

# Adequacy Review Report

**Project No. 2006-0050**

**Western Silver Corp.**

**Carmacks Copper Project**

**April 28, 2006**

**YESAB**  
Yukon Environmental and Socio-economic  
Assessment Board

## INTRODUCTION

This document synthesizes the results of an adequacy review conducted on the project proposal for the Carmacks Copper Project submitted by the Western Silver Corporation on February 27, 2006 for an Executive Committee Screening under YESAA. This document contains requests for supplementary information from the proponent required to aid the Executive Committee in their adequacy review of the proposal. The document is organized to follow the YESAB *Proponent's Guide to Information Requirements for Executive Committee Project Proposal Submissions*.

Pursuant to the Executive Committee Screening Rules section 19:

1. The Executive Committee shall consider a proposal to be adequate if, in the opinion of the Executive Committee, the proponent has consulted with first nations and the residents of communities in accordance with subsection 50(3) of the Act;
2. has in its proposal taken into account the matters referred to in paragraphs 42(1)(b),(c) and (e) to (h) of the Act;  
and the proposal,
3. contains sufficient information to enable the Executive Committee to prepare a statement of the scope of the project under section 34;
4. contains sufficient information to enable the Executive Committee to commence the screening; and
5. complies with the applicable rules.

Where useful the Executive Committee has endeavoured to provide context and rationale with the specific requests.

Pursuant to the Executive Committee Screening Rules, the proponent is afforded 180 days to either submit the requested supplementary information or to advise the Executive Committee in writing, of when it will be submitting the supplementary information.

The form and content of the submission of supplementary information should comply with all applicable rules and requirements of the Board, including the general filing requirements and any specific direction provided to the proponent herein.

The Executive Committee is willing to review this document with the proponent at a time of mutual convenience prior to the proponent submitting the supplementary information. Early engagement in this regard is encouraged.

If at anytime the proponent has questions, comments, or concerns regarding this adequacy review report or the project assessment in general they should contact the assigned YESAB Senior Assessment Officer, Mr. Travis Ritchie who may be reached by telephone at (867) 668-6420, by email at [travis.ritchie@yesab.ca](mailto:travis.ritchie@yesab.ca), by fax at (867) 668-6425, in or in person at 3059-3<sup>rd</sup> Ave, Whitehorse, Yukon.

## **PART I - PROJECT INTRODUCTION AND OVERVIEW**

### ***GENERAL***

The Executive Committee has determined the scope of the project should be expanded beyond that proposed by the proponent so that the assessment may include an examination of the potential effects associated with the proposed improvement of the Freegold Road, associated bridges and their use throughout the life of the project.

This determination is supported by the fact that the proponent has indicated that the roadway improvements will be required for the project to proceed – i.e. that the two projects are interdependent

The project proposal states the following on pages 3-6 and 3-45 of the Project Description and Environmental Assessment Report (PD&EAR), respectively,

“Upgrading of the YG Freegold Road will be required prior to the commencement of the project operations. Discussions have been initiated with YG on their plans for upgrading this road, including the bypass road (also currently cleared) around the Village of Carmacks.”

and,

“The bridge over the Nordenskjold River, 1.5 km from Carmacks and the bridge at Crossing Creek, 25.5 km from Carmacks, are to be replaced to meet highway transport truck loadings. It is expected that the two bridges and the portion of the Freegold Road that connects to the project site access road will be completely upgraded by YG and will commence upon Western’s production decision.”

Appropriate project description and effects assessment information regarding the improvements/upgrades to the Freegold Road must be provided to the Executive Committee for their consideration in the adequacy review. Furthermore, an assessment of the potential effects associated with use of the road as a result of the project needs to be presented.

It is understood that the responsibility for the Freegold Road improvements will lie with the Yukon Government. In order to provide information on these accessory projects Western Silver may coordinate with YG to provide the required information for the assessment of the project.

***SUPPLEMENTARY INFORMATION REQUESTED***

1. As part of complying with the requests for supplementary information contained in this document, please review the requirements for Project Introduction and Overview in the Proponent's Guide to Information Requirements for Executive Committee Project Submissions, hereafter referred to as the *EC Information Requirements Guide* (mentioned in the introduction) and update your project proposal as necessary.

