APPENDIX 2 – EA AND EIS RELATED DOCUMENTATION

Including:

- **Federal Notice of Commencement for an EA**
- **Referral of the Project to an Independent Review Panel**
- **Voluntary Agreement between SCI and the province of Ontario**
- **Harmonization Order under S18(2) of the Canada Ontario Agreement on Environmental Assessment Cooperation**
- **Terms of Reference for the EIS**
- **Agreement establishing the Joint Review Panel**
- **Appointment of the Joint Review Panel**
- **Project Agreement for the Marathon Platinum Group Metals and Copper Mine Project in Ontario**

Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale

Canada

NOTICE OF COMMENCEMENT

of an Environmental Assessment

Marathon Platinum Group Metals and Copper Mine Project, Pic River, Marathon Township Municipality

Marathon (ON)

April 29, 2010 (Updated July 19, 2010) -- Fisheries and Oceans Canada, Natural Resources Canada and Transport Canada are required to ensure that a comprehensive study is conducted pursuant to the *Canadian Environmental Assessment Act* commencing on April 16, 2010 in relation to the project: Marathon Platinum Group Metals and Copper Mine Project, Pic River, Marathon Township Municipality.

On July 12, 2010, a series of amendments to the *Canadian Environmental Assessment Act* came into force. As part of these amendments, the Canadian Environmental Assessment Agency is playing an enhanced role in the environmental assessment of this project as it will perform the duties and functions of the responsible authority in relation to this project until the submission of the comprehensive study report to the Minister of the Environment.

At this time, the Agency is awaiting further information from the proponent necessary to proceed with the environmental assessment.

The Agency has posted a notice on the Canadian Environmental Assessment Registry advising of its intention to conduct public consultation on the Marathon Platinum Group Metals and Copper Mine Project and the conduct of the comprehensive study once further information is received from the proponent.

An environmental assessment is required in relation to the project because Fisheries and Oceans Canada may take action in relation to paragraphs 36(5)(a) to (e), where the regulation made pursuant to those paragraphs contains a provision that limits the application of the regulation to a named site of the *Fisheries Act*, to section 32 of the *Fisheries Act* and to subsection 35(2) of the *Fisheries Act*; Natural Resources Canada may take action in relation to paragraph 7(1)(a) of the *Explosives Act* and because Transport Canada may take action in relation to section 5 of the *Navigable Waters Protection Act*.

This project is also subject to the environmental assessment requirements of the Government of Ontario.

As per the Cabinet *Directive on Improving the Performance of the Regulatory System for Major Resource Projects*, this environmental assessment has been identified as a major natural resource project. For additional information refer to the Major Projects Management Office's Tracker that monitors the progress of proposed major resource projects through the federal regulatory review system.

For further information on this environmental assessment, please contact:

Marathon Platinum Group Metals and Copper Mine Project
Amy Liu, Project Manager
Canadian Environmental Assessment Agency
55 St. Clair Ave. East, Suite 907
Toronto ON M4T 1M2
Telephone: 416-952-1576
Fax: 416-952-1573
Email: MarathonPGM-Cu.EA@ceaa-acee.gc.ca

and refer to Registry reference number **10-03-54755**

Note: The document has been amended on the following dates.
April 29, 2010 at 14:32
July 19, 2010 (Current)

Date Modified: 2012-01-04

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Canada

NOTICE OF REFERRAL

to a Review Panel

Marathon Platinum Group Metals and Copper Mine Project

Marathon (ON)

October 7, 2010 -- Canada's Environment Minister Jim Prentice has decided to refer the Marathon Platinum Group Metals and Copper Mine project in Ontario to an independent review panel.

The Canadian Environmental Assessment Agency will make available funding to assist the public and Aboriginal groups to participate in the environmental assessment process.

Marathon PGM Corporation is proposing to construct, operate and decommission an open pit platinum group metals and copper mine approximately 10 km from Marathon, Ontario. The proposed project would include three open pits, an ore processing plant, tailings and mine rock storage facilities, site access roads, a 7 km power transmission line, explosives factory and magazines, water management facilities, ancillary mine infrastructure and associated activities. The rate of production would be approximately 22,000 tonnes per day with a proposed operating mine life of approximately 11.5 years.

For further information on this environmental assessment, please contact:

Marathon Platinum Group Metals and Copper Mine Project
Canadian Environmental Assessment Agency
Colette Spagnuolo, Panel Manager
160 Elgin Street, 22nd floor
Place Bell Canada
Ottawa ON K1A 0H3
Telephone: 613-957-0700 or 1-888-582-1884
Fax: 613-957-0941
Email: MarathonMine.Review@ceaa-acee.gc.ca

and refer to Registry reference number **10-05-54755**

Date Modified: 2010-10-07

AGREEMENT

This agreement is made in triplicate,

BETWEEN

The Minister of the Environment [the "Minister"]

AND

Stillwater Canada Inc., its agents, successors and assigns [the "Proponent"],

CONCERNING

The Proponent proposes to develop and operate the Marathon Platinum Group Metals and Copper Mine Project ("Project") approximately 10 kilometres north of the Town of Marathon. This Project involves the establishment and operation of an open pit mine and mill for the purpose of extracting and processing ore containing copper and platinum group metals and including, but not limited to, any ancillary activities and the activities outlined below:

- the construction and/or use of equipment, buildings and structures;
- the establishment, construction and operation of tailing impoundment areas, explosives factory and magazine facilities, waste rock storage areas, water management facilities, transmission lines, temporary and emergency generation facilities, and activities to mitigate environmental impacts;
- the decommissioning, closure and abandonment of the mine and mine-related infrastructure;
- the establishment, construction and/or modification and use of transportation infrastructure including access roads, highways and/or rail lines to support the above-mentioned activities and the transport of final mine concentrate(s).

[the "Undertaking"]

Whereas s. 3.0.1 of the *Environmental Assessment Act* states:

A person, other than a person referred to in clause 3 (a), who carries out, proposes to carry out or is the owner or person having charge, management or control of an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity may enter into a written agreement with the Minister to have this Act apply to the enterprise, activity, proposal, plan or program.

Whereas the Proponent is a person, other than a person referred to in clause 3 (a) of the *Environmental Assessment Act*, who carries out, proposes to carry out or is the owner or person having charge, management or control of an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity which is described above as the "Undertaking."

Whereas the Proponent has requested that the *Environmental Assessment Act* apply to the Undertaking.

NOW, THEREFORE:
The Minister and the Proponent agree that the *Environmental Assessment Act* apply to the Undertaking.

This Agreement shall take effect from the date of the last signature below and shall continue indefinitely unless terminated by the agreement of both Parties, in writing.

Executed by:

<original signed by>

Mar 22/11

Agatha García-Wright — DATE
Director, Environmental Assessment and Approvals Branch
Ministry of the Environment

<original signed by>

March 23-2011

John R. Stark, Vice President — DATE
Stillwater Canada Inc.
I have the authority to bind the Corporation.

ORDER MADE UNDER THE
ENVIRONMENTAL ASSESSMENT ACT

Harmonization Order - Stillwater Canada Inc.

The French translation of this document may not accurately reflect the original English language version, and to the extent there is a discrepancy, the English version shall prevail.

Having due regard that the *Environmental Assessment Act* R.S.O. 1990 Chapter E.18 ("the Act") applies to any enterprise or activity by Stillwater Canada Inc. and its successors and assigns as described in the Voluntary Agreement between Stillwater Canada Inc. and the Director, Environmental Assessment and Approvals Branch, dated March 23, 2011 ('Project");

Having received notice from the federal Minister of the Environment that the *Canadian Environmental Assessment Act, R.S.C. 1992* , c. 37 ("CEAA"), applies to the Project;

Having received notice from the Canadian Environmental Assessment Agency (the "Agency") that the federal Minister of the Environment has referred the Project to a review panel under s. 29(1) (ii) of CEAA;

And having received a request from the Agency, pursuant to section 18 of the Canada-Ontario Agreement on Environmental Assessment Cooperation, to consider harmonizing the Ontario and federal environmental assessment requirements by the establishment of a joint review panel by entering into a project-specific harmonization agreement under section 18(2) of the Canada-Ontario Agreement on Environmental Assessment Cooperation;

And having completed a harmonization agreement for the Project with the federal Minister of the Environment, which provides for the establishment pursuant to paragraph 40(2) of the CEAA, of a joint review panel (a copy of which agreement and Terms of Reference for the Joint Review Panel, referred to as the "Harmonization Agreement" is attached as Schedule 1);

The undersigned considers that the requirements of the Joint Review Panel as set out in the Harmonization Agreement, including the Terms of Reference for the Joint Review Panel, are equivalent to the requirements imposed under the Act, and orders the following:

1. The following requirements of the Act have been varied in order to facilitate the effective operation of the requirements of both jurisdictions, and shall apply to the Project:

    (a) Section 1 is varied to delete the definition to "Tribunal" and substitute "Joint Review Panel" means a body established by the federal Minister of the Environment which meets the requirements of the Canadian Environmental Assessment Act and the Ontario Environmental Assessment Act, the

members of which are appointed by the federal Minister of the Environment, based on the recommendations of both the Agency, on behalf of Canada, and the Ministry of the Environment, on behalf of Ontario. Section 1 is also varied to substitute “Project” for the word “undertaking” and to add a new definition for “Joint Review Panel’s Report” means the report produced by the Joint Review Panel, which contains the Joint Review Panel's rationale, conclusions and recommendations, with respect to the environmental assessment of the project. This report will serve as recommendations to both the provincial Minister of the Environment and the federal Minister of the Environment.

(b) Subsections 5(3) and 5(4) and 11.4 (1) are varied to remove reference to ”the Tribunal”, with any necessary modifications.

(c) Section 34, subsection 35 (b) and section 37.1 are varied to remove reference to “the Tribunal” and replace it with “the Joint Review Panel”, with any necessary modifications.

(d) Section 9(1) to (4) has been varied as follows:

9. (1) The Minister, with the approval of the Lieutenant Governor in Council, may:

(a) Give approval to proceed with the Project in accordance with the Joint Review Panel Report

(b) Give approval to proceed with the Project subject to such conditions as the Minister considers necessary and in particular requiring or specifying:

(i) The methods and phasing of the carrying out of the Project,
(ii) The works or actions to prevent, mitigate or remedy effects of the Project on the environment,
(iii) Such research, investigations, studies and monitoring programs related to the Project and reports thereof, as the Minister considers necessary,
(iv) Such changes in the Project the Minister considers necessary,
(v) That the proponent enter into one or more agreements related to the Project with any person with respect to such matters as the Minister considers necessary,
(vi) That the proponent complies with all or any of the provisions of the Joint Review Panel Report that may be incorporated by reference in the approval,
(vii) The period of time during which the Project or any part thereof shall be commenced or carried out; or

(c) Refuse to give approval to proceed with the Project

9. (2) The Minister shall consider the following matters when making the decision:

(a) The purpose of the Act;
(b) The Joint Review Panel's Report; and
(c) Such other matters as the Minister considers relevant to his or her decision.

9. (3) The Minister shall notify the proponent of his or her decision and shall give the proponent written reasons for it.

9. (4) The Minister shall also provide a copy of the decision to the federal Minister of the Environment and shall provide notice to participants of the Joint Review Panel process that the decision is available and published on the public registry.

2. Except for the requirements of the Act as varied above, and the following requirements: Part I of the Act, subsections 11.4(1), 11.4(4) and 11.4(5), sections 12 and 12.2., Part IV, sections 28, 31, 31.1, and 32, subsection 35 (a), sections 36, 37, 37.2 and 38, and Part VI of the Act; the remaining sections of the Act are dispensed with for the purposes of this order.

The reasons for this Order are as follows:

1. The undersigned has entered into the Harmonization Agreement. The Harmonization Agreement establishes the Joint Review Panel to undertake an environmental assessment of the Project.

2. The process to be undertaken by the Joint Review Panel of the Project will allow the Project to be evaluated in a manner equivalent to the requirements of both Ontario and Canada, while avoiding unnecessary duplication, delays and confusion that could arise from individual reviews by each government.

3. The requirements of the Joint Review Panel process, which include the preparation of the Environmental Impact Statement by Stillwater Canada Inc. and the assessment of the Project by the Joint Review Panel in accordance with the said Terms of Reference are equivalent to the requirements of the Act, as both the Terms of Reference and the Environmental Impact Statement Guidelines incorporate the requirements of the Act.

4. The undersigned retains, with the approval of the Lieutenant Governor in Council, the decision-making authority, under s. 9 of the Act as varied by this Order, to give approval to proceed with the Project, give approval to proceed with conditions or refuse the Project.

Dated the 9th day of August, 2011 at TORONTO.

<original signed by>

John Wilkinson
Minister of the Environment

Schedule 1

GUIDELINES FOR THE PREPARATION OF

AN ENVIRONMENTAL IMPACT STATEMENT

PURSUANT TO THE

CANADIAN ENVIRONMENTAL ASSESSMENT ACT
AND
ONTARIO *ENVIRONMENTAL ASSESSMENT ACT*

for the

MARATHON PLATINUM GROUP METALS AND

COPPER MINE PROJECT

August 2011

Prepared by:
Canadian Environmental Assessment Agency
and
Ontario Ministry of Environment -
Environmental Assessment and Approvals Branch

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LIST OF FIGURES

ABBREVIATIONS

ARD/ML	acid rock drainage / metal leaching
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DFO	Fisheries and Oceans Canada
EA	environmental assessment
EIS	environmental impact statement
EMPs	environmental management plans
EMS	environmental management system
Km	Kilometres
kV	Kilovolt
MMER	Metal Mining Effluent Regulations
PAG	potentially acid-generating
PM	particulate matter
Project	Marathon Platinum Group Metals and Copper Mine Project
Proponent	Stillwater Canada Inc.
QA/QC	quality assurance/quality control
TIA	tailings impoundment area
VEC	valued ecosystem component

PART 1: BACKGROUND

1.1 INTRODUCTION

The purpose of this document is to identify for Stillwater Canada Inc. (the Proponent), the nature, scope and extent of the information that shall be addressed in the preparation of the environmental impact statement (EIS) for its proposed Marathon Platinum Group Metals and Copper Mine (the Project). The Proponent will prepare and submit an EIS that examines the potential environmental effects, including cumulative effects, of the site preparation, construction, operation, modification, decommissioning (closure) and abandonment (post-closure) of the Project and that evaluates the significance of any such effects.

While the EIS Guidelines provide a framework for preparing a complete EIS, it is the responsibility of the Proponent to provide sufficient data and analysis on any potential environmental effects to permit proper evaluation. The EIS Guidelines outline the minimum information requirements while providing the Proponent some flexibility in selecting methods to compile data for the EIS.

1.1.1 Background

The Proponent proposes to develop an open-pit platinum group metals and copper mine and mill operation with a mine life of approximately 11.5 years. The mine site would be located 10 kilometres (km) northeast of the Town of Marathon in the Province of Ontario, Canada (Figure 1).

The Project is subject to review under the *Canadian Environmental Assessment Act* given the requirement for Fisheries and Oceans Canada, Transport Canada and Natural Resources Canada to issue permits, approvals, authorizations and/or licences pursuant to the *Fisheries Act*, the *Navigable Waters Protection Act* and the *Explosives Act* respectively.

The Project is also subject to review under the Ontario *Environmental Assessment Act* as components of the Project trigger the requirement for environmental assessment pursuant to Part II.1 of that Act.

A project description was submitted by the Proponent on March 11, 2010. The Notice of Commencement of the comprehensive study was posted on the Canadian Environmental Assessment Registry Internet Site on April 29, 2010 and subsequently amended on July 19, 2010. The Proponent submitted an addendum to the Project description on July 21, 2010.

On August 24, 2010, Fisheries and Oceans Canada (DFO), Natural Resources Canada and Transport Canada responded to a request from the Canadian Environmental Assessment Agency to provide advice and analysis based on their areas of technical expertise and jurisdictional responsibilities as to whether, taking into account any appropriate mitigation measures, the Project may cause significant adverse environmental effects. DFO and Transport Canada provided advice to the Canadian

Figure 1: Project Location

Environmental Assessment Agency that the Project may result in significant adverse environmental effects. Natural Resources Canada indicated that they did not have sufficient information at the time to determine whether there was the potential for the Project to result in significant adverse environmental effects. Taking this advice into consideration, the Canadian Environmental Assessment Agency recommended that the federal Minister of the Environment refer the Project to a review panel. On October 7, 2010, the Honourable Jim Prentice, Minister of the Environment, announced that the Project will undergo a federal environmental assessment (EA) by way of an independent review panel.

