ENVIRONMENTAL ASSESSMENT TRACK REPORT

WESTERN SILVER CORPORATION'S

PROPOSED

CARMACKS COPPER MINING PROJECT

SUBMITTED TO THE

MINISTER OF THE EXECUTIVE COUNCIL OFFICE

BY

DEVELOPMENT ASSESSMENT PROCESS (DAP) BRANCH, EXECUTIVE COUNCIL OFFICE

ENERGY MINES AND RESOURCES

AS RESPONSIBLE AUTHORITIES FOR THE PROJECT

NOVEMBER 14, 2005

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1.0 INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

The Carmacks Copper mining project, as proposed by the Western Silver Corporation, has triggered an environmental assessment under the Yukon *Environmental Assessment Act* (EAA) and requires, at minimum, a Comprehensive study-level assessment. Under EAA, other assessment options could include a Panel Review or Mediation.

The intent of this document is to assist the Minister of the Executive Council Office (the Minister) to determine the appropriate path for this environmental assessment. This document represents the report required under section 67 of EAA.

1.2 LEVEL OF ENVIRONMENTAL ASSESSMENT

The Executive Council Office, Development Assessment Process Branch (DAP), as lead Responsible Authority (RA) on behalf of the Minister, and Energy Mines and Resources (EMR), in its role as an RA, have determined that the Carmacks Copper Project is subject to either a Comprehensive Study, Panel Review or Mediation under EAA, pursuant to paragraph 10 (a) of the Comprehensive Study List Regulation, which reads:

> 10(a) *The proposed construction, decommissioning or abandonment of a metal mine, other than a gold mine, with an ore production capacity of 3,000 t/d or more*

The Carmacks Copper project will exceed the threshold of 3000 t/d.

Projects are typically reviewed on a panel review/mediation level when it is determined that the activities proposed may contribute to a significant adverse environmental effect and have a high level of uncertainty as to the practicality of the proposed mitigation and/or are likely to cause significant public concern.

This project will also be assessed by the Yukon Environmental and Socio-economic Assessment Board (YESAB). The EAA and YESAA assessments will be harmonized to the extent possible and further to the Yukon Government and YESAB transition strategy. The Minister's track decision under EAA will not affect YESAB's decision on how to proceed with the YESAA assessment of this project.

1.3 OVERVIEW OF THE ENVIRONMENTAL ASSESSMENT PROCESS

Pursuant to subsection 67(a) of EAA, the RAs must submit a report to the Minister which includes the following:

- The scope of the project, the factors to be considered in the environmental assessment and the scope of those factors;
- The public concerns in relation to the project;
- The project's potential to cause adverse environmental effects; and
- The ability of the Comprehensive Study to address issues relating to the project.

Pursuant to section 67 (subsection 18.1(1)) of EAA, after considering the report and recommendation, the Minister must decide whether to refer the project back to the RAs to continue with the Comprehensive Study process, or refer the project to a Mediator or Review Panel. If the Minister decides that the project should continue as a Comprehensive Study, the project cannot be referred to a Mediator or Review Panel at a later date.

Pursuant to section 25 of EAA, if, after considering the report and recommendation, the Minister refers the project to a Mediator or Review Panel, the project would no longer be subject to a Comprehensive Study under EAA. In such an instance the Minister, after consulting other RAs and appropriate parties, would set the terms of reference for the review, and appoint the Mediator or Review Panel members.

Pursuant to section 67 (subsection 18.1(1)a) of EAA, the Minister determines that the environmental assessment will continue as a Comprehensive Study, an environmental assessment will be undertaken and a Comprehensive Study Report (CSR) will be prepared and submitted to the Minister.

Pursuant to section 18 (1) of EAA, following drafting of the CSR, the RAs would invite the public to comment on the report prior to the Minister making his final determination. The Minister may request additional information or require that public concerns be further addressed before issuing the environmental assessment decision statement. Once the environmental assessment decision statement is issued, the Minster will refer the project back to the RAs for action, including the issuance of authorizations to allow the project to proceed.