## **PART II - FIRST NATION/COMMUNITY CONSULTATION**

### ***GENERAL***

As a part of conducting the formal adequacy review of the project proposal upon its submission to the Executive Committee it was determined that the project area lies within the traditional territories of both the Little Salmon Carmacks First Nation and the Selkirk First Nation.

Pursuant to section 50(3) of the Act, “before submitting a proposal to the Executive Committee, the proponent of a project shall consult with any first nation in whose territory, or the residents of any community in which, the project will be located or might have significant environmental or socio-economic effects”.

### ***LITTLE SALMON CARMACKS FIRST NATION***

- Consultation was undertaken in a variety of ways, including:
  - Direct contact through meetings, advisory committees, review committees, interviews, phone calls, emails, site tours (project area and pilot plant), field surveys, seminars and public open house;
  - Indirect contact through newsletters, website postings, public notices, posters; and,
  - Project documentation, including the Project Description and Environmental Assessment Report and associated supporting technical information and various presentation materials (maps, figures photographs, overheads).
- The type of information that was presented for consideration generally included oral descriptions at meetings with hard-copy (paper) supporting documents. Other engagements included the use of posters.
- Rational for the methodologies utilized included:
  - “Consultation methodologies centered on visually based presentation materials supported by in-person meetings and open houses to “walk people through” the information.”

- Agendas and meeting notes/minutes from meetings conducted as well as some information materials (or a description) that were supplied during the meetings were provided.

As a concluding part of the consultation requirements a proponent is required to demonstrate how the views, presented by the parties to be consulted, have been fully and fairly considered in the project design and subsequent preparation of the project proposal. While it is not a requirement of the proponent to necessarily incorporate any of the views presented by the parties to be consulted, it is required that the proponent detail how they were considered so that the assessor may determine if they were considered in a full and fair manner. This step is in keeping with s. 3 of the Act which states *"Where, in relation to any matter, a reference is made in this Act to consultation, the duty to consult shall be exercised.....by considering, fully and fairly, any views so presented."*

A variety of technical questions and concerns that have been raised by the LSCFN and others have been, or are in the process of being, examined and addressed by the proponent. Furthermore, it appears that the proponent has also fully and fairly considered the comments provided in the development of their proposal, with only one exception.

This exception is in regard to the socio-economic information update that the LSCFN requested be completed in their letter of September 12, 2005.<sup>1</sup> The proponent has not demonstrated a response to this specific request, within the context of the project proposal, other than the commitment for further community consultation.

What confounds the ability of the proponent to fulfill this requirement is the fact that while opportunities for further consultation were offered, they were not accepted by one of the primary groups that may be affected as a result of the project (i.e. the LSCFN). The ability of the proponent to comprehensively refine their baseline data and socio-

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<sup>1</sup> Bill Slater Environmental Consulting, September 12, 2005. Review of Project Description and Environmental Assessment Report Carmacks Copper Project. Prepared For Little Salmon Carmacks First Nation.

economic effects predictions and assessment is partially predicated on their ability to access the FN government and the FN membership to collect this information and consider it within the context of their assessment (proposal). This is to say that while the proponent may have wanted to address the FN comments regarding the updating of SE data it appears that they do not feel they were able to collect the information due to obstacles created as a result of the First Nation Government's comfort level with the assessment process under YEAA.

Therefore, the issues of whether the socio-economic data collected to date and the initial socio-economic effects assessment are still considered valid and have not been addressed by the proponent. A response in regard to this issue must be provided to the Executive Committee.

*Supplementary Information Requested*

1. In light of the comments made by the LSCFN, with regard to the socio-economic effects assessment, please demonstrate how the Western Silver Corporation fully and fairly considered this comment in their assessment and preparation of the project proposal.

***SELKIRK FIRST NATION***

While efforts have been documented in the project proposal to indicate that the proponent has initiated consultations with the community of Carmacks and the Little Salmon Carmacks First Nation, the only indication of consultation with the Selkirk First Nation is in the provision of a copy of the project proposal submitted under the YEAA process in June of 2005.