The Government of Canada and the Province of Ontario entered into a joint review panel agreement for the EA of the Project. Components of mining project are typically subject to class environmental assessments under the Ontario *Environmental Assessment Act*. On March 24, 2011, the Proponent entered into a voluntary agreement to make the Project subject to the Ontario *Environmental Assessment Act*. Subsequent to this, the Ontario Ministry of the Environment enacted a Harmonization Order that varies or dispenses with various provisions of the Ontario *Environmental Assessment Act*. This Order indicates that the joint review panel process is equivalent to and fulfills the requirements of the Ontario *Environmental Assessment Act*. These Guidelines incorporate requirements that will satisfy both the federal and provincial legislative requirements.

The Project is also subject to the Major Resource Project Initiative led by the Major Projects Management Office, which works collaboratively with federal departments and agencies, and acts as a single window into the federal regulatory process. Similarly, the Project is also subject to the the One Window Coordination Process led by the Ontario Ministry of Northern Development, Mines and Forestry.

1.2 GUIDING PRINCIPLES

1.2.1 Environmental Assessment as a Planning Tool

Environmental assessment is a planning tool used to ensure that projects are considered in a careful and precautionary manner in order to avoid or mitigate the possible adverse effects of development on the environment and to encourage decision makers to take actions that promote sustainable development and thereby achieve or maintain a healthy environment, healthy communities and a healthy economy.

The EA of this Project shall, in a manner consistent with those purposes:

- consider and evaluate alternatives;
- document consultation activities;
- identify the Project's possible environmental effects (including natural, social, cultural and economic);
- propose measures to avoid activities with the potential for significant adverse environmental effects and to mitigate adverse effects[1]; and

[1] The EIS Guidelines make reference to mitigation measures. In interpreting this phrase, the Proponent shall consider any actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon, or the effects that might be reasonably expected upon, the environment.

- predict whether there will be likely significant adverse environmental effects after mitigation measures are implemented.

1.2.2 Traditional and Local Knowledge

Traditional and local knowledge refers to the broad base of knowledge held by individuals and collectively by communities that may be based on spiritual teachings, personal observation and experience or passed on from one generation to another through oral and/or written traditions. This tradition is dynamic, substantive and distinct living knowledge.

Traditional and local knowledge, in combination with other information sources is valuable in achieving a better understanding of potential effects of projects. Traditional and local knowledge may, for example, contribute to the description of the existing physical, biological and human environments, natural cycles, resource distribution and abundance, long and short-term trends, and the use of lands and land and water resources. It may also contribute to project siting and design, identification of issues, the evaluation of potential effects and their significance, the effectiveness of proposed mitigation, cumulative effects and the consideration of follow-up and monitoring programs.

Traditional knowledge, which is rooted in the traditional life of Aboriginal people, has an important contribution to make to an EA. Certain issues relevant to the review process are firmly grounded in traditional knowledge, such as harvesting, use of lands and resources for traditional purposes, cultural well-being, heritage resources, and others. Although the basis for traditional and local knowledge and science-based knowledge can differ, they may on their own or together, contribute to the understanding of these issues.

The Proponent shall incorporate into the EIS the traditional and local knowledge to which it has access or that it may reasonably be expected to acquire through appropriate due diligence, in keeping with appropriate ethical standards and without breaching obligations of confidentiality.

1.2.3 Sustainable Development

As outlined in the Brundtland Report (1987), sustainable development can be defined as development that seeks to meet the needs of present generations without compromising the ability of future generations to meet their own needs.

Environmental assessment provides a systematic approach for identifying, predicting and evaluating the potential environmental effects of projects before decisions are made. In addition, EA provides the means to identify mitigation measures for adverse effects. Environmental assessment provides an effective means of integrating environmental factors into planning and decision-making process in a manner that promotes sustainable development and contributes to decision making that can ultimately provide net ecological, economic and social benefits to society.

A project that is supportive of sustainable development shall strive to integrate the objective of net ecological, economic and social benefits to society in the planning and decision-making process and shall incorporate citizen participation. The Project, including

its alternative means, shall take into account the relations and interactions among the various components of the ecosystems and meeting the needs of Canadians. The Proponent shall include in the EIS consideration of the extent to which the Project contributes to sustainable development. In doing so, the Proponent shall consider, in particular:

(a) the extent to which biological diversity may be enhanced or affected by the Project;
(b) the capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of present and future generations; and
(c) the extent to which the Project will enhance the long-term environmental, social, and economic viability of the community.

In addition, the Proponent should consider any specific sustainability objectives or plans made available by communities potentially affected by the Project.

1.2.4 Precautionary Approach

One of the purposes of EA is to ensure that projects are considered in a careful and precautionary manner before authorities take a course of action in connection with them, in order to avoid or mitigate significant adverse environmental effects. The precautionary principle informs the decision-maker to take a cautionary approach, or to err on the side of caution, especially where there is a large degree of uncertainty or high risk.

The Government of Canada document *A Framework for the Application of Precaution in Science-based Decision Making About Risk* (2003) sets out guiding principles for the application of precaution to science-based decision making in areas of federal regulatory activity for the protection of health and safety and the environment and the conservation of natural resources.

The Proponent shall indicate how the precautionary principle was applied or considered in the design of the Project in at least the following ways:

- demonstrate that all aspects of the Project have been examined and planned in a careful and precautionary manner in order to ensure that they do not cause serious or irreversible damage to the environment and/or the human health of current or future generations;
- outline and justify the assumptions made about the effects of all aspects of the Project and the approaches to minimize these effects;
- evaluate alternative means of carrying out the Project and compare in light of risk avoidance, and adaptive management capacity;
- in designing and operating the Project, demonstrate that priority has been given to strategies that avoid the creation of adverse effects;
- develop contingency plans that explicitly address accidents and malfunctions;
- identify any proposed follow-up and monitoring activities, particularly in areas where scientific uncertainty exists in the prediction of effects or effectiveness of proposed mitigation measures;
- discuss how the design of monitoring programs will ensure rapid response and correction where adverse effects are detected; and
- present public views on the acceptability of all of the above.

In doing so, the Proponent shall consider the guiding principles set out in the *Framework for the Application of Precaution in Science-based Decision Making About Risk* (2003) referenced above.

1.3 PREPARATION AND PRESENTATION OF THE ENVIRONMENTAL IMPACT STATEMENT

In order to facilitate public review of the EIS, the Proponent is encouraged to make all electronic documents that are submitted for review available in a format that is searchable and includes "copy" functionality.

1.3.1 Study Strategy and Methodology

The Proponent is expected to observe the intent of the EIS Guidelines and to identify all environmental, social, economic, cultural and human health effects that are likely to arise from the Project (including situations not explicitly identified in these Guidelines), the mitigation measures that will be applied, and the significance of any residual effects[2].

It is possible that the EIS Guidelines may include matters that, in the judgement of the Proponent, are not relevant or significant to the Project. If such matters are omitted from the EIS, they shall be clearly indicated with appropriate justification so that Aboriginal groups, the public and other interested parties have an opportunity to comment on this judgement. The Proponent may be required to provide additional information where the joint review panel disagrees with the Proponent's decision to omit certain information.

In describing methods, the Proponent will document how it used scientific, engineering, and traditional and local knowledge to reach its conclusions. Assumptions shall be clearly identified and justified. All data, models and studies will be documented such that the analyses are transparent and reproducible. All data collection methods shall be specified. The uncertainty, reliability and sensitivity of data and models used to reach conclusions will be indicated.

The EIS will identify all significant gaps in knowledge and understanding where they are relevant to key conclusions presented in the EIS. The steps to be taken by the Proponent to address these gaps will also be identified. Where the conclusions drawn from scientific and technical knowledge are inconsistent with the conclusions drawn from traditional knowledge, the EIS will contain a balanced presentation of the issues and a statement of the Proponent's conclusions.

[2] Residual effects refer to those environmental effects of the Project that remain after the implementation of mitigation measures. The significance of environmental effects is only determined on the residual effects that remain after mitigation measures are implemented.

1.3.2 Level of Detail Required in the EIS

The EIS Guidelines provide a framework and outline the minimum information requirements for preparing a complete EIS. However, it is in the interest of the Proponent to collect and undertake additional detailed information and analysis that may be required for obtaining permits and authorizations from federal and provincial authorities, and to integrate this material into the EIS[3]. This will allow the Proponent to present regulatory information requirements conceptually in the EIS, as required, in support of its conclusions regarding the Project's environmental effects.

1.4 OUTLINE OF THE ENVIRONMENTAL IMPACT STATEMENT

The Proponent shall ensure that the EIS is organized in a logical manner that enables the reader to easily follow the analysis. At a minimum, the organization of the EIS shall include the components outlined in the subsections below.

1.4.1 Preface

The EIS shall include a preface that indicates why the document is being prepared and how it has been developed. It will indicate that the Project is subject to review by the Government of Canada pursuant to the *Canadian Environmental Assessment Act*, SC 1992, c.37 and by the Government of Ontario pursuant to the Ontario *Environmental Assessment Act*, R.S.O. 1990, c. E.18. It will identify the parties involved in developing the EIS.

1.4.2 Acknowledgements

The EIS will identify all the consultants involved in preparing the EIS.

1.4.3 Executive Summary

The EIS will contain an Executive Summary, produced as a stand-alone document describing the environmental effects of the Project and the proposed environmental management and mitigation measures. The Executive Summary will contain the following information:

- a concise description of all key facets of the Project;
- a succinct description of the consultation conducted with Aboriginal groups, the public and government agencies, with a summary of the issues raised and solutions found and/or suggested during these consultations;
- a general overview of the key effects of the Project and proposed mitigation measures; and
- the Proponent's conclusions and significance determinations from the assessment.

1.4.4 Abbreviations

A list of abbreviations and glossary of terms will be included in the EIS. The Proponent is encouraged to minimize the use of abbreviations to the extent possible.

[3] For example, there are substantial information requirements associated with approvals under the *Lakes and Rivers Improvement Act (1977),* the *Metal Mining Effluent Regulations*, and, if required, requirements associated with applying to obtain an overall benefit under the *Endangered Species Act*, (2007) that could be incorporated into the EIS.

1.4.5 Organization of the EIS

The Proponent shall avoid repetition by describing, for each valued ecosystem component (VEC)[4], the Project setting, the anticipated effects on the VEC, the proposed mitigation measures, the significance of residual effects, and where relevant, the proposed compensation, in the same section of the EIS. Consideration shall be given to having a stand-alone section for the cumulative effects assessment.

The Proponent shall present the EIS in the clearest possible language and avoid scientific/technical jargon to the extent possible. The Proponent shall provide charts, diagrams, tables, maps and photographs, where appropriate, to clarify the text. Perspective drawings that clearly convey the various components of the Project shall also be provided. Wherever possible, maps shall be presented in common scales and datum to allow for comparison and overlay of mapped features.

For purposes of brevity, the EIS may make reference to information that has already been presented in other sections of the document, rather than repeating it. Detailed studies shall be provided in separate appendices and shall be referenced by appendix, section and page in the text of the main document of the EIS.

To facilitate the identification of the documents submitted and their coding in the Canadian Environmental Assessment Registry, the title page of the EIS and its related documents shall contain the following information:

- project name and location;
- title of the document, including the term “environmental impact statement”;
- subtitle of the document;
- name of the Proponent; and
- date.

The EIS shall specify the organization of the document. This shall include a list of all tables, figures, and photographs referenced in the text of the EIS. A complete list of supporting literature and references will be provided.

The contents of the EIS will include the information outlined in Part 2 of these Guidelines.

1.5 USE OF EXISTING INFORMATION

In preparing the EIS, the Proponent is encouraged to make use of existing information relevant to the Project. When relying on existing information to meet the requirements of various sections of the EIS Guidelines, the Proponent shall either include the information

[4] Valued ecosystem components refer to the environmental element of an ecosystem that is identified as having scientific, ecological, social, cultural, economic, historical, archaeological or aesthetic importance. The value of an ecosystem component may be determined on the basis of cultural ideals or scientific concern. Valued ecosystem components that have the potential to interact with Project components shall be included in the assessment of environmental effects.

directly in the EIS or clearly direct (e.g., through cross-referencing) the reviewers to where they may obtain the information. When relying on existing information, the Proponent shall also comment on how representative the data are, clearly separate factual lines of evidence from inference, and state any limitations on the inferences or conclusions that can be drawn from them according to the criteria for information quality set out in the EIS Guidelines. For instance:

- assumptions shall be clearly identified and justified;
- all data, models and studies shall be documented such that the analyses are transparent and reproducible;
- the uncertainty, reliability and sensitivity of models used to reach conclusions shall be indicated;
- conclusions shall be substantiated; and,
- the studies shall be prepared using best available information and scientifically defensible methods, to the highest standards in the relevant subject area.

1.6 USE OF CONFIDENTIAL INFORMATION

The EIS that is made available for public and stakeholder comment should not contain:

- information that could cause specific, direct and substantial harm to the Proponent, to a witness, or specific harm to the environment (ecologically or culturally significant sites, species of conservation concern[5], etc.) by its disclosure;
- information that is confidential (i.e., financial, commercial, scientific, technical, personal or other nature), that is treated consistently as confidential, and the person affected has not consented to the disclosure; or
- information that is likely to endanger the life, liberty or security of a person through its disclosure.

1.7 TABLE OF CONCORDANCE

The EIS will include a Table of Concordance which cross-references the information presented in the EIS (including appendices and reference material) with the information requirements identified in the EIS Guidelines.

[5] Species of conservation concern includes Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed species or species listed under the federal *Species at Rick Act* or species listed on the Species at Risk in Ontario listed under the *Endangered Species Act* 2007.

PART 2: CONTENTS OF THE ENVIRONMENTAL IMPACT STATEMENT

2.1 INTRODUCTION AND BACKGROUND

The EIS will include an introduction that orients the reader to the EIS by briefly introducing the geographic setting, the Project, the underlying rationale or need for the Project, the Proponent, the provincial and federal review process and the content, organization and format of the EIS.

2.1.1 The Proponent

The EIS will describe the Proponent by providing pertinent corporate information, including the following:

- contact information (i.e., name, address, phone, fax, email etc.);
- history of the Proponent;
- the name of the legal entity that would develop, manage and operate the Project;
- an explanation of corporate and management structures, as well as insurance and liability management related to the Project;
- the mechanism used to ensure that corporate policies will be implemented and respected for the Project;
- a description of the Proponent's record of performance pertaining to environmental and socio-economic issues in past operations;
- the policies with regard to Aboriginal consultation, procurement, community engagement, hiring and corporate social responsibility; and
- key personnel, consultants, contractors, and/or sub-contractors responsible for preparing the EIS, where available.

The EIS will provide information on the nature of the Proponent's management structure and organizational accountability for:

- the design, construction, operation, modification, closure and decommissioning of the Project;
- the implementation of Environmental Management Systems and Plans, mitigation and monitoring; and
- key elements of the environmental and health and safety management systems and how the systems will be integrated into the Project.

2.1.2 Legal Framework and Role of Government

To understand the context of this EA, this section shall identify, for each jurisdiction, the government bodies involved in the EA. The EIS will identify the planning context for the EA of the Project, including government policies, regulations, and land use plans that have a bearing on the Project. The EIS will also identify the local government(s) and applicable official community plans of communities potentially affected by the Project.

The EIS will identify the reasons why the requirements of the *Canadian Environmental Assessment Act* and the Ontario *Environmental Assessment Act* apply. The EIS will identify provincial and federal legislation, agreements, conventions, and key policies and/or guidelines applicable to the Project. The EIS will identify regulatory approvals that may be required for the Project, and which of those approvals, if any, will be requested for concurrent review with the EIS. A table summarizing the regulatory requirements of the Project shall be provided as an appendix to the EIS[6]. Further, the EIS will summarize and discuss the approach, including the role of regulatory bodies, to ensure compliance with existing federal and provincial environmental legislation applicable to the Project.

Appendix A includes a listing of some of the relevant federal and provincial statutes, policies and strategies which are likely to apply to the Project. The Proponent is encouraged to contact the various federal and provincial departments involved in the review of the Project to acquire information regarding potential requirements for permits/authorizations and to assist in meeting the environmental legislative obligations of federal departments and provincial ministries.

2.2 PROJECT DESCRIPTION

2.2.1 Need for and Purpose of the Project

The Proponent shall clearly describe the rationale or need for the Project. This description shall define the problem or opportunity the Project is intending to solve or satisfy. The EIS will identify the main function of the Project. In this context, the EIS will present the fundamental rationale for proceeding with the development at this time within the context of regional, provincial and national economies, as well as global implications of supply and demand on metal prices and markets.