1.4 YUKON ENVIRONMENTAL AND SOCIO-ECONOMIC ASSESSMENT ACT (YESAA)

Environmental assessments in Yukon are currently being conducted under EAA, and/or the *Canadian Environmental Assessment Act* (CEAA). On November 13, 2004 the *Yukon Environmental and Socio-Economic Assessment Act* (YESAA) came into effect. However the regulations which accompany this legislation are not expected to come into force until late 2005. Until such time, assessments will continue to be conducted under EAA/CEAA.

2.0 PROJECT OVERVIEW

The Carmacks Copper Project is a proposed open pit, acid copper heap leach mine and solvent extraction/electro winning (SX/EW) processing facility being developed by the Western Silver Corporation (Western Silver). The orebody is located approximately 38 km northwest of the Village of Carmacks, or 192 km north of Whitehorse. The deposit contains an open pit mineable reserve of 13.3 million tonnes at an average grade of 0.97% total copper. The project will include the following main components and associated activities:

1. **Open Pit;**
2. **Waste Rock Storage Area;**
3. **Heap Leach Operation;**

4. **Events Pond;**
5. **Processing Facilities;**
6. **Haul road; and**
7. **Ancillary facilities and Services.**

For further information regarding this project please refer to the Project Description/Environmental Assessment Report which can be accessed online at *http://www.gov.yk.ca/depts/eco/dap/projects/western_silver/index.html* .

3.0 SCOPE OF THE PROJECT

The scope of the project refers to the various components of the proposed undertaking or activities that will be considered as the project for the purposes of the environmental assessment.

Subsection 11(1) of EAA requires the RAs to determine the scope of the project in relation to which an environmental assessment is to be conducted. Subsection 11(3) of EAA requires that where a project is in relation to a physical work:

"…an environmental assessment shall be conducted in respect of every construction, operation, modification, decommissioning, abandonment or other undertaking in relation to that physical work that is proposed by the proponent or that is, in the opinion of the responsible authority…likely to be carried out in relation to that physical work."

The scope of this project will include all undertakings involved with the physical works and activities related to the development, construction, operation, decommissioning, care and maintenance, closure and post closure of the proposed Carmacks Copper Mining Project. (See "Scoping Document" Appendix A)

4.0 FACTORS TO BE CONSIDERED IN THE ASSESSMENT

Subsection 12(1) of the EAA requires that environmental assessments consider the following factors:

> (a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
>
> (b) the significance of the effects referred to in paragraph (a);
>
> (c) comments from the public that are received in accordance with this Act and the regulations;
>
> (d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
>
> (e) any other matter relevant to the screening, Comprehensive Study, Mediation, or assessment by a Review Panel, such as the need for the project and

> alternatives to the project, that the responsible authority or, except in the case of a screening, the Minister after consulting with the responsible authority may require to be considered.

In relation to (e) above, the RAs have not included any additional matters within the scope of the assessment.

In addition to the factors set out in subsection 12(1) above, every Comprehensive Study of a project and every Mediation or assessment by a Review Panel shall include a consideration of the following factors:

> (a) the purpose of the project;
>
> (b) alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;
>
> (c) the need for, and the requirements of, any follow-up program in respect of the project; and
>
> (d) the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

With respect to (c) above the RA has determined that there will be a requirement for follow-up programs in respect to this project.

5.0 SOCIO-ECONOMIC FACTORS

A socio-economic effect as defined in YESAA includes effects on economies, health, culture, traditions, lifestyles, and heritage resources. The scope of assessment under EAA requires consideration of socio-economic effects that result from changes in the environment. In the case of this project, therefore, the social and economic effects that result from changes to the environment (as described in EAA) will be considered in the scope of the assessment. Accordingly, changes to the local social and economic conditions, beyond those arising from environmental changes, are **not** included in the scope of this EAA assessment.

It should be noted that while socio-economic effects are not within the scope of this assessment beyond those resulting from changes in the environment, this project is also likely to require an assessment under YESAA given the anticipated date of the YESAA regulations coming into force. Any assessment under YESAA will require an examination of the direct socio-economic effects of a project.