The Executive Committee has determined that provision of a copy of a draft project proposal, with no specific address to the party with which the proponent has a duty to consult, can not be considered adequate consultation pursuant to the Act, Rules, or Board guidelines.



*Supplementary Information Requested*

1. Before the proposal can be deemed complete, the proponent must meet their duty to consult with the Selkirk First Nation and document meeting that requirement in their response to this request for supplementary information. The proponent shall also refine their project proposal as appropriate to incorporate any considerations they may have made as a result of consultations with the Selkirk First Nation.

***COMMUNITY OF CARMACKS***

It appears that the proponent has met their duty to consult with the community of Carmacks.

The executive committee would caution, however, that a turnout of less than 3% of the population of a community of this size to the proponent's most recent open house in February of 2005 might have implications for the identification of interests that local people may have in regard to the proposed project. Particularly those effects associated with significant in-migration to the community that will result from the project.

### **PART III - PROJECT LOCATION AND LAND TENURE**

#### **Supplementary Information Requested**

1. Notwithstanding the direction provided in the Filing Requirements for Executive Committee Screening Proposals it is requested that the proponent provide copies of any GIS files pursuant to the requirements under section 3.1 of the EC Information Requirements Guide;
2. Identify trapline locations and the locations of any trapping cabins or camps within the project study area; and,
3. Identify land tenure along the Freegold Road.

## **PART IV – EXISTING ENVIRONMENTAL & SOCIO-ECONOMIC CONDITIONS**

### ***ENVIRONMENTAL CONDITIONS***

#### **Supplementary Information Requested**

##### **Air Quality**

1. Please briefly describe the existing air quality baseline for the proposed project site and surrounding area as well as that of the Village of Carmacks.
2. Describe and explain the air circulation patterns (e.g. prevailing winds) at the proposed project site as well as the potential for weather or seasonally induced change (e.g. thermal inversions) which may affect air quality.

##### **Vegetation**

1. Within the text of the PD & EAR a description of the forest stand types is provided, for each please give an estimate of the approximate volume/density and age classes within the proposed project area.
2. The proposal describes the forest stand types expected to be cleared as a result of the project. Please provide similar details for the area and distribution of vegetation types (i.e. sedges/grasses) that will be cleared in the construction and operation of the proposed project. The provision of this information will better enable assessors to understand appropriate reclamation procedures.

##### **Wildlife**

1. Project proposal (PD & EAR Addendum; tab 2; page 12) states “Additional aerial surveys are planned to monitor the density and abundance of moose near the access road and mine site.” Identify when these surveys are planned to occur, and further discuss whether the surveys are expected to be part of the pre-operational planning or a part of the Environmental Effects Monitoring Program.

2. Within the project description seven wildlife habitat types have been identified, described, and assigned a habitat potential. Please further this description by providing a percentage cover of the area of each habitat type contained within the study site. An understanding of the abundance of each habitat type will provide a greater understanding of species potential within and around the project site and therefore aid in the assessment of potential wildlife impacts.
3. Identify and describe any key wildlife migration corridors in and around the proposed project site.
4. For each wildlife species please provide a description of the temporal scope of habitat use (i.e. seasonal use) in the project area and vicinity. This information will further enable the assessment to determine the extent of potential project effects on wildlife and identify feasible mitigation measures.
5. Clarify bison population estimates in the key habitat area identified, if any, as well as any existing migration corridors utilized by this species. It is further requested that the proposal identify any special management practices that are required for the bison population.

### Water Resources

1. The project proposal has identified sampling for both water quality and ground water surveys. Please identify how the information collected from this sampling might affect the water treatment plant requirements or the adaptive management plan for the site water model (both items are scheduled to be released in April 2006). Further, please clarify if the intent of this additional baseline data is intended for long term monitoring.
2. Provide an analysis of the seasonal variations of water quality for both surface and ground water from the 2006 sampling session. This information will provide a basis for comparison from which to compare future water quality results, and enable a clearer understanding of baseline conditions.
3. If available please provide upstream and downstream photos of monitoring stations. This information will be used to provide context and understanding of the physical environment being assessed.