The Proponent is required to clearly describe the purpose of the Project by defining what is to be achieved by carrying out the Project. In addition, the purpose of each of the Project facilities and activities and their relevance to the overall project development plan will also be discussed.

The “rationale or need for” and “purpose of” the Project shall be established from the perspective of the Proponent and provide the context for the consideration of alternatives.

2.2.2 Project Setting

The EIS will include a concise description of the geographic setting in which the Project is proposed to take place and will include site, regional, watershed, and bathymetric maps. The following shall be considered for each map type:

- Site map - shall be to an appropriate scale and show all relevant features of the mine site (e.g., tailings pond, waste rock storage area, etc.);
- Regional map - two shall be provided, one to 1:100 000 scale and a second to a 1:50000 scale;

[6] This table should include the name of the issuing department/ministry, the pertinent act/regulation, and specific permit/authorization/approval required, and the relationship of the regulatory requirement to the Project.

- Watershed map - shall be appropriately scaled and show discharge and sampling locations;
- Bathymetric maps - shall be provided for potentially impacted and reference lakes; and
- Land Use maps – depicting municipal boundaries, mining tenure, claims and leases, Crown land tenure, private land tenure and land use designations.

In addition to the requested maps, in order to illustrate the regional setting and clearly locate the Project within that setting, the EIS shall include site plans at the appropriate scale and photographs (as necessary).

The description of the Project setting shall be focused on those aspects of the environment important for understanding the potential environmental effects of the Project. This description shall integrate the natural and human elements of the environment in order to explain the interrelationships between the physical and biological aspects and the people and their communities. This description may include the following information:

- main ecological constraints of the environment;
- any existing designated environmentally sensitive areas, such as national, provincial and regional parks, ecological reserves, designated fisheries areas, wetlands, estuaries, and habitats of provincial or federally listed species at risk , habitats of bi-national importance, and other sensitive areas;
    - with regard to woodland caribou, the description will include mapping and attribute details of the typical and non-typical habitat of the costal caribou range, as well as in the adjacent discontinuous distribution that overlaps with the study area delineated for caribou impact and effects assessment;
- physical or cultural heritage resources, and built heritage and cultural heritage landscapes;
- the current land use in the area and the relationship of the Project facilities and components with any existing land use including traditional, private and crown lands;
- regional and/or local planning or policy frameworks that relate to the protection of the environment (e.g., Lake Superior Lakewide Management Plan, Great Lakes Bi-National Toxics Strategy, Peninsula Harbour Area of Concern, Caribou Conservation Plan, Cervid Ecological Framework, etc.)
- detailed land requirements;
- local communities; and
- the environmental significance and value of the surrounding area.

The EIS will describe land uses in the project area, including resource development, fishing, recreational use and registered hunting, trapping and guiding areas.

2.2.3 Project Description

The EIS will describe the general layout of the components of the mine site, the location of the transmission line corridor, the new access roads and areas for road upgrades, and

load-out and any other supporting facilities. The EIS will describe the Project as it is planned to proceed, including project phases and activities (construction, operation, modification (if relevant), closure, post-closure, decommissioning and abandonment (if relevant)).

The EIS will contain sufficient detail to be able to identify major mine components or structures which are likely to have a high failure consequence during construction, operation, closure and post-closure and where monitoring efforts will be required for the purposes of risk analysis. In describing the Project, the Proponent is encouraged to consider relevant recommendations in the *Environmental Code of Practice for Metal Mines*, published by Environment Canada (2009). The recommended practices in the Code include the development and implementation of environmental management tools, the management of wastewater and mining wastes, and the prevention and control of environmental releases to air, water and land. The Code is available at http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=CBE3CD59-1.

The description will include an estimated timeline for all phases of the Project and a discussion of all Project components. This information will be provided in sufficient detail to allow the Proponent to predict potential effects and address concerns of interested parties.

The EIS shall include a description of the phases of the Project, including site preparation, construction, operation, modification (if applicable), closure and post-closure, and decommissioning and abandonment (if applicable)[7] as described in the Marathon Platinum Group Metals and Copper Mine Project – Project Description (July 2010) and any subsequent Project updates. In describing the phases of the Project, the Proponent shall include any relevant socio-economic components, such as estimated employment numbers and worker housing and transportation arrangements. The description of project phases shall include, but not be limited to, the following activities:

Site Preparation

- clearing, grubbing and stripping of vegetation, topsoil and other organic material;
- grading with topsoil;
- drilling and blasting to develop the open pits and plant site area;
- excavating and pre-stripping to remove mine rock and overburden;
- preparation of construction surfaces and installation of temporary construction facilities;
- site preparation for waste management;
- management of surface water and groundwater on the site, including seepage and run-off;
- maintenance and management of mine rock and overburden stockpiles (including run-off and seepage) to protect groundwater and surface water quality; and
- monitoring of groundwater and surface water quality and quantity.

[7] The terminology “closure” and “post-closure” is used throughout the EIS Guidelines. However, it is recognized that decommissioning or abandonment activities could occur at any Project phase, in an early closure scenario.

Construction

- construction of administration buildings, storage buildings, other ancillary structures and site services such as parking lots, area fencing, security systems;
- construction of explosives factory and magazine facilities;
- construction of tailings containment dams;
- management of surface water and groundwater on the site, including seepage, run-off, and mill process water;
- maintenance and management of mine rock stockpiles, tailings impoundment areas (TIAs), and the process water pond (including run-off and seepage);
- monitoring of groundwater and surface water quality and quantity;
- construction of water management facilities and drainage works (including but not limited to pipelines, dewatering facilities, storm water management, polishing ponds, and sediment control ponds and mine process water reservoirs);
- dewatering of natural water bodies in the project area;
- construction of new mine site access and haul roads including any water crossings, and water body shoreline works or undertakings;
- upgrading of the existing mine access road(s) and entrance(s) to the project area including any water crossings and water body shoreline works or undertakings;
- construction of a 115kV electrical transmission line within a new right-of-way from the existing sub-station on Highway 626 to the mine site;
- aggregate sources and amounts;
- management of waste;
- fish compensation works; and
- any works or undertakings associated with upgrading a rail load-out facility for mine concentrate.

Operation

- drilling, blasting, loading of mine rock from the pit to mine rock storage areas and the ore to the crusher;
- operation of explosives factory and magazine facilities;
- handling, transportation, use and disposal of explosives;
- transportation of crushed run-of-mine material;
- transportation of mill feed (ore) to the grinding section of the processing facility;
- mill processing;
- transportation of filtered concentrate;
- management and maintenance of the entire mine waste stream, including but not limited to, tailings, waste rock, process water pond, and mine rock;
- decommissioning of the temporary process water pond (proposed during mine operations), including removal or breaching of dams;
- dewatering activities (e.g. open pit);
- management of surface water and groundwater on the site; including seepage, run-off, mill process water and storm water;
- management of surface water on site during dam removal or breaching;
- management of domestic waste from the workers camp;

- management of hazardous waste;
- monitoring activities; and
- environmental safety procedures.

Closure and Post-closure

- installation of security fencing around the pit perimeters;
- management of inputs from groundwater and surface water run-off into pits;
- decommissioning, dismantling and/or disposal of equipment;
- demolition/removal of surface buildings and associated infrastructure and disposal of resulting rubble;
- decommissioning/removal of explosives factory and magazine facilities;
- removal of power lines and electrical equipment;
- decommissioning of the potable water and sewage treatment systems (e.g., settling ponds associated with mine rock storage, roads and plant site);
- maintenance and management of mine rock stockpiles and TIAs (including runoff and seepage);
- following removal of infrastructure, soil, groundwater, and surface water testing for residual contamination, and disposal of contaminated soils and treatment of groundwater and surface water, as required;
- plans for reclamation and restoration of landscape (including water bodies) to productive capacity including management and monitoring;
- management of flooded pits to protect groundwater and surface water quality during flooding and pit overflow; and
- adaptive management, follow-up, compliance and effects monitoring.

2.2.3.1 Mine Plan

The EIS will include an accounting of the defined mineral resource, including measured, indicated and inferred categories. The tonnes mined in the reserve mine plan and grades used will also be included.

The EIS will also include:

- the results of geological, geotechnical and geohydrological site investigations, particularly for the location of the mine rock storage area, tailings impoundments, temporary stockpiles, process water and other facilities and open pits;
- as appropriate, the results for geotechnical site investigations for any other mine site infrastructure (other than those listed above) requiring either shallow or deep foundation systems; and
- as appropriate, details of any geotechnical work undertaken to determine the integrity and stability of infrastructure outside of the mine site, such as the access road, transmission line and concentrate transfer station facilities.

2.2.3.2 Mine Development

Where known, the sequence and scheduling of mine development will be provided, including but not limited to the following components:

- open pit development plan including location, design and production scheduling;

- pit wall management;
- mine rock storage area development plan;
- identification, segregation and management of acid rock drainage / metal leaching (ARD/ML) rock;
- low grade ore stockpile;
- concentrate stockpile;
- overburden storage;
- topsoil storage for reclamation;
- surface and groundwater management activities and facilities (e.g., storm water management ponds, sedimentation ponds, tailings ponds, etc.);
- crushing and conveying ore;
- mine site and access roads and drainage control;
- explosives use, manufacturing and storage facilities;
- dust management and vehicle emissions;
- truck shop and maintenance facilities;
- mine rock storage areas and TIA plan including tailings embankments which will identify location, preliminary designs, preliminary data on geotechnical properties and foundation conditions, seepage and surface water controls. The location and design of major structures will be based on geotechnical investigation and evaluation of foundation condition. Details concerning how these mine components will be maintained throughout all phases will be provided.
- dangerous goods and hazardous material handling, storage and/or distribution;
- borrow sources for dam construction and site preparation;
- condemnation drilling plan in areas of proposed permanent mine structures; and
- construction materials for roads, infrastructure/facilities pads and impoundments.

2.2.3.3 Process Plant

The EIS will describe the process plant, including but not limited to the following components:

- ore storage for the mill and low grade ore;
- tailings characterization;
- physical and chemical ore processing options;
- reagent handling and storage;
- where known, a list of reagents that will be used, including concentrations and quantities to be kept on site;
- concentrate slurry handling, storage and pumping facility;
- TIA with pipeline and reclaim water facilities;
- process water storage reservoir, intakes pipelines and distribution;
- plant runoff and sedimentation control facilities;
- dust management and fugitive emissions;
- spill contingency plans;
- metallurgical and assay laboratories; and
- water budget along with methods to ensure appropriate water sources and a discussion of contingencies should water quantities not be available for drought or

seasonal reasons. Appropriateness may be determined by evaluating the environmental effects of various water-taking options.

Furthermore, the EIS shall describe any waste water management initiatives to be undertaken by the Proponent with respect to the process plant.

2.2.3.4 Maintenance, Administration and On-Site Support Facilities

The EIS shall describe ancillary facilities and operations required at the mine site to support the mining of the ore body. The description shall include, but is not limited to the following:

- mine services buildings;
- power generation facilities;
- explosives storage and associated facilities, including:
    - the type of explosives to be manufactured and stored,
    - maximum quantity of explosives at each facility,
    - specified location, with distances to vulnerable features such as dwellings, roads, camps, etc. The Proponent needs to demonstrate that safety distances required have been considered and met. Explosive magazine locations shall also be specified,
    - fuel and ammonium nitrate storage plans (storage of ammonium nitrate to be in conformance with any guidelines),
    - liquid effluent disposal plans,
    - spill contingency plans, and
    - information on any temporary explosive facilities to be used for starting the Project;
- storage and management of fuels for equipment and vehicles;
- storage and management of hazardous materials, domestic and industrial wastes, used oil, recyclable wastes (types, volumes and disposal methods and waste minimization to be employed);
- proposed monitoring systems and maintenance plans;
- conceptual design details of the freshwater intake screen that will be used to ensure fish are not impinged or entrained in the intake system as per the Fisheries and Oceans Canada (DFO) *Freshwater Intake End-of-Pipe Fish Screen Guideline* (1995);
- surface water diversion, collection or storage works (water balances);
- pumping systems and any pipelines;
- all water supply requirements (e.g., source, volumes, temporal usage); and
- potable water sources.

For all proposed new roads and road upgrades, the EIS will describe the following:

- the entrance to the proposed mine site on the existing provincial Highway 17 that will be utilized during construction and operations;
- road use strategy for any portion of roads located on Crown land;
- existing and new road design specifications;
- the location of water body crossings and preliminary design specifications for any required crossings;

- sources of road construction materials (quarriable materials, gravel, fill); and
- management of runoff, stormwater and sediment control.

2.2.3.5 Off-Site Support Infrastructure for Mine Development and Operations

Support infrastructure for mine development and operations associated with the Project include, a 7km power transmission line and, if required, associated maintenance access routes and the structures for the transport of concentrate.

Electrical Power Supply

The EIS will describe the design of the transmission line and the proposed right-of-way, including the proposed route, including width, and will list any water body crossing. An outline of the schedule and preliminary construction details will be provided. Details concerning lighting or marking requirements will be discussed and information regarding the need for and location of maintenance access routes will be provided. The EIS will also describe maintenance requirements and techniques for the right-of-way.

Transport of Concentrate

The EIS will describe the loading, transport and unloading of concentrate from the mine site to the concentrate transfer station facilities. The EIS will identify the anticipated average number of truck or train trips per day (both to and from the associated facilities), and the anticipated load capacity of concentrate trucks or trains. Concentrate handling, storage and transportation measures designed to reduce or eliminate concentrate discharge to the environment will be discussed.

With respect to road upgrades to Highway 17, the results of the Transportation Impact Study undertaken by the Proponent shall be described in the EIS.

2.2.4 Project Development Schedule

The EIS will provide an estimated timetable and schedule for construction of the Project with an estimate of timing to reach commercial production.

2.3 PROJECT SCOPING

2.3.1 Summary of the Project

Stillwater Canada Inc. proposes to develop and operate the Marathon Platinum Group Metals and Copper Mine Project (the Project) approximately 10 km north of the Town of Marathon. This Project involves the establishment and operation of an open pit mine and mill for the purpose of extracting and processing ore containing copper and platinum group metals and including, but not limited to, any ancillary activities and the activities outlined below:

- the construction and/or use of equipment, buildings and structures;
- the establishment, construction and operation of TIA, explosives factory and magazine facilities, waste rock storage areas, water management facilities, transmission lines, temporary and emergency generation facilities, and activities to mitigate environmental impacts;

- the decommissioning, closure and abandonment of the mine and mine-related infrastructure; and
- the establishment, construction and/or modification and use of transportation infrastructure including access roads, highways and/or rail lines to support the above-mentioned activities and the transport of final mine concentrate(s).

The scope of project shall include all components of the Project as proposed by the Proponent.

2.3.2 Factors to be Considered

The Proponent will include a consideration of the following factors in the EIS. In assessing the environmental effects of the Project, the following definitions of environment and environmental effect, as found in the Joint Review Panel Agreement, shall be used;

"Environment" means,

(a) air, land or water,
(b) plant and animal life, including human life,
(c) the social, economic and cultural conditions that influence the life of humans or a community,
(d) any building, structure, machine or other device or thing made by humans,
(e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
(f) any part or combination of the foregoing and the interrelationships between any two or more of them.

"Environmental effect" means,
(a) any change that the Project may cause in the environment, and
(b) any change that the environment may cause to the Project;
Whether such change occurs within or outside Canada.

The assessment by the Joint Review Panel will include a consideration of the factors listed in subsection 16(1)(a) to (d) and 16(2) of the *Canadian Environmental Assessment Act*, subsection 6.1(2) of the Ontario *Environmental Assessment Act*, and as per subsection 16(1)(e) of the *Canadian Environmental Assessment Act* any other matter relevant to the assessment, including:

a. the purpose of the Project;
b. the rationale or need for the Project;
c. alternatives to the Project (including the "do nothing" alternative), the environmental effects of such alternatives to, and the advantages and disadvantages to the environment of such alternatives to;
d. alternative means of carrying out the Project that are technically and economically feasible, the environmental effects of any such alternative means, and the advantages and disadvantages to the environment of such alternative means;
e. the significance of the environmental effects, including the following:

- 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;

f. measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the Project
g. measures to enhance any beneficial environmental effects;
h. 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;
i. extent to which biological diversity (e.g. ecosystems and/or species diversity) is affected by the Project, including any listed wildlife species, its critical habitat or the residences of individuals of that species as those terms are defined in subsection 2(1) of the federal *Species at Risk Act*, as well as any impact it may have on a provincially threatened or endangered species and/or it's protected habitat;
j. extent of application of the precautionary principle to the Project;
k. the need for, and the requirements of, any follow-up program in respect of the Project.
l. description of the consultation undertaken by the Proponent with the public and Aboriginal groups during the preparation of the EIS;
m. comments from the public and Aboriginal groups that are received during the review; and
n. community knowledge and Aboriginal traditional knowledge and the current use of lands and resources for traditional purposes by Aboriginal persons.

