility	Reversible		
	Irreversible		
Project Setting Context	Low		
	Medium		
	High		
****Significance***	Significant		
	Not significant		
	Positive		
Level of Confidence	Low		
	Medium		
	High		

TABLE 4
SUMMARIZING ISSUES, MITIGATION STRATEGIES, RESIDUAL EFFECTS ASSESSMENT AND SIGNIFICANCE

					Residual Project Effects (RPEs)							
Component of Project setting	**VEC, focal parameter**	**Stage of development**	**Issues**	**Planned Mitigation**	**Magnitude**	**Geographic Extent**	**Duration**	**Frequency**	**Reversibility**	**RPE Significance**	**RPE Contribution to CEEs**	**Level of Confidence**
	Includes biophysical, social, economic, heritage, health, etc.	Construction										
		Operation										
		Closure										
		Post closure										

TABLE 5
SUMMARIZING CUMULATIVE ENVIRONMENTAL EFFECTS

			Cumulative Environmental Effects (CEEs)							
Scenario	**Potential CEE(s)**	**Planned Mitigation**	**Magnitude**	**Geographic Extent**	**Duration**	**Frequency**	**Reversibility**	**Residual CEE significance**	**Project contribution to Residual CEE(s)**	**Level of confidence**
Current/ Future CEE(s) without project										
Project contribution during construction, operation, closure										
Project contribution post-closure										
CEE(s) with the project for all stages										