## ***SOCIO-ECONOMIC CONDITIONS***

### ***General***

Generally speaking the Executive Committee is interested in understanding the overall socio-economic conditions of the community or communities at present (in addition to information regarding the past that may inform the present conditions). The Executive Committee is interested in understanding:

- Societal relationships with the biophysical environment;
- Political and social resources;
- Culture, attitudes, social-psychological conditions;
- Economic and financial background;
- Relevant population (or demographic) characteristics (e.g. age, gender, education, and employment distributions).

The following VCs - valued components - were identified in the project proposal:

- Traditional Use – Trapping
- Traditional Use – Wildlife and Cultural
- Heritage Resources
- Social
- Economic
- Human Health & Safety

As such the project proposal should contain sufficient information to provide a baseline for the above valued components. While these VCs have been described well in most cases, supplementary information is needed to gain a comprehensive understanding of

the socio-economic conditions of the potentially affected communities<sup>2</sup> with particular regard to informing the assessment of potential effects (positive and negative) to the VCs identified by the proponent.

The level of effort devoted to the description of the socio-economic setting should be commensurate with the size, cost, and degree of expected effects of the proposed project. That is to say that only those elements of the socio-economic system within the established study area that are potentially affected by the project need be further identified and characterized.

It may be that some data may not be available to establish baseline conditions of certain VCs for the assessment. In such cases, either document the lack of information or use of alternative measures.

It should be noted that it is this information which will be utilized as the basis for the long-term monitoring of the project's socio-economic effects, should it be recommended to proceed.

#### Supplementary Information Requested

1. More fully describe the recreational opportunities/amenities and participation/practices of residents of Carmacks.
2. Update information regarding the recreational/tourism use of the Yukon River corridor in the region.
3. Describe, generally, the use of the region by the registered outfitter including how and where they generally access the backcountry and the general proximity of their operations to the project area.
4. Describe capacities and current operating levels of infrastructure in Carmacks.

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<sup>2</sup> The term 'community' in the socio-economic context refers to both place-based communities, which can be defined geographically, and interest-based communities defined by a common interest or activity, also sometimes referred to as a 'stakeholder' group.

5. Provide information on economics and employment of the local community. For example:
  - Non-wage (or subsistence) economy;
  - Self-employment;
  - Income distribution;
  - Family Income;
  - Cost of living;
  - Gender income equity;
  - Major industrial activities;
  - Level of business activity;
  - Labour force participation; and,
  - Gender representation in the labour force.
6. Include measures of community stability/vulnerability/resiliency such as information on the quality of life, language, historical or cultural assets, cultural practices of community citizens (types and times), cultural industries, state of public health, family life and structure, personal safety and security, incidence of disease and crime, housing status, and status and perceived adequacy of social and physical infrastructure.
7. Describe other population demographics such as level of training/education (status and opportunity levels).
8. Discuss the anticipated capacity of the community or surrounding areas to provide adequately trained personnel to the project.
9. Discuss further the frequency, intensity, and location of trapping activities in the area.
10. Describe the history and experience that the local community may have had with projects similar to the proposed project (note: this will inform issues surrounding socio-economic context and significance in particular).
11. Identify vulnerable groups of people in the potentially affected communities.
12. Describe the health status of communities, including physical and mental health.
13. Describe any stated community priorities, economic or social development plans, or valued components.

## **PART V – PROJECT DESCRIPTION**

### ***GENERAL***

Leach pad operations, and directly associated activities are outlined in s. 3.2.3 – 3.2.5 of the PD & EAR. These sections include information regarding the operational concepts, design basis (dimensions), arrangement of the heap (solution storage, embankments, berms, etc.), the arrangement of the heap with regard to associated infrastructure, pad and liner design, drainage systems, perimeter dimensions, leak detection and recovery system, geotechnical instruments, frost design considerations, events pond design etc.

Information contained above may be modified as a result of studies that are currently being prepared and/or updated by the proponent. Below is a list of study documents outlined to be provided in the PD & EAR Addendum as well as their corresponding output dates (as proposed).

### **Supplementary Information Requested**

1. The following documents are required for consideration in the assessment of the proposed project and are thus required to be submitted as part of the project proposal.
  - Water Treatment Plant (April 2006);
  - Waste Rock Dump Design (April 2006);
  - Heap Geotechnical Conditions (March 2006);
  - Heap Liner Design (March 2006);
  - Heap Embankment Design (March 2006); and,
  - Heap Loading (April 2006).