2.3.3 Scope of the Factors

Scoping establishes the boundaries of the EA and focuses the assessment on relevant issues and concerns. By defining the spatial and temporal boundaries, a frame of reference for identifying and assessing the environmental effects associated with the Project will be established. Different boundaries may be appropriate for each VEC.

The effects analysis shall consider the magnitude, aerial extent, duration, frequency and reversibility of residual effects. The analysis shall consider both the cumulative effects and assimilative capacity of the receiving environment. The likelihood of the occurrence of effects should be assessed separately.

The Proponent is expected to continue working with review agencies during development of the EIS to discuss and further clarify the methodology to be used.

2.3.4 Valued Ecosystem Components

The EIS shall explain and justify methods used to predict the effects of the Project on each VEC, which includes biophysical and social, economic and cultural components, the interactions among these components and on the relations of these components within the environment. The information presented shall be substantiated. In particular, the Proponent will describe how the VECs were selected and what methods were used to predict and assess the adverse environmental effects of the Project on these

components. The value of a component not only relates to its role in the ecosystem, but also to the value placed on it by humans. The culture and way of life of the people using the area affected by the Project may themselves be considered VECs. The spatial and temporal boundaries used in the assessment may vary as appropriate, depending on the VEC. For example, with respect to woodland caribou, the spatial and temporal boundaries should be broad in order to assess the effects of the Project on woodland caribou habitat and populations of the continuous distribution coastal range and the discontinuous distribution.

The VECs that will be assessed in the EIS will include, at a minimum:

- atmospheric environment;
- climate change;
- acoustic environment;
- water quality and quantity, including surface and groundwater and the Lake Superior watershed;
- fish and fish habitat (as defined by the *Fisheries Act*), aquatic ecosystems, including benthos and sediment quality and federally and provincially listed species at risk, with particular attention to lake sturgeon;
- terrain and soils;
- vegetation, including country food (e.g. wild game, berries, plants);
- wildlife and wildlife habitat including avifauna, federally and provincially listed species at risk with particular attention to woodland caribou, alternate prey species and their associated predators;
- economic and social environment, including resource uses and human health;
- commercial land and resource use;
- navigable waters;
- physical and cultural heritage resources;
- the current use of Crown lands and resources for recreational purposes; and
- the current use of lands and resources for traditional purposes by Aboriginal people and groups.

This list of VECs in the EIS shall be modified as appropriate by the Proponent, as a result of consultation undertaken with Aboriginal groups, the public, federal and provincial government departments and relevant stakeholders.

2.3.5 Spatial Boundaries

A description of the boundaries of the Project in a regional context showing existing and planned future land use, current and proposed resource development projects, and current infrastructure (i.e. transportation routes, urban areas, and proposed improvements to these infrastructure) shall be provided. A description of any traditional land use and any established or asserted Aboriginal and treaty rights from Aboriginal people and groups within the wider regional context shall be provided.

Sensitive areas including national and provincial parks, wetlands, critical habitats as defined under the *Species at Risk Act* and archaeological sites found within the regional context shall be described. General habitat description or habitat regulations as defined

under the *Endangered Species Act*, 2007, and preliminary woodland caribou population ranges as identified through the Caribou Conservation Plan shall also be described. The study area for the EA shall be based on the aerial extent of project facilities and activities and their likely effects. It shall encompass:

- the immediate mine site plus the corridor for the transmission line and access roads;
- those specific areas in which the direct and indirect effects of the Project may be felt; and
- a wider area for comparison purposes when assessing the significance of those effects.

In determining the spatial boundaries to be used in assessing the potential adverse and beneficial environmental effects, the Proponent shall consider, but not be limited to, the following criteria:

- the physical extent of the Project, including any worker camps, offsite facilities or activities, such as the transmission line corridor, new access road and the concentrate transfer station facilities;
- the extent of cultural heritage resources that may be affected by the Project, including potential built heritage resources and cultural heritage landscapes adjacent to the project area[8];
- the extent of aquatic and terrestrial ecosystems potentially affected by the Project;
- the extent of potential effects arising from noise, light and atmospheric emissions. In assessing the effects of the Project on the atmospheric and acoustic environment, the Proponent shall consider not only the location of potential receptors, but also property lines and other such designations (e.g. land use permit boundaries that are currently zoned for or can otherwise be utilized by sensitive receptors);
- the extent to which species of conservation concern potentially affected by the Project utilize the landscape;
- the extent to which traditional land use, asserted or established Aboriginal and treaty rights could potentially be affected by the Project;
- lands used for residential, commercial, industrial, recreational, cultural, and aesthetic purposes by communities whose areas include the physical extent of the Project; and
- the size, nature and location of past, present and reasonably foreseeable projects and activities which could interact with the items above including any on-going exploration.

These boundaries shall also indicate the range of appropriate scales at which particular baseline descriptions and the assessment of environmental effects are presented. The Proponent is not required to provide a comprehensive baseline description of the environment at each scale, but shall provide sufficient detail to address the relevant

[8] For the purposes of evaluating potential impacts of the Project, "adjacent" means: contiguous properties as well as properties that are separated from a heritage property by a narrow strip of land used as a public or private road, highway, street, trail, right-of-way, walkway, green space, park or easement or as otherwise defined in the municipal official plan"

environmental effects of the Project and the alternative means. The EIS shall contain a justification and rationale for all boundaries and scales chosen.

The geographic study areas for the EIS shall encompass the areas of the environment that can reasonably be expected to be affected by the Project, or which may be relevant to the assessment of cumulative environmental effects. Study areas shall encompass all relevant components of the environment, including people, non-human biota, land, water, air and other aspects of the natural and human environment, notably, traditional land use. Study boundaries shall be defined taking into account traditional knowledge, ecological, technical, social and political considerations.

2.3.6 Temporal Boundaries

The temporal boundaries of the Project shall cover all phases of the Project as well as decommissioning, abandonment and the reclamation of the sites affected by the Project. If the Proponent does not believe the full temporal boundaries should be used, the EIS shall identify the boundaries used and provide a rationale for the temporal boundaries selected.

In characterizing the environmental effects of the Project, the Proponent shall consider the current baseline environment and environmental trends within the study area. The description of the existing baseline and the environmental trends shall include a consideration of past projects and activities carried out by the Proponent and/or others within the regional study area.

In assessing cumulative environmental effects within the study area, the Proponent shall consider the effects of the Project in combination with other past, present and future projects that are either “certain” or “reasonably foreseeable” as defined in Canadian Environmental Assessment Agency’s guidance *Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act* (2007).

As is the case for the determination of spatial boundaries, the temporal boundaries shall indicate the range of appropriate scales at which particular baseline descriptions and the assessment of environmental effects are presented.

The approach taken to determine the temporal boundary of assessment shall take into account the following elements:

- hazardous lifetime of the contaminants associated with waste or with releases to the environment during both normal operation and postulated accidents and malfunctions;
- duration of the operational period;
- design life of engineered design elements;
- duration of both active and passive controls;
- frequency and duration of natural events and human-induced environmental changes (e.g., seismic occurrence, flood, drought, climate change, etc.); and
- duration of the potential for foreseeable adverse environmental effects.

2.4 PROJECT ALTERNATIVES

2.4.1 Assessment of Alternatives and Selection of the Proposed Project

The EIS shall include an analysis of alternative means of carrying out the Project that are technically and economically feasible and the environment effects of any alternatives means. Further, the EIS shall include a consideration of the alternatives to the Project. For further guidance, the Proponent is referred to the Canadian Environmental Assessment Agency guidance document *Addressing 'Need for', 'Purpose of', 'Alternatives to' and 'Alternative Means' under the Canadian Environmental Assessment Act* (CEAA 1998) as well as the Ontario Ministry of Environment document *Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario* (MOE 2009). When assessing project alternatives, the Proponent is encouraged to take into account the relations and interactions among various components of the ecosystem, including affected communities. Further, the Proponent is encouraged to demonstrate how the preferred alternative contributes to sustainable development.

2.4.2 Alternatives to the Project

The EIS shall include an analysis of alternatives to the Project, including the “do nothing” alternative, describing functionally different ways to meet the Project’s need or rationale and achieve the Project’s purpose from the perspective of the Proponent. For each identified alternative to the Project, this section of the EIS shall explain how the Proponent developed the criteria to identify the major environmental, social and cultural, economic and technical costs and benefits of those alternatives, and how the Proponent identified the preferred project based on the relative consideration of the environmental, social and cultural, economic and technical benefits and costs. This shall be done to a level of detail which is sufficient to allow government departments and ministries, the public and Aboriginal groups to compare the preferred project with the alternatives.

2.4.3 Alternative Means of Carrying out the Project

The EIS shall identify and describe alternative means to carry out the various components of the Project that are, from the perspective of the Proponent, technically and economically feasible. If there is more than one alternative means that is technically and economically feasible, the EIS shall also describe the environmental effects of each alternative means. In describing the preferred means, the EIS shall identify the relative consideration of environmental effects, and technical and economic feasibility. The alternative means that were considered but determined not to be technically and economically feasible should be identified and the rationale as to why they were determined not to be feasible should be documented. The criteria used to identify alternative means as unacceptable, and how these criteria were applied, shall be described, as shall the criteria used to examine the environmental effects of each remaining alternative means to identify the preferred alternative.

In addition, the EIS shall identify and describe the alternative means that have been considered to avoid or minimize adverse effects on protected species and habitat. Reasonable alternatives should reflect a broad spectrum of possibilities. An alternative means that would completely avoid adverse effects on the protected species and habitat present on and/or surrounding the activity location must be considered and described.

Alternatives that were considered but were deemed not feasible due to social, economic, technical considerations should also be identified.

2.4.3.1 Assessment of Alternatives for Mine Waste Disposal

With respect to the assessment of alternative means of disposing of mine waste, the following guidance is intended to assist the Proponent in developing a robust assessment of alternatives. The Proponent is encouraged to utilize the methodology provided by Environment Canada outlined below to conduct a robust and thorough assessment of alternatives means of mine waste disposal. The Proponent will also continue to meet with involved parties to ensure that their concerns and input are addressed in the alternatives analysis.

As per Section 2.4.3, the EIS shall also include an assessment of the alternative means of carrying out the Project, which includes the disposal of mine waste. The Proponent has identified the need to use one or more natural water body(ies) frequented by fish for the disposal of mine waste, including tailings and waste rock, as well as the management of process water. If the Project receives the required approvals through the EA process, the Metal Mining Effluent Regulations (MMER) would need to be amended to add these water bodies to Schedule 2 to designate them as TIAs in order to allow the use of water bodies for mine waste disposal. This regulatory process would not be initiated until a detailed assessment of alternatives for mine waste disposal had been undertaken by the Proponent.

It is recommended that the Proponent undertake the assessment of alternatives for mine waste disposal as a component of the EIS to coordinate consultation requirements for both the EA and MMER processes and minimize the time required to proceed with the MMER amendment process.

The assessment of alternatives for the mine waste disposal should objectively consider all available options for mine waste disposal, including options that do not involve the use of a natural water body(ies) frequented by fish as a TIA. This assessment should qualitatively and quantitatively assess the effects of each alternative on the environment. Both the short term impacts of each alternative and the long term risks through the closure and post-closure phases should be assessed. The assessment of alternatives for mine waste disposal shall include all aspects of the Project that may contribute to the predicted impacts associated with the proposed TIA(s). The economic component of the assessment of mine waste alternatives should consider the full costs of each alternative throughout the mine life cycle, from construction through post-closure, including long term maintenance and monitoring requirements, as well as costs associated with the legislated requirement for a compensation plan to offset fish habitat loss.

For further guidance, the Proponent is encouraged to consult Environment Canada's draft *Guidelines for the Assessment of Alternatives for Mine Waste Disposal* (May 2011).

2.5 CONSULTATION

Meaningful involvement in the EA takes place when all parties involved have a clear understanding of the Project as early as possible in the review process. Therefore, the Proponent is required to continue to provide up-to-date information describing the Project to the public and Aboriginal groups, and especially to the communities likely to be most affected by the Project. The Proponent shall also involve Aboriginal people and groups in determining how best to deliver that information (e.g., the types of information required, translation needs, different formats and the possible need for community meetings). The Proponent will also explain the results of the EIS in a clear and direct manner to make the issues comprehensible to as wide an audience as possible.

2.5.1 Aboriginal Consultation

An objective of the overall review process is to involve potentially affected Aboriginal people and groups in order that the EA can identify any changes that the Project may cause in the environment. It shall therefore identify the resulting effects of any such changes on the current use of lands and resources for traditional purposes by Aboriginal persons, physical and cultural heritage, and on 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. The Proponent shall ensure that it engages with Aboriginal people and groups that may be affected by the Project and that have asserted or established Aboriginal and treaty rights.

It is understood that the consultation activities conducted by the Proponent do not release the Crown's own duty to consult Aboriginal people and groups that may be affected by the Project. However, the Crown may delegate the procedural aspects of Aboriginal consultation to a third party and use existing processes to the extent possible. Therefore, the Proponent is expected to gather and include in the EIS information from Aboriginal groups relating to the effects of the Project on the current use of lands and resources for traditional purposes, on physical and cultural heritage, and on 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. Further, information related to the possible impacts of the Project on asserted or established Aboriginal and Treaty rights shall also be included in the EIS, where available.

2.5.1.1 Engagement and Consultation

For the purpose of developing the EIS, the Proponent will continue to consult with Aboriginal people and groups with respect to their perspectives and opinions about the Project and the potential effects of the Project on their Aboriginal interests.

The EIS will include a summary of the consultations undertaken with Aboriginal people and groups prior to the submission of the EIS. The Proponent will also explain the results of the EIS in a clear and direct manner to make the issues understandable to as wide an audience as possible.

For the purposes of facilitating federal and provincial Crown Consultations, the Proponent is required to describe in the EIS how the concerns respecting Aboriginal people and

groups will be addressed. That description shall include a summary of discussions, the issues or concerns raised, and shall consider and describe any asserted or established Aboriginal and treaty rights. The EIS must document the potential effect of the Project on asserted or established Aboriginal and treaty rights, and the measures to prevent or mitigate those potential effects.

The EIS will:

- describe consultations undertaken prior to the submission of the EIS, the methods used and their rationales, perspectives and opinions expressed about the Project, issues raised and the ways in which the Proponent has responded to these issues; and
- outline a proposal for a consultation process with Aboriginal people and groups which the Proponent, as directed by government, intends to carry out for the purposes of the review of the EIS.

In preparing the EIS, the Proponent shall ensure that Aboriginal people and groups have access to the information that they require in respect of the Project and of how the Project may impact them. The Proponent will provide copies of the EIS to Aboriginal groups for information and consultation purposes and during the EIS review stage. The Proponent will consult with Aboriginal groups in accordance with the consultation process outlined in the EIS.

A summary of the completed, ongoing and future consultation with Aboriginal people and groups will be provided. This summary shall include information from each group respecting concerns related to the Project and which asserted or established Aboriginal and treaty rights are potentially affected by the Project and how such rights may be affected. It shall also include a description of how the concerns of groups or potential impacts to asserted or established Aboriginal and treaty rights have been considered or addressed. There shall also be a summary of any outstanding issues that remain.

2.5.1.2 Aboriginal Traditional Knowledge

The EIS will describe where and how Aboriginal traditional knowledge is incorporated into the assessment, including in effects prediction, and determining mitigation measures. Where Aboriginal traditional knowledge is not available or not provided in a timely manner the EIS will describe efforts taken to obtain it.

2.5.1.3 Key Issues

The EIS will include a list and discussion of key issues identified throughout the engagement and consultation activities with Aboriginal people and groups. Information on each issue will be included in a Table of Concordance which in turn will clearly indicate which section of the EIS includes a discussion of the issue.