The RAs recognize the efforts to date of the company to consider socio-economic effects of the project and it is understood by the RAs that socio-economic effects of the project beyond the scope of the EAA assessment will be discussed in detail and concurrently with the EAA assessment. It is the RAs' opinion that this will aid any assessment under YESAA.

6.0 DECOMMISSIONING

Subsection 11(1) of EAA requires the RAs to scope decommissioning and abandonment of a project into the assessment. In doing so the RAs must consider the technical and economic feasibility of the proposed decommissioning plan as it constitutes a measure to mitigate potential adverse environmental effects. Decommissioning of the site includes, but is not necessarily limited to, the following components:

- Detoxification of the heap.
- Decommissioning of mine workings.
- Geochemical and physical stability of all waste rock piles.
- Decommissioning and removal of site infrastructure.
- Revegetation of the site.
- Measures to limit access to the site in post-closure period (includes discussion of 'gating' and closure of road from Freegold Road to mine site).
- Continued monitoring of the site through the post-closure period.
- Implementation of adaptive management plans as necessary during closure and post-closure period.

7.0 PUBLIC CONCERNS IN RELATION TO THE PROJECT

On August 17, 2005, as per EAA, the public was invited to provide their comments and concerns regarding the Project as proposed. Specifically, stakeholders were asked to comment on the following areas:

- The project as proposed by the proponent
- The scope of the project, assessment and factors to be considered
- The ability of the Comprehensive Study to address issues relating to the Project.

The following is a summary of the most significant comments/concerns raised in relation to the assessment and factors to be considered, which are relevant to the Minister's track decision. Please note that this is not an exhaustive list of the public concerns raised. Concerns about the technical feasibility of the heap decommissioning are discussed in section 8.0 below.

Department or Organization	Contact person	Comments/Concerns
Department of Environment – Gov. of Canada	Benoit Godin, Head of Environmental Contaminants	• The proponent has not provided sufficient evidence within the present information to prove the technical feasibility of their decommissioning plan. Specifically the proponent has not provided evidence to show that chemical neutralization of the heap is stable. More information regarding the proposed heap detoxification is required. • There appears to be some uncertainty concerning water quality for seepage waters in contact with waste rock. In dealing with this uncertainty regarding potential for unacceptable metal contaminants, the proponent commits to collect and treat if necessary. Additional effort is required to understand the potential for long-term release of metal contaminants from the waste rock dump, and its ability to meet CCME guidelines. • The proponent does not substantiate why 100% drain down is not

		required. • From the current work presented additional investigation is necessary to demonstrate that long-term stability can be achieved for the site.
Little Salmon Carmacks First Nation	Susan Davis, Director of Lands and Resources	• The technical feasibility of the heap detoxification has not been demonstrated by the test work presented. • The long-term performance of waste rock storage facilities remains uncertain because of permafrost conditions in the proposed waste rock storage area. • The EAR generally relies on data collected in the 1990's. As a result, there are some significant gaps and inconsistencies in the EAR. • The liner design proposed by the company does not appear to meet the guidelines specified by the Government of Yukon in their Performance Standards.
Yukon Government – Environment Department	Randy Lamb, Manager of Environmental Affairs Section	• More information regarding the proposed heap detoxification is required. • A more detailed discussion of the risk assessment should be provided for review of the events pond sizing. Any loss of copper sulphate solution to Williams Creek could have serious consequences on water quality and downstream aquatic resources. • The proposed project does not provide 100% drain down solution storage capacity for the lifetime of the project and the proponent does not substantiate their proposed drain down containment based on sound reasoning and a risk assessment utilizing accepted methodology. • The proposed project will traverse known key moose habitat. The survey for wildlife abundance and key habitat were not completed during the late winter period. • The data used to calculate the water balance should be updated as the data used originally was limited. No information is given on the approach taken to estimate design storm and runoff events, the water balance is calculated using 1998 approximations and has not been updated using the data collected since 1998.The methodology used to estimate creek flows is not described.
Yukon Conservation Society	Tracy Boyes, Watershed Health Coordinator	• More information is required regarding the potential impact of the heap. In order to provide more information it is recommended that field test pads be designed to study the potential impacts of the heap. • A significant portion of the data presented by the proponent is outdated and insufficient. • Information provided regarding permafrost is inadequate. • Further research is required on the potential for the waste rock dumps to release toxins into the receiving environment. As a tributary of the Yukon River, any contamination of Williams Creek could have significant adverse effects on salmon stocks and other aquatic life important to the Yukon. • The proponent has suggested that further study may lead to an alternate means of applying acid to the heap. More information is required on this option. • Increased access to this site will increase hunting pressures on wildlife. • The proponent should have further explored other options of mineral extraction for this project.
Yukon Government – Tourism	Cathryn Paish, Tourism Resource	• Current tourist activities in the area include non-motorized boating/canoeing and rafting in the summer and dog mushing along the Yukon River in the winter. Concerns exist surrounding the possible