Aspects of each of these components are addressed in the following pages.

### **Mining - Alternatives and Chosen Approach**

1. While the proposal provides reasoning for the selection of the heap leach methodology over other forms of mining, such as conventional milling, it does not provide a comparison of alternative methodologies for heap leaching. As a result, please describe the rationale for the selection of the 'Valley Heap Leach' methodology over other heap leaching methodologies for the proposed project.



### Heap Leach Pad Design

1. Upon updating of the heap liner design, heap embankment design, heap loading plan and heap geotechnical assessment please present this information along with an analysis of the feasibility of the currently proposed spillways and diversion present at the heap. This information is necessary in determining the adequacy of the proposed heap, spillways and diversions in meeting environmental and project demands.

### Heap Liner Design

1. Project proposal contains a description of a three part liner system which is composed of an upper works, lower works and trenches. Each of these sections is identified to have an individual design profile for which the proposal states that laboratory testing is being conducted to confirm design criteria. Please provide the information, analysis and conclusions from the laboratory tests conducted to confirm feasibility of the proposed liner system. This information is required to assess the adequacy of the heap liner design.

### Heap Detoxification

A review of the detoxification of the heap is provided in the PD & EAR, and is predominantly based on laboratory work completed by Beattie Consulting Ltd. 1994, 1996 and 2001. The PD & EAR Addendum contains updated heap detoxification test work conducted by Alexco Resource Corp. in 2005/2006.

In light of the updated test work please provide the following:

1. Discuss in detail the methodology utilized in the calculating of the scale-up estimates provided in the *"Detoxification and Rinsing Testwork Report"*. Further, please present examples of other projects where scale-up predictions have been calculated in a similar fashion.
2. The proponent is requested to provide a comprehensive and detailed timeline for the proposed heap detoxification methodology. Within this timeline please confirm and clarify if rinsing of the heap will occur 365 days/year, or if rest periods will be incorporated indicate their expected length. The provision of a more detailed

timeline for the detoxification process will be beneficial in understanding the life cycle of the project, specifically that of the reclamation and closure program.

3. Please confirm/clarify that the environmental effects assessment and resulting mitigations proposed are still representative and appropriate given the newly presented detoxification test work.
4. Provide a description and analysis of contingency planning, as well as risks and/or uncertainties of the newly proposed detoxification methodology.
5. Please present the criteria which will be utilized to determine that the heap has been neutralized and further, that it has reached a state which is appropriate for closure.
6. Update the conceptual closure plan of the project proposal to reflect the results of the new heap detoxification test work and the information requested above.

#### Waste Rock Dump Design

The additional information requests listed below arise from the proponent's proposal for a new waste rock dump. It is acknowledged that the previously proposed waste rock dump is described and will be assessed as part of the proposal and further that not all sections related to this project component may change.

1. The PD & EAR Addendum references the establishment of an updated waste rock dump design, please supply this design in detail. Further, provide an analysis of how the new design might effect and change the proposed infrastructure and procedures associated with mine construction, operation, and reclamation.
2. Within this analysis provide a discussion of how the new design may change the effects characterization and associated mitigations provided for the previous design.
3. The PD & EAR Addendum states that an updated geochemical assessment has been conducted for the newly proposed waste rock dump, as such please provide the results of this assessment.

### Water Treatment Plant

1. The proposal states that two water treatment facilities will be developed to meet operational needs, as such please include further detail as to the intended operation and function of each plant.

### Project Phases and Scheduling

1. To support the narrative provided within the project proposal, please provide a visual timeline of the estimated closure schedule (e.g. Gantt chart of decommissioning and closure activities).

### Human Resource Requirements

1. Identify the employment requirements by skill level (educational/technical prerequisites) for each position and stage of development.