2.5.1.4 Community Interest and Benefit

The Proponent shall fully consider the interests, needs and ambitions of local and Aboriginal communities in all aspects of the work proposed as part of the Project. The EIS will include details describing how community and Aboriginal interests and benefit intentions, practices and programs have been and will continue to be carried out. The

Proponent shall consult with local and Aboriginal communities to determine how best to incorporate this information into the EA. Details related to benefits that may be accrued to Aboriginal communities as the result of the Project will only be made public with the agreement of the affected communities.

2.5.2 Public Consultation

Public participation[9] is a central feature of the EA process. Meaningful public participation requires the Proponent to address concerns of the general public regarding the potential environmental effects of the Project. In preparing the EIS, the Proponent is required to engage residents and organizations in all affected communities, other interested organizations, and relevant government agencies. The Proponent must provide in the EIS the highlights of this engagement, including the methods used, the results, and the ways in which the Proponent intends to address the concerns identified, including a summary of issues raised during such engagement.

The EIS will:

- describe public consultations undertaken prior to the submission of the EIS, the methods used, perspectives and opinions expressed about the Project, issues raised and the ways in which the Proponent has responded to these issues;
- outline a proposal for a public consultation program that the Proponent plans to carry out for the purposes of the review of the EIS. The location and timing of the proposed open houses and other consultation activities to be undertaken during the review of the EIS will be specified;
- describe the ongoing public consultation activities and any plans for further public consultation about the Project;
- summarize the comments made by the public to-date with respect to the Project; and
- identify the key issues of concern raised by the public and how the Proponent has, or intends to, address them.

The EIS shall also detail consultations undertaken with local governments, stakeholder organizations, and federal and provincial government organizations.

2.6 EXISTING ENVIRONMENT

The EIS shall provide a baseline description of the environment, including the components of the existing environment and environmental processes, their interrelations and interactions as well as the variability in these components, processes and interactions over time scales appropriate to this EIS.

The Proponent's description of the existing environment shall be in sufficient detail to permit the identification, assessment and determination of the significance of

[9] As described in the Canadian Environmental Assessment Agency's Public Participation Guide (May 2008), terms such as "participation," "consultation," "involvement" and "engagement" are often used interchangeably, although they may mean different things to different people. These guidelines endeavor to use these terms in a manner that is consistent with the 'Public Participation Terminology' described in this guidance.

potentially adverse environmental effects that may be caused by the Project, to adequately identify and characterize the beneficial effects of the Project, and provide the data necessary to enable effective testing of predictions during the follow-up program.

The information describing the existing environment may be provided in a stand alone chapter of the EIS or may be integrated into clearly defined sections within the effects assessment of each VEC.

The baseline description shall include results from studies done prior to any physical disruption of the environment due to initial site clearing activities planned as part of the site preparation phase. The baseline description shall include characterization of environmental conditions resulting from historical and present activities in the local and regional study area (see Cumulative Effects section). The EIS shall compare baseline data, in areas on which the assessment will focus, with applicable federal, provincial, municipal or other legislative requirements, standards, guidelines or objectives.

The baseline description shall include those VECs, processes and interactions that are likely to be affected by the Project. The Proponent shall also describe the nature and sensitivity of the area within and surrounding the Project. The Proponent shall also indicate the specific geographical areas or ecosystems that are of particular concern, and their relation to the broader regional environment and economy. Relevant information about the VECs is to be presented graphically to document physical and biological (e.g., home range) characteristics.

If the background data have been extrapolated or otherwise manipulated to depict environmental conditions in the study areas, modeling methods and equations shall be described and shall include calculations of margins of error and other relevant statistical information, such as confidence intervals and possible sources of error. Such information can be included in the main body of the EIS or in supporting documents that are referenced in the EIS.

2.6.1 Physical and Biological Environment

In describing the physical and biological environment, the Proponent shall take an ecosystem approach that considers both scientific and traditional knowledge and perspectives regarding ecosystem health and integrity. The Proponent shall consider the extent to which biological diversity (e.g. ecosystems and/or species diversity) is affected by the Project. The Proponent shall propose and present a rationale for the indicators and measures of ecosystem health, human health, and social health and integrity it uses. These shall be related to project monitoring and follow-up measures.

For the biological environment, baseline data in the form of inventories alone is not sufficient for the purposes of the EIS. The Proponent shall consider the sensitivity/resilience of species populations, communities and their habitats. As appropriate, the Proponent shall summarize pertinent historical information on the size and geographic extent of populations as well as density for both terrestrial and aquatic ecosystems. Habitat at regional and local scales shall also be defined, as appropriate, in

ecological mapping of aquatic and terrestrial vegetation types and species (e.g. ecological land classification mapping). Habitat use shall be characterized by type of use (e.g., spawning, breeding, migration corridors, feeding, nursery, rearing, wintering), frequency and duration. Emphasis shall be on those species, communities and processes identified as VECs. However, the interrelations of these components and their relation to the entire ecosystem and communities of which they are a part shall be indicated. The Proponent shall address issues such as habitat, nutrient and chemical cycles, food chains, productivity, to the extent that they are appropriate to understanding the effect of the Project on ecosystem health and integrity. Range and probability of natural variation over time shall also be considered.

2.6.1.1 Geology

The EIS will provide the following:

- a discussion of the soils, surficial and bedrock geology of the deposit, host rocks, and overburden units, which includes geological maps and cross-sections of soil units, surficial geology units, and bedrock geology units. Where appropriate, the following geologic parameters will be included:
    - representative lithologic descriptions including age, colour, grain size, mineralogy, physical strength, hardness, weathering characteristics, depositional setting and correlations,
    - representative soil descriptions including, but not limited to: depth, texture, classification, colour, grain size, organic matter, hydraulic conductivity and permeability; borehole and test pit logs,
    - spatial distribution and thickness of lithologic units, or links to vegetation and landforms,
    - alteration styles, mineralogy, occurrence and intensity,
    - structural fabric (e.g. fractures, faults, foliation and lineations, etc.) and structural relationships,
    - ore mineralogy, including sulphide types, abundance, mode of occurrence, extent of previous oxidation and an estimate of relative sulphide reactivity,
    - type and grade of metamorphism, and
    - regional geologic framework including tectonic belt, terrain, regional metamorphism and structure;
- delineate the regional and local geological structures in the project area that may affect the proposed infrastructure, and show their potential effect on the proposed infrastructure as well as links to ARD/ML mitigation geochemistry. This includes major structural features as well as lesser local structures.

This information will be used by the Proponent to assist in developing the surface and groundwater quality predictions for the Project.

Acid Rock Drainage and Metal Leaching

Materials at the Project site that shall be investigated for ARD/ML potential include overburden, waste rock, ore and low grade ore, and tailings. Components of the Project that will be assessed for ARD/ML potential include but are not limited to the pit walls,

waste rock dumps, low grade ore and ore stockpiles, tailings/waste rock impoundments, borrow materials, plant site and roads.

The EIS will include:

- a description of the chronology of ARD/ML investigations and the design of an ARD/ML characterization program, including the geological and mine plan context for the additional work;
- predictions of the ARD/ML potential of all materials (bedrock and surficial) to be disturbed or created (i.e. tailings) during all phases (construction, operation, closure and post-closure) of the Project. This will include a discussion of the expected time required for the onset of ARD for each lithological/alteration/waste management unit and mine component, the expected time required to deplete available sources of neutralization, metal leaching and the predicted drainage chemistry for each mine component, including the types and concentrations of major and trace elements;
- a comprehensive discussion of the geology of the deposit and its relationship to ARD/ML potential for all of the lithological units which will be disturbed during mine development, based on the preliminary mine sequence. Where applicable, for each lithological unit, how its origin, field occurrence, alteration, relationship to other lithological units, as well as the mineralogy, textures, structures and materials handling plans affects the potential for ARD/ML will be explained;
- a discussion on how mine sequencing, particularly how changes to sequencing could affect the results of the ARD/ML assessment;
- a description of all the static and kinetic test work conducted to date. This includes a detailed description of the rationale, advantages and disadvantages of the sample selections and the methodology for all test work;
- population assessments for each lithological/alteration/waste management unit. Populations have been assessed in terms of vertical and horizontal distribution and sampling biases to ensure that a waste management unit is properly characterized over its range of variability;
- raw baseline and predictive data from the ARD/ML assessment program that is properly identified and clearly tabulated, with sample calculations, clear interpretations and conclusions for all data. Tabulated data include the number of samples of each lithological/alteration/waste management unit, with minimum, maximum, mean, median, standard deviation, and 10th and 90th percentile values as appropriate;
- clear, concise cross-sections which relate the ARD/ML assessment (static/kinetic sample locations and results), geology and development plans;
- graphical representation of the information collected from the static and kinetic test work. Where appropriate, data presented will include the number of samples of each lithological/alteration/waste management unit and other statistical information, such as minimum, median, maximum, and 10^{th} and 90^{th} percentile values; and
- delineation of source terms, methods and assumptions utilized in the geochemical modeling.

The manual *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (2009) produced by the Mine Environment Neutral Drainage Program is a recommended reference for use in ARD/ML prediction.

2.6.1.2 Atmospheric Environment

The EIS shall describe the climate and meteorological conditions at the site, local and regional study areas. Any off-site data used in the description shall be thoroughly discussed, including an analysis of how representative data are of conditions at the project site. Its use would be qualified with an understanding of local and regional variability and the geographic locations of any on-site and off site meteorological stations.

Climate and meteorological information provided should include:

- air temperature, relative humidity, evaporation, precipitation, wind speed and direction, atmospheric pressure, and solar radiation;
- seasonal variation in weather conditions;
- description of current air quality; and
- occurrence of weather phenomena (i.e. tornadoes, lightning, temperature inversions and fog) with special consideration given to extreme and rare meteorological phenomena.

The influence of regional topography or other features that could affect weather conditions in the study areas shall be described.

2.6.1.3 Acoustic Environment

The EIS shall describe current ambient noise levels at the site and in the local study areas, and include information on its source(s), geographic extent and temporal variations. The description shall also provide ambient noise levels for other areas which could be affected by the Project, such as along the proposed transmission corridor.

2.6.1.4 Water Quality and Quantity

2.6.1.4.1 Hydrology and Hydrogeology

Surface Water

The EIS shall describe surface water hydrology at the site, local and regional study areas. The description shall include delineation of drainage basins at the appropriate scales and a description of hydrological data such as water levels and flow rates collected over the years. The Proponent shall describe hydrological regimes, including monthly, seasonal fluctuations and year-to-year variability of all surface waters. Normal flow, 7Q20 flows[10], flooding, and drought properties of lakes and streams shall be provided. The interactions between surface water and groundwater flow systems that may produce “coldwater” discharges into streams and lakes shall also be addressed. The Proponent shall establish a conceptual plan for long term monitoring and watershed management. This plan shall include a commitment to establish hydrological stations within areas of concern, and the verification of appropriate methods to validate predicted flows over time.

[10] 7Q20 refers to the lowest mean flow for seven consecutive days that has a 20-year recurrence interval period (i.e. a 1 in 20 chance of occurring in any one year).

The EIS will include the following baseline information:

- description of hydrometric monitoring program(s) on site including an assessment of completeness and accuracy of data;
- review of regional hydrometric data and assessment of hydrologic similarity with hydrological conditions found at the project site;
- theoretical residence time for lakes; and
- for each drainage basin that may be impacted by the proposed mine site:
    - mean monthly and annual run-off and streamflow,
    - seven-day low flow estimates for mean annual conditions for the 10-yr return period (7Q10),
    - estimates of peak stream flow with a 100, 50 and 10 year return periods, and
    - an estimate of the provincial regulatory flood event.

Groundwater

This section of the EIS shall provide a detailed description of the hydrogeological environment at the site, local and regional study areas. The description must characterize the physical and geochemical properties of hydrogeological units such as aquitards and aquifers, delineate groundwater flow patterns, identify recharge and discharge areas, and identify groundwater interaction with surface waters. Investigations for the hydrogeological assessment should involve:

- modeling of baseline and anticipated hydrogeological conditions;
- a hydrological model that discusses the hydrostratigraphy and groundwater flow systems;
- intrusive and surface investigations; and
- anticipated or potential changes to groundwater flow and quality related to any surface waters.

These studies shall define the subsurface conditions in enough detail to:

- allow for a reasonable evaluation of the level of groundwater impacts that might occur as a result of the undertaking; and
- predict the main contaminant migration pathways, potential receptors, potential for off-site migration, and expected contaminant attenuation capacities and mitigation.

<u>Baseline Monitoring Framework</u>

A baseline groundwater monitoring framework shall be established in sufficient detail to permit the collection of appropriate data to allow for the identification, assessment and determination of the significance of potentially adverse environmental effects that may be caused by the Project. A groundwater monitoring framework shall be developed which:

- considers all phases of the Project;
- establishes background/baseline hydrogeological conditions, groundwater quality and quantity, both at the site and within the regional study area for the proposed project;
- includes the lithology for all wells from which data was collected;
- identifies potential seasonal fluctuations;

- identifies groundwater to surface water discharge;
- takes into consideration the potential for ARD/ML and the potential impacts due to mine dewatering on baseflow to surface water features, including wetland features;
- identifies water quality objectives from the perspective of socio-economic/human health and ecological health; and
- includes ongoing monitoring of planned site activities.

The monitoring framework shall include groundwater monitoring wells within the footprint of the planned operation works, for baseline characterization and later decommissioning; with an aim of having the majority of the groundwater monitoring wells remaining in-place during all phases of the undertaking.

In developing the baseline monitoring framework, consideration should be given to the fact that provincial Certificates of Approval will be required for any facilities which have the potential for groundwater impact (e.g. waste rock piles, tailings facilities, tailings ponds, waste disposal, subsurface sewage disposal)[11].

Hydrogeological Modeling

An appropriate hydrogeologic model (e.g. 3-Dimensional numerical groundwater flow model) shall be presented for the project area, which discusses the hydrostratigraphy and groundwater flow systems. These models will be used in predicting the influence of the mine construction, operation and closure on groundwater flow, quantity and quality, and performing a quantitative assessment of residual effects for the post-closure period.

The models shall be calibrated against baseline conditions and should be physically tested to confirm the generated models with the groundwater monitoring data for the site. The models shall incorporate the anticipated groundwater seepage locations, rates, seepage quality, and direction, into or from:

- open pits;
- mine rock stockpiles and other stockpiles;
- process solids management areas;
- primary sedimentation pond and process water pond; and
- open pits during any future overflow.

Additional Groundwater Requirements

The EIS shall also include the following information and items related to the hydrogeological assessment for the project site:

- an inventory of existing information on the hydrogeological conditions in the project area, including: published reports, geological maps, and well record data;

[11] The Certificates of Approval will be assessed with respect to the Reasonable Use guideline. Under this guideline, Reasonable Use criteria are based on comprehensive background/baseline water quality data of the existing hydrogeological environment, and incorporation of the Ontario Drinking Water Standards, Objectives and Guidelines, including *Incorporation of the Reasonable Use Concept into MOEE Groundwater Management Activities, Guideline B-7* (1994); *Determination of Contaminant Limits and Attenuation Zones, Procedure B-7-1*; *Ontario Drinking Water Quality Standards, Ontario Regulation 169/03* (2002); and *Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines* (revised June 2006).

- review of the physical geography and geology of the area, as it pertains to local and regional groundwater flow systems and aquifer/aquitard systems;
- description of local and regional potable groundwater supplies, including their current use and potential future use;
- measurements of hydraulic conductivity for all hydrogeological units in the project area;
- hydrogeologic maps and cross-sections for the project area, outlining:
    - the extent of aquifers, including bedrock fracture zones,
    - location of groundwater monitoring wells with respect to proposed facilities and works, topography, and surface water features,
    - location of groundwater divides,
    - location of springs,
    - groundwater flow directions, and
    - groundwater contours (piezometric surfaces).

2.6.1.4.2 Water Quality and Aquatic Ecology

The Proponent shall provide a description of water quality sampling protocols and analytical methods. Where appropriate, maps and figures shall be provided.

The EIS will include the following baseline information:

- description of the monitoring program, including the location of all monitoring locations on site and off site in the receiving systems, and reference sites;
- monitoring protocol for collection of surface water data before and during construction, operation, closure and post-closure;
- details of quality assurance / quality control (QA/QC) protocols;
- analysis of water chemistry, which must include mercury;
- temporal and spatial trends analysis of water quality data, where possible; and
- assessment of productivity measurements (e.g., chlorophyll A).

The Proponent shall describe all surface water sources used for drinking water in the area.