Department	Coordinator	visual and noise impacts on the Yukon River travellers. • The Yukon Quest trail includes a portion of the Freegold Road and runs along Williams Creek. This project may affect winter use of the Quest Trail by tourism operators and the Yukon Quest event. • A number of commercial dog mushers offer trips along the Quest Trail that may include the area proposed for the mine use.
Canadian Parks & Wilderness Society (CPAWS)	Mac Hislop, Campaign Coordinator	• There is significant uncertainty regarding the technical viability of the proposed heap leaching operation. The technology to be employed is as yet unproven at the scale and environment proposed in this project. • Copper mining is known to cause irreversible ecological and environmental damage including: habitat destruction, fragmentation and alienation and water and air pollution. • According to Western Silver Corporation's 40-F filings with the United States Securities and Exchange Commission for the fiscal year ended September 30, 2004, the company does not have any experience in placing properties into production. • High degree of uncertainty that the proponent can reclaim areas disturbed by its proposed and past activities.

8.0 POTENTIAL OF THE PROJECT TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS

It is the RAs' view that this project has the potential to cause significant adverse environmental effects, unless the environmental assessment process can identify appropriate mitigative measure to be applied by the proponent. While the majority of these effects can be mitigated using known means there is an element of uncertainly regarding the mitigation being proposed to decommission the spent ore within the heap. The effectiveness of this proposed technique is as of yet unknown. The proponent is conducting tests to demonstrate the viability of this approach.

While cyanide heap leach mining techniques have been used in the Yukon at Brewery Creek, examples of sulphuric acid heap leaching techniques, as proposed by Western Silver, are unknown in Canada due to the geological conditions which allow the oxide ore bodies to develop being rare in Canada. There are a few examples of acid heap leach operations being successfully decommissioned in North America and those are located in warm dry areas of the United States that have an arid climate which make complete neutralization of the heap unnecessary.

The proponent has identified that the higher precipitation, in the Yukon, makes the neutralization of the heap necessary for closure of this site. The proponent is proposing a bicarbonate rinse of the heap to bring the pH back to a neutral level and is conducting column cell test to demonstrate the process. The extent to which this approach to heap detoxification has been attempted is unknown and to date results of column tests have not been provided. The proponent has committed to provide this information once the test results are available.

9.0 ABILITY OF THE COMPREHENSIVE STUDY TO ADDRESS PROJECT ISSUES

It is the opinion of the responsible authorities that the Comprehensive Study will fully address the issues related to the project. It is recommended by the RAs that (pursuant to section 67, subsection 18.1(1)a) of EAA) the Minister should determine that the environmental assessment will continue as a Comprehensive Study. The project should be referred back to the RAs to continue with the comprehensive study process.

It is the RAs' view that the scale of the project and potential environmental effects is in line with similar projects that have undergone comprehensive study assessments in the past. The Comprehensive Study approach to project assessment has been successfully applied to northern Canadian mining projects in recent years and there have been no significant public concern raised regarding the track that the assessment of this project should proceed on.

The responsible authorities will ensure that the public is provided with an opportunity to participate in the comprehensive study. The comprehensive study process will utilize a technical advisory subcommittee and socio-economic subcommittee as well as a Public Registry to gather public input.

It is the opinion of the RAs that the Comprehensive Study process will afford the opportunity to harmonize the EAA review with the YESAB assessment process.

Appendix A: Carmacks Copper Mining Project Comprehensive Study Scoping Document