### Economic Inputs and Outputs

1. Update the analysis presented in the 1994 Socio-economic Impact Assessment prepared by Hallam Knight Pieshold Ltd., including:
  - Predicted gross expenditures for each phase of the development including a comparison to local, regional, and territorial Gross Domestic Product;
  - Predicted gross revenues from development with annual breakdown (including sales price assumptions);
  - Identify and describe the main areas of required contractors and goods and services (including general volume estimates) for the life of the development;
  - Direct and indirect income;
  - Tax revenues; and,
  - In addition, describe any proposed investments in human or physical capital other than direct development-related investments (examples may include training, community education, buildings, programs, etc.).

### Other Operational Alternatives

1. Present alternatives with respect to development timelines (particularly with regard to maximizing long-term employment);

2. Present alternatives with respect to work scheduling; and,
3. The potential effects associated with in-migration to the community of Carmacks for the purposes of working at the mine have the potential to be one of the most important aspects of the assessment of this project. While the proposal does address alternatives to housing its labour force it is the opinion of the Executive committee that all the viable alternatives for housing the labour force for this project need to be more fully considered and presented within the project proposal. The development scenario, costs and benefits, and schedule for each alternative should be discussed in detail. The assessment of other potential effects associated with in-migration is described in the Section VI of this report.

#### Closure and Reclamation

1. The project proposal is expected to include a description of reclamation and closure of the development, including temporary and final closure. While details regarding financial assurance and security are expected to be handled by the appropriate regulator during the project authorization stage, following the environmental and socio-economic assessment, the details regarding the general costs associated with this key phase of the project are required to be provided in the project proposal.

## **PART VI – ENVIRONMENTAL & SOCIO-ECONOMIC EFFECTS ASSESSMENT**

### ***GENERAL***

Notwithstanding the IEE documents prepared in the 1990s, it is requested that the project proposal fully describe/explore the potential effects of the project in addition to simply listing the potential effects and listing proposed mitigation measures as has been presented in the PD & EAR document. The suggestion that Appendix K of this document presents a detailed significance assessment and associated mitigation plan for each potential environmental effect is misleading. Appendix K would more appropriately be described as providing a tabular summary of the narrative summary of significance assessment and proposed mitigation contained in the main body text of the PD & EAR. Detailed characterization, significance assessment, and a description of appropriate mitigation measures are required for each potentially adverse effect. Beneficial or positive effects that may be significant should also be fully assessed and presented in this manner.

As mentioned previously, when describing mitigation measures to address potentially significant adverse effects, the proposal states that an environmental study program will be developed and submitted to regulatory agencies for review prior to commencement of operations. Under YESAA, proponents are required to submit this information as part of their proposal to be included in the environmental and socio-economic assessment. This information will be used to understand how the proponent intends to collect monitoring information in order to adaptively manage their practices to maintain the level of effects of their project at an acceptable level. Furthermore, information on the environmental study program aids in assessing how the proponent intends to identify and manage potential effects of malfunctions, accidents, and unpredicted events during all phases of the proposed project.

In general, an update of the original 1994 socio-economic effects assessment is required. Details are provided in the following information request section.

Similar to the comments above regarding environmental monitoring and adaptive management as mitigation, it should be understood that in order for information to be considered in an assessment under YESAA it must be submitted in accordance with the appropriate Rules. Confidential agreements such as what appears to be suggested by the proponent when referencing the negotiation of Benefits Agreements (BA) on page 7-37 of the PD & EAR are beyond the purview of the Executive Committee. There may be information contained in the BA that may mitigate potentially adverse effects under assessment; if this information is not disclosed, it cannot be used as evidence of mitigation of significant adverse effects in the assessment process. A comprehensive presentation of the potential effects, their significance and the proposed mitigation must be provided to the Executive Committee for review during the assessment.

In addition it should be understood that ongoing monitoring and public reporting needs to be part of the mitigation proposed.

#### Supplementary Information Requested

##### General

1. Pursuant to the discussion in the general comments above regarding mitigation, monitoring and adaptive management, please provide a details of the proposed Environmental Surveillance Network and Environmental Effects Monitoring Study Plan, including what environmental factors are proposed to be monitored, how they will be monitored, a schedule of data collection, form, content, and schedule of reporting to the public and/or other organizations, and what criteria will be utilized to determine acceptable levels of change and action/response levels. Additionally, please identify what steps and/or actions that will be taken if a problem is identified.
2. The PD & EAR (v. I; page 8-10) identifies and proposes the initiation of a wildlife monitoring program. If this is will not already be addressed in the response to the request above then describe in detail the components of this program and include proposed monitoring activities, reporting form and content, and criteria for acceptable change, as well as steps for adaptively managing expected and unexpected effects to valued wildlife species.