2.6.1.4.3 ***Sediment Quality and Benthos***

The description of the existing aquatic environment shall include information on sediment quality and benthic invertebrate communities, including characterization of the community diversity, distribution and abundance. The baseline sediment data gathered shall be sufficient to support the development of biological monitoring programs and shall assess variation relative to historical data[12].

The EIS will include the following baseline information:

- description of the monitoring program, including the on and off site monitoring locations and reference sites;

[12] The Proponent is encouraged to contact Environmental Canada for specific recommendations regarding the collection of benthic invertebrate community baseline endpoints in relation to the MMER.

- monitoring protocol for collection, including details of timing (for reproducibility of ongoing monitoring) and use of comparable substrates/habitats;
- details of QA/QC protocols;
- details of identification methods for benthos; and
- details of statistical tools and data interpretation.

2.6.1.5 Fish and Fish Habitat

The EIS will include:

- scientifically defensible baseline data that characterizes fish habitat, fish habitat use and fish community, including aquatic species of conservation concern, within each water body and their inter-connecting channel(s) in the context of the local and regional sub-watershed areas. This shall include, as appropriate to the circumstances:
    - the characterization of fish habitat use as spawning, rearing/nursery, feeding, migratory corridor and overwintering/summer refuge,
    - a quantification of habitat by watercourse reach and/or type within the local watershed, including measures such as direction of flow, length of stream, surface area and/or mean bank full width, depths, monthly/seasonal/annual discharge volumes/velocities and natural or anthropogenic barriers to fish passage, and
    - for each potentially affected water body, measures of; total surface area, water elevation above mean sea level, shoal area, surface area of submerged and emergent aquatic vegetation, maximum and mean depths and water quality parameters (e.g., profiles of water temperature, turbidity, pH, dissolved oxygen);
- distribution, abundance and characterization of fish by species and life stages;
- characterization of existing metal levels, including mercury, in fish muscle and liver in areas that may be impacted by effluent or seepage from the mine; and
- the results of fish and fish habitat surveys along proposed new roads and the transmission line right of way.

The adequacy of aquatic baseline data for each water body shall be evaluated based on, but not limited to, such factors as:

- use of appropriate and varied gear type(s);
- adequacy of sampling effort, across all seasons and over multiple years; and
- distribution of sampling effort both temporally and geographically for different habitat types within each water body.

When making a determination of presence/absence of fin fish in water bodies and watercourses within the project area, the Proponent should follow the methodologies and guiding principles presented in Portt *et al* (2008). Any variation form those methods should be scientifically justified and referenced.

2.6.1.6 Terrain and Soil

The EIS will include:

- baseline mapping of soils within the project area, including the transmission line and access roads, to support the effects assessment for all terrestrial disciplines;
- map soil depth by horizon within the mine site area to support soil salvage and reclamation efforts;
- details of soil sample analysis completed and the quality assurance/quality control program followed; and
- summary of baseline data on the concentration of trace elements in site soils prior to Project development.

2.6.1.7 Vegetation

The EIS will characterize the baseline vegetative communities within the area potentially affected by the Project. In particular, the EIS will include information on the following key communities, species groups or ecosystems that have intrinsic ecological or social value:

- forests (e.g. species composition, age, forest unit, volume) including information for all lands to be cleared[13];
- wetland ecosystems;
- riparian ecosystems;
- plant species and ecological communities of conservation concern; and
- description of current proposed forest management activities that overlap with the Project.

2.6.1.8 Wildlife

The EIS shall describe and identify:

- the terrestrial species and their habitat at the site and within the local and regional study areas;
- any species of conservation concern and their associated habitat (general, regulated or critical), with particular attention to woodland caribou[14];
- any wildlife corridors and physical barriers to movement that exist within the project area;
- all protected and conservation areas established by federal, provincial and municipal jurisdictions (e.g. wilderness areas, parks, sites of historical or ecological significance, nature reserves, federal migratory bird sanctuaries and wildlife management areas).

The results of wildlife surveys conducted during the seasons and during times of day which facilitate detection of the target species or species groups will be summarized in the EIS (with further detail provided in accompanying appendices). The following will be provided:

[13]The Ontario Ministry of Natural Resources Forest Resources Inventory information.

[14] The Boreal Population of Woodland Caribou is listed as Threatened under the federal *Species at Risk Act*, and Environment Canada is currently preparing a National Strategy for this population. The national Woodland Caribou, Boreal Population, Recovery Strategy is expected to be posted on the Species at Risk Public Registry (http://www.sararegistry.gc.ca) by the end of summer 2011. Proposed critical habitat will be identified in the Recovery Strategy to extent possible, based on best available information. Once available, the Recovery Strategy should be citied and used in concert with Ontario's Woodland Caribou Conservation Plan.

- identification of species of conservation concern that may occur at any point throughout the year in the project area and information on relative abundance, distribution and habitat use of these species;
- identification of ungulate/cervid species occurring in the project area and along the transmission corridor;
    - the results of aerial surveys to collect data on the relative abundance and distribution of moose, white-tail deer and woodland caribou by season (winter, summer) will be provided and used in conjunction with other data sources (e.g., provincial government surveys and mapping) to verify the habitat mapping and provide a baseline from which to predict and mitigate effects;
- information on the level of use of the mine site area by large carnivores such as black bears and wolves;
- information on furbearer and small mammal species known and potentially occurring in the proposed mine development area. The relative abundance of furbearer species in the area will be described;
- information on raptors and raptor habitat in the proposed mine site area, and their abundance; and
- information on the relative abundance, distribution and density of migratory birds, including:
    - breeding, migration, staging and stopover as well as wintering populations, and
    - available data from Environment Canada and Ontario Ministry of Natural Resources.

Species At Risk

The EIS shall describe and identify any biological species of conservation status at a federal, provincial, regional or local level and their critical habitats, as outlined in the sections above. This includes information pertaining to species of conservation concern (i.e., species listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), species listed under the *Species at Risk Act*, the *Endangered Species Act*, 2007, and species at risk in Ontario) that may occur at any point throughout the year in the project area, including their conservation status and the type of habitat protection they receive under legislation[15].

The EIS shall provide a description of the relative abundance, distribution and habitat use of wildlife species of conservation concern, including a detailed description of the methodology for each species of conservation concern identified. For woodland caribou, the implications of Ontario's Woodland Caribou Conservation Plan in relation to baseline data collection shall be discussed, and, in particular, a discussion of the preliminary caribou population range(s) in which the Project will be located shall be provided (i.e. the Lake Superior Coastal Range and Discontinuous Range). A map which clearly delineates

[15] The Proponent should note that an authorization may be required from the Ministry of Natural Resources for inventory efforts associated with Species at Risk in Ontario-listed species under the *Endangered Species Act*, 2007, as well as under the *Fish and Wildlife Conservation Act* (i.e. Scientific Collectors permit)

the boundaries of the mine and all associated project components (e.g., road, transmission lines, tailings impoundment areas, etc.) in relation to the preliminary caribou population ranges shall also be provided.

EIS shall include the following information:

- summary of the species at risk surveys employed specific to each species at risk and their habitat;
- the number of species and habitat observations recorded in the project area, the dates, times and where appropriate, the geographic coordinates of each species/habitat observation;
- the habitat features found in the project area. Where available, photos of the habitat areas and key features should be submitted; and
- how the habitat is being used by the species to carry out its life processes (e.g. reproduction, rearing, hibernation, overwintering, migration, feeding), any other life process.

A map that clearly identifies each protected species and habitat occurrence found in the project area using points or polygons should be provided.

2.6.2 Socio-Economics, Culture and Human Health

In describing the social, cultural, and economic environment and human health, the Proponent shall provide information on the functioning and health of the socio-economic environment, encompassing a broad range of matters that affect the people and communities in the study area in a way that recognizes interrelationships, system functions and vulnerabilities. A description of the rural and urban settings likely to be affected by the Project shall be provided.

The Proponent shall also describe any agreements with partners with respect to emergency plans or protective actions.

The proponent is encouraged to consult Health Canada's document *Useful Information for Environmental Assessments* (2010) for additional details on the types of baseline information required for the assessment of potential Project effects on human health.

2.6.2.1 Economic Issues

The EIS shall describe the general economic conditions at the local and regional study areas. A description of the local and regional economies shall also be provided, including workforce and employment. Information shall be provided on the available labour supply and rates of employment in the surrounding communities and region.

The EIS will provide a profile of the study area that includes the following information:

- a clear definition, including map representation, of the geographic area under consideration in the effects assessment;
- a general demographic profile of the region, including age groups, gender, family status and social assistance levels;

- a profile of the local labour force and labour market conditions, including a description of the existing labour pool and unemployment rates, particularly as they relate to the types of jobs which will be created by the Project, both during construction and at the operations stage;
- existing economic conditions in the study area; and
- a profile of existing community services.

2.6.2.2 Social Issues

The EIS shall include information regarding community demographics, including but not limited to the following:

- a map identifying the location of nearest human receptors to the Project, including residents and transient residents (e.g. recreational cabins).
- information on existing and projected population densities and distributions in the Town of Marathon, including resident populations and transient populations. Information shall be presented by both Project phase and for the life of the Project;
- information on housing markets and housing availability in the Town of Marathon;
- a description of the proximity of the Project to affected communities in the regional study area; and
- information on fluctuations in population and population attributes (age groups, employment) in the local and regional study area.

The EIS will identify the existing demand for housing in the project area, the existing traffic volumes and patterns in the project area, including local communities. The EIS shall outline the base case conditions for existing community services (i.e. police, fire, ambulance, social services, recreation, justice, commercial, retail and industrial services) that are available to residents. The EIS will also include information on basic infrastructure that is present, such as transportation, public health, municipal water supply, wastewater treatment, and garbage disposal.

2.6.2.3 Resource Uses

The EIS shall describe land use in the local and regional study areas. The Proponent shall identify past, current and planned land use(s) of the study areas or beyond, that may be impacted by the Project. The EIS will include the following information:

- current land tenure and land uses within the proposed mine site area and, as applicable, adjacent to the mine site area;
- a description of recreational fisheries that could be affected by the Project, including water body use, catch success, and the importance of the water body in a regional and provincial context;
- estimates of the current and projected value of the recreational and tourist industry (e.g., fishing, hiking, parks, kayaking, and cottages) for the study areas, including commercial recreation tenures and activities located in the project area;
- estimates of the current and projected value of the hunting, trapping, fishing and guiding industry for the study areas, including the number of trapping and guiding territories in the project area;
- current forest resources and activities in the project area;
- current mining projects and existing mining leases/rights; and

- current agricultural resources and activities.

2.6.2.4 Human Health

The Proponent shall use a broad definition of human health in describing the aspects of human health. The Proponent is encouraged to include all baseline information relevant to human health in one section of the EIS.

The EIS shall describe the current health profiles of the communities likely to be affected by the Project. A description of community and public health services available to the residents of communities and to Aboriginal people and groups in the regional study area shall also be included.

If relevant, the Proponent is encouraged to provide background levels of electric and magnetic fields at selected locations along the proposed transmission corridor for use in the assessment of the potential effects on human health from exposure. If the Proponent is unable to provide this information, a justification or rationale shall be provided in the EIS.

The EIS shall also describe the location of domestic water supplies and any wells used for drinking water within the Town of Marathon, as well as their current and projected use.

2.6.2.5 Navigable Waters

The EIS shall identify all waterways and water bodies that will be directly affected by components of the Project, including representative width, depth, gradient, and flow. Photographs of all potentially affected waterways shall be included in the EIS.

2.6.3 Physical and Cultural Heritage Resources

The EIS shall identify any terrestrial and aquatic areas containing features of historical, archaeological, paleontological, architectural or cultural importance. A description of the nature of the features located in those areas shall be provided.

The EIS will include an archaeological assessment by an archaeologist licensed under the Ontario *Heritage Act,* in order to allow for the assessment of the potential effects of on site and off site components of the Project on known and potential archaeological resources.

2.6.4 Aboriginal Considerations

In keeping with the Guiding Principles of these Guidelines, the EIS shall describe Aboriginal land use at the site and within the local and regional study areas. The EIS shall identify the lands, waters and resources of specific social, economic, archaeological, cultural or spiritual value to Aboriginal people and groups, including Métis, which assert Aboriginal and treaty rights, or in relation to which Aboriginal and treaty rights have been established and that may be affected by the Project.

2.6.4.1 Aboriginal Groups

The EIS will include a description of each Aboriginal group that may be affected by the Project, and how such groups were identified. Potentially affected Aboriginal people and groups include those:

- where any component of the Project will be located within their identified traditional territory, and/or
- who may have asserted or established Aboriginal and treaty rights that may be impacted by the Project.

Where available, traditional territory maps shall be included in the EIS. The EIS shall also include a map indicating where the Project may intersect or overlap the asserted boundaries of Aboriginal Group traditional territories. If this information is not available, the Proponent will outline the effort taken to obtain the information.

There shall also be an attempt to identify any agreements or understanding between various groups' use of the area. The EIS shall also describe why groups have not been included in discussions, particularly if the group has self-identified as having an interest in the project area.

The geographic limits of the analysis undertaken to address considerations of Aboriginal people and groups will be provided, supported with maps as required. The boundaries of the study area will be determining by considering the traditional territories of each Aboriginal group, relative to the Project footprint.

2.6.4.2 Health of Aboriginal People

A discussion on Aboriginal people's health-related traditional activities, including the accessibility to spiritual sites within regional study area will also be included, where available. Health-related traditional activities could include gathering of country foods for consumption (hunting, fishing, trapping, planting and harvesting of plants for medicinal purposes) and activities of spiritual importance.

The Proponent shall provide a description of traditional dietary habits and dependence on country foods and harvesting for other purposes, including harvesting of plants for medicinal purposes. Information on current consumption of country foods and its quality by food type, amounts consumed, parts consumed (whole body as opposed to a specific organ) by Aboriginal people and groups shall be provided, where available.

2.6.4.3 Current Use of Lands and Resources for Traditional Purposes

The EIS will discuss the current use of lands and resources for traditional purposes within the study area, as provided through consultation with Aboriginal groups. Any current use information that is deemed to be sensitive by the respective Aboriginal groups will be described to the level of detailed allowed by the group. Confidential data will not be included in the EIS, as outlined in the Guiding Principles.

Potential areas that are of cultural importance to Aboriginal people and groups at the mine site, transmission line corridor and access roads will also be identified.

Current land use areas can include:

- places where animals are harvested;
- places where plants are harvested;
- places where fish are harvested;
- places where rocks and minerals are collected for tools, weapons, medicines, etc…;
- notable animal use areas (ex. salt licks, breeding grounds, staging areas);
- habitation sites;
- burial groups and grave sites;
- spiritual places, includes places where people have died and places used for spiritual training; and
- travel and trade routes, non-timber resources, such as cedar strips, as indicators of timber resource harvesting sites.

Current use areas can relate to the use of certain specific locations within the overall traditional territory of an Aboriginal group.

2.6.4.4 Aboriginal and Treaty Rights

A discussion of the asserted or established Aboriginal and treaty rights supported with maps, legal cases and treaties as appropriate, will be provided in the EIS.

2.6.4.5 Aboriginal Archaeological Resources

The EIS shall include a discussion of the archaeological, cultural and historical resources in the project area that are of particular interest to Aboriginal people and groups.

2.7 IMPACT ASSESSMENT

2.7.1 Approach to the Effects Prediction, Mitigation Measures and Significance of Residual Effects

2.7.1.1 Effects Prediction

The EIS will describe the effects of the Project on the biophysical, social, economic and cultural environments, on human health and on Aboriginal people and groups. Potential effects from all components of the Project included in the scope of Project, and all project phases, shall be discussed. In predicting and assessing the Project's effects, the Proponent shall clearly state the elements and functions of the environment that may be affected, specifying the location, extent and duration of the effects and their overall effect.

The assessment of the effects of the works and activities associated with all phases of the Project shall be based on a comparison between the predicted future conditions with the Project and the predicted future conditions without the Project. The assessment shall describe the environmental effects of the Project, the mitigation measures proposed to be implemented and an assessment of the effectiveness of those measures. Where mitigation measures are proposed to be implemented for which there is little experience or for which there is some question as to their effectiveness, the potential risks and effects to the environment should those measures not be effective shall be clearly and concisely described.

The EIS will consider the broad range of potential environmental effects but will focus on interactions between the Project and the identified VECs. This section shall also discuss changes to the Project caused by the environment. Each environmental change shall be described in terms of whether it is direct or indirect and positive or adverse.