3. A similar draft plan should be developed for monitoring and adaptively managing potential socio-economic effects.
4. Given the recent and ongoing updating of baseline data and the descriptions of various components of the project, are there any changes to be incorporated into the effects assessment (i.e. adaptation of proposed mitigation measures, or effects of environment on the project etc.)?

#### Assessment Scope:

1. Clearly indicate, and provide a rationale for, the spatial and temporal bounds of the assessment of potential effects for each of the environmental and socio-economic VCs identified in the project proposal – i.e. to what spatial and temporal extent did the assessment examine the potential effects on each VC and why.

#### Atmosphere

1. In characterizing the potential effects of the project and its operations on the atmosphere a proposed mitigation of the proposal states “process controlled production of sulphuric acid” will be used to minimize gaseous emissions. Please detail what is meant by “process controlled production” and further outline how this production will be monitored to ensure air quality is not negatively affected.

#### Topography

1. The creation of a waste rock storage dump will be a permanent topographical change, the proponent should revisit this section of environmental effects characterization and proposed mitigations to ensure that they are still appropriate and reflect changes in design and/or location.
2. In the PD & EAR (v. I; pg. 7-11) a proposed mitigation is stated as “reclaim surface drainage to original condition”. Please include a description of what is meant by this statement and outline what criteria will be used to determine when the state of “original condition” has been reached.

#### Water Quality

1. Please clarify the meaning and intent of the proposed mitigation on page 7-13 of the PD & EAR (bullet #8) which states “Project footprint with buffer zone between riparian areas”.

Economic Effects

1. Employment:

- Update the assessment of the development requirements for labour vs. available local labour pool for each potentially affected community;
- Describe any barriers to employment, advancement, and retention of local community workers, aboriginal workers, or northern workers in general;
- Describe in more detail the proponent's or other parties' plans, strategies, or commitments to maximizing northern and/or aboriginal hires, promotion and retention with a focus on the most affected communities; and,
- Describe any increased training requirements necessary to procure an adequate local workforce.

2. Describe Business Activities and Government Costs & Benefits:

- Capacity of local, regional, territorial businesses to capture contracts and provide goods and services as a percent of totals;
- Developer and other party strategies for maximizing local business opportunities;
- Economic multipliers of development, including income, employment and local goods and services multipliers;
- Any training requirements for business development;
- Estimates of external competition for businesses from development, list any policies for local preference;
- Indicate how the development will contribute to economic diversification at different spatial levels;
- Indicate all the anticipated additional government costs associated with the development; compare these to the expected government revenues; and
- Indicate any plans to promote local post-development economic stability, emphasizing transition programs for workers and overall protection of boom and bust cycles.



3. Distribution of effects:

- Predicted local economic impacts on inflation, costs of living, access to goods and services;
- Identify any groups within the community that are likely to be especially adversely affected;
- Identify impacts on traditional economy and role of conservation of natural resources in development planning;
- Estimate which communities will be more beneficially and adversely affected by the development;
- Identify economic “lessons learned” from other similar developments in Yukon and the North; and,
- Identify and describe any plans, strategies, or commitments to deal with any impacts predicted from above and any agreements for the distribution of benefits.

Social Effects

1. Estimate potential effects of increased disposable income on social issues in communities, including drug and alcohol usage, gambling, family violence, housing pressures, and educational access, quality, and completion levels.
2. Estimate effects on mine workers’ and families’ mental, physical, and cultural health.
3. Identify social “lessons learned” from other similar developments in Yukon and the North.
4. On page 50 of Volume II of the 1994 HKP IEE several mitigation measures for potential socio-economic problems are identified. The proponent should indicate if these are commitments it is making to mitigate the associated effects should they occur. If these are in fact commitments on the part of the proponent, please detail how the potential effects that require such mitigation will be monitored and at what point will a response, in the form of mitigation as proposed/committed to, be implemented – refers to the concept of action levels discussed previously regarding issues of effects monitoring and adaptive management .