For the areas on which the assessment is focused, the EIS shall include comprehensive analyses of both the short and long term effects of the Project on the environment. The Proponent shall indicate the degree of certainty in predicting the environmental effects identified. When numerical models are used (e.g., a quantitative ecological risk assessment model, a population level ecological risk assessment model), scientific defensibility should be demonstrated by performing model verification (e.g., peer review of model theory), calibration (e.g., adjusting key parameters to site-specific data), validation (e.g., comparison of predicted to observed), sensitivity and uncertainty analysis.

Where appropriate, the Proponent is expected to employ standard ecological risk assessment frameworks that categorize the levels of detail and quality of the data required for the assessment. These categories are as follows:

- Tier 1: Qualitative (Expert opinion, literature review, and existing site information);
- Tier 2: Semi-quantitative (Measured site-specific data and existing site information); and
- Tier 3: Quantitative (Recent field surveys and detailed quantitative methods).

Thus, if the Tier 2 assessment still indicates a potential for significant negative effects, then a Tier 3 assessment would need to be conducted to reduce the level of uncertainty. If the risk characterization component is uncertain this may necessitate probabilistic modeling about the effect. The Proponent is encouraged to use an impact matrix methodology to evaluate the potential effects of the Project. Where appropriate, the Proponent will present the results of risk assessment as a range of values rather than a single value.

The consideration of views from Aboriginal groups and the public, including any perceived changes attributed to the Project, shall be recognized and addressed in the assessment method.

2.7.1.2 Mitigation Measures

Mitigation is the elimination, reduction or control of the adverse environmental effects of the Project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means. As a first step, the Proponent is encouraged to use an approach based on the avoidance and reduction of the effects at the source. Such an approach may include the modification of the design of the Project or relocation of project components.

The Proponent shall describe the standard mitigation practices, policies and commitments that constitute mitigation measures and that will be applied as part of standard practice. The Proponent shall then describe its conceptual environmental protection plan and its environmental management system, through which it will deliver this plan. The plan shall provide an overall perspective on how potentially adverse effects will be minimized and managed over time. As well, the Proponent shall describe its commitments, policies and arrangements directed at promoting beneficial or mitigating adverse social, economic and cultural effects. The Proponent shall discuss the mechanisms it will use to require its contractors and sub-contractors to comply with these commitments and policies and with auditing and enforcement programs. The Proponent shall indicate which measures respond directly to statutory or regulatory requirements.

For all of the adverse biophysical and social, economic and cultural effects, the Proponent shall present the mitigation measures that they intend to implement. Wherever possible, it shall provide detailed information on the nature of these measures, their implementation, their management and the post-installation follow-up.

All proposed mitigation shall be described by project phase, timing and duration. Sufficient detail shall be provided on methods, equipment, procedures and policies associated with the proposed mitigation that allows the identification and analysis of the significance of the environmental effect of the Project. The Proponent shall discuss and evaluate the effectiveness of the proposed measures and assess the risk of mitigation failure and the potential severity of the consequences of such failures. Information shall be provided on similar mitigation methods used with similar projects and the degree of success achieved.

The EIS shall specify the actions, works, minimal disturbance footprint techniques, best available technology, corrective measures or additions planned during the Project's various phases to eliminate or reduce the significance of adverse effects. The EIS shall also present an assessment of the effectiveness of the proposed mitigation measures. The reasons for judging if the mitigation measure reduces the significance of an adverse effect shall be made explicit.

The Proponent shall indicate what other mitigation measures were considered, including the various components of mitigation, and explain why they were rejected. Trade-offs between cost savings and effectiveness of the various forms of mitigation shall be justified. The Proponent shall identify who is responsible for the implementation of these measures and the system of accountability.

For species at risk defined by the federal *Species at Risk Act*, pursuant to subsection 79(1) of that Act, the Canadian Environmental Assessment Agency shall notify the appropriate federal Minister if any listed wildlife species, its critical habitat or the residences of individuals of that species may be adversely impacted by the Project. Pursuant to subsection 79(2) of the *Species at Risk Act*, if the Project is carried out, responsible authorities shall also ensure that measures are taken to avoid or lessen those effects and to monitor them; these measures shall be taken in a way that is

consistent with any applicable recovery strategy and action plans. Therefore, the Proponent shall include information in the EIS that will allow the Canadian Environmental Assessment Agency and responsible authorities to meet this requirement.

For species at risk listed on the Species at Risk in Ontario List under the *Endangered Species Act*, 2007 as endangered or threatened and where an adverse effect of the Project has been identified to protected species or habitat, the Proponent shall include a description of the reasonable steps that will be taken to minimize adverse effects on individual members of the protected species.

In instances where avoidance of adverse effects to protected species or habitat is not possible, authorization under the *Endangered Species Act* will be required to avoid a contravention. Details regarding eligibility and application for authorization under the *Endangered Species Act* are available on the Ontario Environmental Registry (EBR Registry Number #011-2842 – Endangered Species Act (ESA) Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits).

The EIS shall document the Proponent's plans to verify whether required mitigation measures were implemented. This type of monitoring on its own does not satisfy the requirements for a follow-up program described previously in these Guidelines, but serves to track conditions or issues during the Project lifespan or at certain times. For each environmental component potentially affected by the Project, the EIS shall describe any proposed monitoring programs that will be designed, as outlined in Section 2.8.

2.7.1.3 Compensation

For certain VECs, where adverse residual effects are anticipated and are unavoidable, the Proponent shall implement compensation measures. These measures shall apply both to the biophysical environment and the human environment. The choice of measures is made in cooperation with the users and relevant authorities. Any compensation measures put in place for the Project, including those provided under agreement, shall be described.

The Proponent shall present a compensation program for losses in fish habitat productive capacity that complies with Fisheries and Oceans Canada's policies (see also Section 2.4.3.1 above). The EIS shall identify and characterize the extent to which fish population and fish habitat, the productive capacity of waterbodies, recreation values, wildlife, wildlife habitat and the habitat of species at risk values may be effected and discuss how these effects can be avoided, reduced or mitigated.

With respect to the fish population, fish habitat, the productive capacity of lakes and the fishery they support, the EIS will include a conceptual fish and fish habitat compensation plan. It is expected that this proposed plan will undergo Aboriginal, public and regulatory agency scrutiny and review before being finalized and implemented.

Where there is an impact to protected species such as lake sturgeon or woodland caribou, the *Endangered Species Act* has a requirement for overall benefit to the species

and compensation does not meet the authorization requirements of the *Endangered Species Act*.

2.7.1.4 Cumulative Effects Assessment

The Proponent shall identify and assess the cumulative environmental effects of the Project, including on site and off site components, in combination with other past, present or reasonably foreseeable projects and/or activities within the study areas.[16,17]

Cumulative effects may result if:

- implementation of the Project would cause residual adverse effects on the environment, taking into account the application of technically and economically feasible mitigation measures; and/or
- the same environmental components are affected by other past, present or reasonably foreseeable future projects or activities.

The components of the environment that will not be affected by the Project or will be affected positively by the Project can, therefore, be omitted from the cumulative effects assessment. A cumulative effect on a component of the environment may, however, be important even if the assessment of the Project's effects on this component reveals that the effects of the Project are minor.

Accordingly, the Proponent shall:

- identify and justify the components of the environment that will constitute the focus of the cumulative effects assessment. The Proponent's assessment shall emphasize the cumulative effects on the main VECs that could potentially be most affected by any components of the Project. To this end, the Proponent shall consider, without limiting itself thereto, the following components likely to be affected by the Project:
    - fish and fish habitat, including sediment and benthos;
    - wildlife and wildlife habitat; including provincially or federally listed species at risk,
    - water quality and quantity, including groundwater and surface water resources, aquatic resources and watersheds,
    - economic and social environment, including resource uses and human health, and
    - asserted or established Aboriginal and treaty rights;
- present spatial and temporal boundaries for the cumulative effect assessment for each VEC selected. The boundaries for the cumulative effects assessments will again depend on the effects being considered (i.e., will generally be different for

[16] The Canadian Environmental Assessment Agency's Operational Policy Statement OPS-EPO/2- 2007, *Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act*, and the *Cumulative Effects Assessment Practitioner's Guide* (CEAA 1999) provide further guidance for conducting cumulative effects assessment.

[17] The Caribou Conservation Plan directs the use of cumulative impact assessment to evaluate the status of caribou population ranges and population health and to determine thresholds of landscape disturbance and make decisions on appropriate types and levels of resource use. The Ministry of Natural Resources can provide further guidance to the Proponent in assessing cumulative impacts on woodland caribou.

different effects). These cumulative effects boundaries will also generally be different from (i.e. larger than) the boundaries for the corresponding Project effects;
- identify the sources of potential cumulative effects. Specify other projects or activities that have been or will be carried out that could produce effects on each selected VEC within the boundaries defined, and whose effects would act in combination with the residual effects of the Project. In particular, consideration shall be given to the proposed transmission line routing in combination with other proposed routings. Boundaries shall be determined in consultation with the public, Aboriginal groups, federal and provincial government departments and relevant stakeholders;
- describe the mitigation measures that are technically and economically feasible;
- determine the significance of the cumulative effects. The Proponent shall assess the effectiveness of the measures applied to mitigate the cumulative effects. In cases where measures exist that are beyond the scope of the Proponent's responsibility that could be effectively applied to mitigate these effects, the Proponent shall identify these effects and the parties that have the authority to act. In such cases, the Proponent shall summarize the discussions that took place with the other parties in order to implement the necessary measures over the long term; and
- develop a follow-up program to verify the accuracy of the assessment or to evaluate the effectiveness of mitigation measures for certain cumulative effects.

If the Project is likely to result in improved infrastructure in the area or may facilitate access into the area, the Proponent shall evaluate the likelihood of further development in the area that could result in increased cumulative effects on the same VECs.

The EIS shall describe the analysis of the total cumulative effect on a VEC over the life of the Project, which requires knowledge of the incremental contribution of all projects and activities, in addition to that of the Project. The EIS shall include different forms of effects (e.g., synergistic, additive, induced, spatial or temporal) and identify impact pathways and trends.

The Proponent should also give consideration to developing the cumulative effects assessment as a stand alone document.

2.7.1.5 Determination of the Significance of Residual Effects

The Proponent is expected to take all reasonable precautions to protect the environment. Hence, all reasonable means (e.g., best available technology and economically achievable) are expected to be used to eliminate or mitigate adverse environmental effects. After having established the mitigation and compensation measures, the EIS shall present any residual effects of the Project on the components of the biophysical and human environments persisting despite the proposed mitigative activities.

The EIS shall include a summary of the Project's residual effects so that the reader clearly understands the real consequences of the Project, the degree of mitigation of the effects and which effects cannot be mitigated or compensated for. A summary table that presents the effects before necessary mitigation measures on the various components of

the environment, the mitigation measures applied and the residual effects shall be included in the study.

This approach implies that the proposed mitigation measures shall be considered an integral part of the Project at the time when the significance of the Project's environmental effects is determined. During the course of the Project, the Proponent shall ensure that these measures are effectively implemented.

The EIS shall identify the criteria used to assign significance ratings to any predicted adverse effects. The EIS shall contain a detailed analysis of the significance of the potential residual adverse environmental effects it predicts. It shall contain clear and sufficient information to enable the joint review panel, Aboriginal groups and the public to understand and review the Proponent's judgment of the significance of effects. The Proponent shall define the terms used to describe the level of significance.

The Proponent shall assess the significance of predicted adverse effects according to the following categories, as applicable:

- magnitude of the effect;
- geographic extent of the effect;
- timing, duration and frequency of the effect;
- degree to which effects are reversible or mitigable;
- ecological and social context, including bio diversity; and
- existence of environmental standards, guidelines or objectives for assessing the effect.

The EIS shall clearly explain the method and definitions used to describe the level of the adverse (e.g., minimal, low, medium, high) for each of the above categories and how these levels were combined to produce an overall conclusion on the significance of adverse effects for each VEC. This method shall be transparent and reproducible. The final ranking of overall effect will be based on the following criteria:

- HIGH = Potential effect could threaten sustainability if the resource within the Project study area and should be considered a management concern;
- MEDIUM = Potential effect could result in a decline in a resource within the study area to lower than baseline, but stable, level in a study area after Project closure and into the foreseeable future;
- LOW = Potential effect may result in a slight decline in resource in the study area during the life of the Project; and
- MINIMAL = Potential effect may result in a slight decline in resource in the study area during construction, operation and closure, but the resource should return to baseline levels.

The analysis of the significance of the effects shall contain sufficient information to allow the authorities concerned, Aboriginal groups and the public to understand and evaluate the reasoning of the Proponent.

In assessing significance against these criteria, the EIS shall, where possible, employ relevant existing regulatory documents, environmental standards, guidelines, or objectives such as prescribed maximum levels of emissions or discharges of specific hazardous agents into the environment or maximum acceptable levels of specific hazardous agents in the environment.

If significant adverse effects are identified, the Proponent shall determine the probability that they will occur. The Proponent shall also address the degree of scientific uncertainty related to the data and methods used within the framework of its environmental analysis.

2.7.1.6 Summary of Effects Assessment

For all key valued ecosystem components that were assessed, the Proponent will provide in a table format, a summary of the following key information:

- a concise summary of the Project's beneficial and adverse effects;
- a summary of mitigation and compensation measures;
- a brief description of any potential residual effects;
- a brief description of cumulative effects;
- a determination of the significance of residual effects; and
- for those adverse effects found to be significant, a determination of whether the effect is likely to occur.

2.7.2 Physical and Biological Environment

In conducting the effects assessment on the physical and biological environment, the Proponent shall give consideration to the guidance provided in the following sections.

2.7.2.1 Atmospheric Environment

The baseline climate data collected as per Section 2.6.1.2 will be used to assist in the air quality dispersion assessment and to assist in the hydrology and water management work.

The following documents will be used for guidance in establishing and operating any meteorological stations that may be established:

- Environment Canada AES, 2004. MSC Guidelines for Co-operative Climatological Autostations, Version 3.0 Meteorological Service of Canada, September 2004; and
- World Meteorological Organization, 2006. Guide to Meteorological Instruments and Methods of Observation. Preliminary seventh edition. WMO-No.8. Secretariat of the World Meteorological Organization, Geneva Switzerland.

Criteria Air Contaminants

The EIS will identify potential effects on air quality associated with all project phases, including point and mobile sources. Examples include heavy and light-duty vehicle exhaust, fugitive particulate matter, emissions from the diesel fuel generator and particulate from blasting and ore concentrate transportation.

The analysis will include the following:

- an assessment of emissions and short-term air quality effects from site preparation and construction-related activities, including open burning;
- a source emissions inventory table for the mine site describing the source (i.e. mine rock), operating period, pollution control equipment if any, contaminants (i.e. fugitive dust, PM_{10},VOCs, etc) and predicted concentrations;
- a discussion of:
    - measures considered to minimize the release of greenhouse gases and air contaminants (dust - both emissions and fugitive, particulate exhaust fumes and other air contaminants),
    - atmospheric dispersion of emissions with emphasis on $PM_{2.5}$ and PM_{10} on a local and regional scale,
    - wet and dry acidic deposition resulting from release of gases such as NO_X and SO_X,
    - the worst-case dispersion modeling results (including mapping) and noting the location of key and sensitive receptors,
    - combined predicted cumulative air quality concentrations during the various Project phases with suitably conservative estimates of background concentrations to arrive at the worst-case cumulative air quality concentrations,
    - predicted cumulative air quality concentrations compared with the national ambient air quality objectives and Canada wide standards for air quality and any applicable provincial ambient air quality criteria,
    - impact on biological receptors such as vegetation, fish, wildlife and human health, and
    - demonstration of compliance with applicable federal and provincial air quality standards and guidelines;
- use of an appropriate Air Quality Dispersion Model(s) to:
    - predict ground level concentrations for criteria and other air contaminants in accordance with existing dispersion model guidelines, and
    - assess the potential for effects on human health at sensitive and other receptors, including camps where workers temporarily reside.

Dustfall

The EIS documentation relating to dustfall will consider:

- predicted data for mass of dustfall per area per unit time and predicted metals concentration in the dustfall; and
- measures to mitigate dustfall by exposed tailings beaches, and other sources, during closure and post-closure phases, including the likelihood of establishing and maintaining native plant cover on tailings and other surfaces.

Greenhouse Gases

With respect to Greenhouse Gases (GHGs), the EIS will:

- discuss the analytical techniques and relevant policies considered in the EIS;
- list and estimate the emissions of GHGs predicted for all relevant project sources and compare to Provincial and National totals;
- discuss possible changes in the climate;

- identify mitigation measures considered to control GHG emissions related to the Project; and
- discuss the sensitivity of the Project to changes in specific climate and related environmental parameters, including total annual rainfall, total annual snowfall, frequency and/or severity of precipitation extremes, lake levels and stream flow.