5. Identify any other programs, policies, or commitments to protect and promote individual, family, and community wellness.
6. Heritage Resources:
  - Describe the alternative development scenario(s) and provide an assessment of potential effects should significant heritage resources be discovered in the areas defined as medium heritage site potential within the project area (as identified on Figure 5-6 of the PD & EAR).
7. Land Use and Resource Harvesting:
  - Potential effects identified in the PD & EAR on page 7-35 include conflicts with wildlife harvesting, conflicts with trapline operations, and impairment of visual aesthetics by mining operations, loss, damage, or alienation of traditional uses or pursuits by First Nations, among other effects. To identify these potential effects is commendable. In order to understand the potential effects and proposed mitigation, please provide a characterization/assessment of each of the potential effects identified in this section of the proposal. For example:
    - Describe potential direct or indirect effects the development might have on hunting, fishing, trapping, or berry-picking, including access to land changes, reduced or improved hunting success, quality of country foods, longer distances required to practice traditional economic activities;
    - Describe impacts on access to traditional lands for traditional users and for others (non-aboriginals); and,
    - If applicable, describe any efforts toward establishing a compensation plan or process for any effects to traditional harvesting activities caused by the project.
8. Health and Safety
  - Describe what measures will be undertaken to prevent public access to the site as is proposed for various valued components within this section of the PD & EAR.
9. Socio-economic Monitoring:
  - Describe any commitments, plans, or strategies to monitor and adaptively manage local and regional business opportunities, employment, continued

education and training, other social impacts, impacts on traditional harvesting, and worker and community health and wellness.

10. Closure and Reclamation:

- Identify strategies for communities to adapt to the post-closure economic environment; and,
- Identify and compare closure alternatives in this regard.

Progressive Reclamation

1. Within the project proposal the following mitigation is presented several times, “Progressive cleanup and remediation will be completed where possible”. Please outline the general objectives, methodologies, and criteria which will be used for assessing the need for, and the conduct of, progressive cleanup and remediation.

## **PART VII – CUMULATIVE EFFECTS ASSESSMENT**

### ***SOCIO-ECONOMIC***

1. Estimate cumulative effects on culture – values, tradition, language, spirituality;
2. Estimate cumulative effects on social cohesion, quality of life and ability to adapt positively to pace of economic and/or social change; and,
3. Estimate cumulative effects on land usability for traditional economy and/or other alternative economic activities.

## **PART VIII – ACKNOWLEDGEMENT AND CERTIFICATION**

The proposal must include an acknowledgement and certification page such as that depicted in the *EC Info Requirements Guide* under this heading. This acknowledgement and certification must be signed by the proponent.

## **REQUESTS REGARDING FORM OF RESPONSE**

This project has been in the planning phase for over a decade and assessments of the project initiated and halted under several regulatory regimes. The project proposal as submitted currently spans almost twenty (20) volumes and is over three thousand pages long. It is the compilation of the work of several different consultants, and no doubt developed under the management of various company project managers.

An observation made by the Executive Committee and Board Staff during the adequacy review was that the project proposal as submitted is rather difficult to navigate for the purposes of review, even by trained assessors. Many of the elements of the proposal reflect outdated information yet are still present in the proposal. To compound this issue is the fact that numerous elements of the project description, which in turn will inform the proponents own environmental and socio-economic effects assessment, have not yet been submitted but are anticipated to be ready in the near future. This will inevitably make other information contained in the proposal obsolete.

Combining these elements with the fact that the Executive Committee has developed a number of requests for supplementary information that will inform the assessment of the project in a number of ways, it is the request of the Executive Committee that the proponent not simply submit an addendum in response to this request for supplementary information, but that they endeavour to re-submit their project proposal in a format that will facilitate a more effective review by all those persons, organizations and governments that will participate in this assessment under YESAA. Exact compliance with the order of Schedule A of the Rules and the *EC Information Requirements Guide* is not necessarily required but it would be fairer to the assessor and the public individuals and organizations that will review the project proposal to have it repackaged in a format that is appropriately updated and made more easily readable.

The Executive Committee is not opposed to considering alternatives that the proponent may present in this regard.

- END REPORT -