Additional guidance can be obtained from the Canadian Environmental Assessment Agency guidance *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* (2003).

Light Pollution
The EIS will identify potential effects on the environment resulting from artificial light pollution at the mine site, and will provide a description of management measures to mitigate any such effects.

2.7.2.2 Acoustic Environment

The EIS will assess the potential for noise effects resulting from the Project. The EIS will:

- identify and quantify potential noise sources including reference to construction and operational phases as well as to noise associated with loading concentrate into rail cars and increased road traffic;
- identify and evaluate impacts from noise on potential wildlife receptors;
- identify and evaluate impacts from noise on potential human receptors, such as lots zoned for use by traditionally sensitive receptors (e.g. provide residences, cottages, trapper cabins) at property lot lines and/or at land use permit boundaries[18];
- describe the proximity of identified receptors to Project components; and
- describe mitigation and noise management measures to be incorporated into a conceptual Noise Management Plan, including the conditions for mitigation and evaluate compliance with appropriate noise guidelines.

In completing the assessment of the effects of the Project on the acoustic environment, the Proponent shall use the approach outlined in the Ontario Ministry of the Environment Guidelines, including the following:

- Ontario Ministry of the Environment. October 1995. *Sound Level Limits For Stationary Sources in Class 3 Areas (Rural)* Publication NPC-232 (or its successor).

2.7.2.3 Water Quality and Quantity

2.7.2.3.1 Hydrology and Hydrogeology

Surface Water
Utilizing the results of the baseline data, the EIS shall:

- assist in the development of the site water balance;
- document run-off and sediment control works;

[18] Ontario Ministry of Environment document *Procedure D-1-3 Land Use Compatibility: Definitions* (1995) provides appropriate definitions of sensitive land for these purposes.

- determine water supply requirements;
- assess impacts on fish and fish habitat due to modification of stream flows and lake levels; and
- assist in the development of water quality predictions and mitigation requirements.

The EIS will:

- provide an assessment of changes to the hydrologic regime resulting from site construction (deforestation, removal of overburden, dewatering, increased drainage, etc.), operation, closure and post-closure, with a focus on lakes and streams that relate to existing fish, fish habitat and proposed fish compensation plans;
- include details about changes in lake levels and the magnitude of stream flow, timing and duration for normal, dry and wet hydrologic conditions;
- include maps that show future basins delineation, drainage direction, proposed diversions channels and runoff management features;
- include consideration of the effects of climate change and variability on the future flow regime and water balance assessment, hydrology, such as peak flow rates and the location of ice jams that could affect the environment or project infrastructure.

With respect to the water balance for the Project, the EIS will include a detailed water balance for the mill, open pits, TIAs and any other associated infrastructure, during various project activities (construction, operation, decommissioning and abandonment) and throughout the life of the Project, including closure and post-closure phases, for a range of hydrological conditions. The water balance model will include the following:

- an evaluation of the average precipitation scenario as well as a full range of possible wet and dry scenarios. The possible effects of each different precipitation sequence on mine water management activities will be tracked, and the results presented in terms of probabilities of occurrence; and
- the predicted water balance for each year of the mine life and all inflows and outflows in tabular format. Appropriate return periods shall be defined and methodologies for the evaluation of wet, dry and expected scenarios shall be discussed.

With respect to water management, the EIS will:

- predict the surface run-off coefficient and rate of run-off for the different areas of the mine site, and describe contingency plans for extreme run-off events and drought conditions;
- recommend measures for dealing with water inflows to the open pits during operation;
- profile the open pits and show levels to which flooding can be achieved after closure based on hydrology and the pit design and contours and provide predictions with respect to flooding rates and ultimate water levels for the open pits after closure;

- provide the conceptual design features of all collector and diversion ditches, culverts, bridges, and water storage facilities (including sediment ponds and seepage collection ponds);
- provide an assessment and prediction for all site water diversions including volumes, discharge structures and locations, and potential effects on the receiving environment hydrology; and
- identify, map and characterize any faults located in the open pits and the extent of the faults beyond the confines of the open pits. Include an assessment of the hydraulic connection between the open pits and the adjacent water courses; and
- recommend measures for mitigating the effects of the Project on any springs that may be found within the transmission line corridor.

Groundwater

The EIS will:

- provide a groundwater assessment to determine how the Project and related facilities and activities will impact:
    - the local hydrogeological and groundwater units,
    - groundwater flows, quality and quantity, and
    - fish and fish habitat;

  The assessment will outline the need for mitigation and/or monitoring measures, and assist with ARD/ML prediction work;
- provide results of the hydrogeological assessment that determines groundwater seepage location, rates, seepage quality, and direction into or from applicable project features and from the pits during future overflow. Potential seepage to other water bodies will be emphasized and assessed for potential impacts to fish and fish habitat;
- provide drawings and/or figures showing equipotential contours to determine/illustrate projected seepage conditions for applicable Project components;
- provide drawings and/or figures showing groundwater contours (piezometric surfaces) to illustrate projected seepage conditions for the applicable Project components;
- provide a discussion of the potential for off-site migration of impacted groundwater, and an analysis of contaminant attenuation capacities within the hydrogeological units within the project area;
- provide a description of any proposed mitigation strategies for groundwater seepage within the project area;
- provide the results of a groundwater flow model of the local catchment for the post-closure period incorporating all major permanent mine components, including the open pits, TIAs, and mine rock stockpiles;
- include an analysis of the potential for sulphide oxidation within surficial and bedrock units as a result of groundwater drawdown within the project area;
- demonstrate how and if the withdrawal of groundwater, or the creation of physical changes to the aquifers within the project area, will affect the availability of groundwater for applicable users (e.g. mine site facility operations, on-site drinking

water systems) or baseflows in surface water (surface watercourses), thereby causing surface water impacts;
- include a conceptual Water Management Plan for all dams, including flows and levels during construction, operation, closure and post-closure. The assessment shall include diversions and impacts to aquatic systems from increased and decreased surface flows; and
- include effects of surface infiltration on groundwater flows that may affect discharges into streams and lakes.

2.7.2.3.2 Water Quality and Aquatic Ecology

In conducting the effects assessment for water quality and aquatic ecology, the EIS shall include the following:

- graphical presentation of key variables and stream flows over time for key sites to illustrate patterns and variability;
- power and confidence calculations for key variables at key sites once the effects have been predicted to guide future monitoring. Key variables are those that the impact assessment indicate may contribute to degraded water quality, and key sites are those sites where the discharge of key variables might take place;
- the entire range of data in addition to mean values, because extreme events that have serious environmental consequences can be lost when using only mean values. For example, high levels of metals or acidity may occur briefly during the first flush of spring freshet, but could wipe out large numbers of sensitive aquatic organisms present in the receiving waters at that time of the year; and
- all of the data in an appendix, including summaries of the maximum, minimum, mean or median, standard deviation and coefficient of variation for each site.

The EIS shall include a discussion on whether the principle of “zero discharge” into Lake Superior can be met as a result of the Project, as outlined in the Lake Superior Lakewide Management Plan. If the Project will result in discharge to Lake Superior, the EIS Shall describe how changes in water quality resulting from the Project will impact Lake Superior.

The EIS shall integrate results of the ARD/ML prediction work and surface hydrology and water balance information to develop water quality predictions for input into the impact assessment work. The EIS will include the following:

- information describing how current baseline and ongoing surface and groundwater quality and flow rates are anticipated to be altered by individual mine components. Information will focus particularly on the open pits, ore and low-grade ore stock piles, waste rock piles, and TIAs;
- an assessment and prediction of water quality for major mine components (waste rock stockpiles, open pits, low grade ore stockpiles, etc.) and all site water discharges, including groundwater discharge points in lakes and streams, for the different phases of the Project (i.e. construction, operation, closure, post-closure). This assessment shall include volumes, water quality, discharge structures and location, potential effects on the receiving environment and the description of any mitigation strategies and/or treatment processes;

- a description of contingency plans if there are significant uncertainties or risks associated with the predicted water quality, and for dealing with excessive run-off events and drought conditions if necessary;
- strategies for management of surface run-off from the various mine components, including mitigation strategies to separate contact water from non-contact water and how to prevent erosion and sediment discharge during the construction, operational, closure and post-closure phases; and
- details on additional water requirements (if applicable) necessary to maintain full saturation of the potentially acid generating (PAG) material. If exposure is expected, the results of kinetic test work will be provided to assist in the evaluation of potential effects from exposure.

The ARD/ML prediction information will be used to predict water quality for effects assessment and to determine mitigation requirements for the Project. Additional information will be provided on the following:

- waste rock, tailings and low grade ore characterization, volumes, segregation/disposal methods, mitigation/management plans, contingency plans, operational and post-closure monitoring and maintenance plans;
- assessment of the feasibility to successfully segregate PAG and non-potentially acid generating waste materials during operations, proposed geochemical segregation criteria and identification of operational methods that will be required to achieve geochemical characterization during operations (i.e. geochemical surrogates, on site lab, procedures needed, etc);
- sensitivity analysis to assess the effects of imperfect segregation of waste rock;
- estimates of potential lag time to ARD/ML onset for PAG materials (including various waste rock, tailings, low grade ore) and ability to fully saturate PAG materials during operation and post-closure;
- pit water chemistry during operation and post-closure, and pit closure management measures (e.g. flooding). This will include geochemical modeling of pit water quality in the post-closure period;
- surface and seepage water quality from the waste rock dumps, tailings/waste rock impoundment facility, stockpiles and other infrastructure during operation and post-closure;
- analysis of metal leaching under various pH conditions; and
- ARD/ML prevention/management strategies under a temporary or early closure scenario, including low grade ore.

The EIS will also assess the environmental effects on surface water quality from increased sedimentation resulting from erosion associated with timber harvesting along the proposed transmission line corridor.

In conducting the effects assessment on surface water quality, the Proponent shall consider the following:

- effluent characterization and quality predictions. Predicted effluent quality should be directly compared to toxicity data, where available;

- waste discharge and seepage flows, concentrations, and loadings shall be predicted using data from various sources, which include:
    - quantity and quality of groundwater and surface drainage from the area to be mined,
    - if any lakes are to be drained, quantity and quality of water to be released from those lakes into the receiving water,
    - quantity and quality of tailings pore water from milling process tests,
    - quantity and quality of leachate from samples of tailings, waste rock, and ore,
    - mine effluent management (effluent, run-off, seepage) including where mine effluent would be discharged to the environment,
    - quantity and quality of effluent to be released from the site into the receiving waters. and
    - quantity and quality of humidity cell or column test liquid from acid rock testing;
- use of the predicted waste loads in a mass balance model of the mine area to predict the resulting receiving water quality for all Project phases under normal and worst case conditions (e.g., 1-in-10 year flood and low flows);
    - the EIS shall include predictions of waste loads and water quality on a month by month basis for the critical years of mine site development (critical years are those years when worst-case contaminant loads are expected such as during construction, years when significant construction events or water use change occur, milestone years of operation, and at closure);
- assessment of the spatial extent of effects downstream of the Project (e.g., effluent dilution modeling) down to a magnitude that is indistinguishable from natural variability (e.g. baseline plus or minus 2 standard deviations if outside 95% of measured results or some other, well-rationalized criterion); and
- assessment of the environmental effect of the predicted waste loads and receiving water quality under worst case conditions, and assess the environmental effect of the resulting water quality on aquatic organizations using federal and/or provincial water quality objectives.

Modelling shall be used to determine concentration-based effluent limits. In conducting the effects assessment on surface water quality, the Proponent should refer to Ontario Ministry of the Environment document *Deriving receiving-water based, point-source effluent requirements for Ontario waters* (1994).

If applicable, the EIS will include recommendations for developing watershed-specific water quality objectives for key variables on all watercourses with the potential to be impacted by effluent discharge or seepage, with the intent of meeting the Ministry of Natural Resources' fishery management objectives for the area, and taking into consideration provincial water quality objectives and the Canadian Council of Ministers of the Environment (CCME) Canadian Environmental Quality Guidelines for water, sediment and biota, existing baseline conditions for water, sediment and biota quality, and the existing and potential water uses that should be designated for protection, including, if applicable, drinking water.

The EIS will provide details of a surface water quality monitoring program for the mine site. The surface water quality monitoring program shall provide a basis for the formulation of site-specific water quality objectives for the aquatic environment (if applicable), provide the basis for the determination of allowable maximum waste water discharge and seepage rates based on specific water quality objectives and support biological monitoring programs. In particular, any water quality objectives that are developed for the mine site shall be consistent with the goals and objectives that have been developed for the Lake Superior Lakewide Management Plan, including those substances listed in the Lake Superior Zero Discharge Demonstration Program.

The surface water quality monitoring program will include the characterization of the range and measure of water and sediment quality and aquatic ecology characteristics.

The EIS will provide a conceptual surface water quality monitoring program for the transmission line corridor.

2.7.2.3.3 Sediment Quality and Benthos

The EIS shall describe the effects of the Project on sediment quality and on biota as follows:

- discuss how potential changes related to construction, operation, closure and post-closure may affect toxicity and physical habitat requirements (e.g., particle size) for benthos and fish eggs, utilizing sediment quality baseline data;
- identify sediment parameters that may be present at elevated levels, in comparison to applicable federal and provincial sediment quality guidelines, and, if necessary, use this information to propose site-specific sediment quality objectives; and
- invertebrate species.

2.7.2.4 Fish and Fish Habitat

The EIS will identify potential effects on fish and fish habitat during all phases of the Project. Mitigation strategies for avoiding the harmful alteration, disruption and destruction of fish and fish habitat and a compensation plan for unavoidable losses, based on DFO's policy of the Management of Fish Habitat and the related principle of no net loss of the productive capacity of fish habitat will be included.

The potential effects and planned mitigative strategies for avoiding Harmful Alteration, Disruption and Destruction (HADDs) of fish habitat will be identified for the following:

- footprint of development;
- infrastructure development;
- dewatering activities;
- flow changes from water management and diversions; and
- compensation activities.

The analysis of potential effects will consider:

- productive capacity of aquatic systems. This will include consideration of a comparison with other similar habitat or ecosystems in the region and the province and a variety of other parameters such as fish density, biomass or productivity, biomass and diversity and water quality parameters such as nutrients, pH, dissolved oxygen, or temperature;
- all water bodies that may experience changes to Aboriginal, commercial and/or recreational fisheries resources;
- habitat loss or alteration, including aquatic vegetation and sensitive areas such as spawning grounds, nursery/rearing areas, feeding areas, summer/winter refuges and migration corridors;
- species of cultural, spiritual or traditional use importance to Aboriginal people and groups;
- potential for changes in migratory fish behaviour as a result of changes in water quality and quantity; and
- mortality of fish.

The EIS will outline separate conceptual Fish and Fish Habitat Mitigation and Compensation Plans for sub-section 35(2) authorization(s) under the *Fisheries Act* for the HADD of fish habitat, and under the MMER Schedule 2 requirements for the deposit of deleterious mine waste in natural water bodies frequented by fish. Sufficient detail will be provided in each compensation plan to demonstrate that no net loss of productive capacity of fish habitat can be achieved and that plan measures are technically, economically and biologically feasible. It is anticipated that final details for all compensation plan elements will be provided as appropriate once there are agreed upon plans and sub-section 35(2) authorization(s) under the *Fisheries Act* is/are requested, and when MMER approval is sought.

In developing these plans consideration will be given to the following:

- the extent to which mitigation measures considered for routine Project construction, operation and closure related activities developed and guided by best management practices, operational policy guidance and Project specific Environmental Management Plans will reduce or eliminate potential adverse effects of the Project on fish and fish habitat during all phases of the Project;
- appropriate compensation measures to offset unavoidable losses where it is anticipated that mitigation measures will likely not meet the goal of maintaining or enhancing the productive capacity of fish and fish habitat. These measures shall be developed in accordance with DFO's Policy for the Management of Fish Habitat (1986), Practitioners Guide to Habitat Compensation, and provincial policies, guidelines, and Aboriginal, commercial and/or recreational fisheries management objectives; and
- time delays between loss of habitat productive capacity and when replacement habitat is created and becomes functional as well as uncertainty in whether the replacement habitat is likely to function as intended.

The objective is to achieve No Net Loss of productive capacity of fish and fish habitat supporting Canada's Aboriginal, commercial and/or recreational fisheries resources,

taking into account the implementation of any appropriate mitigation and/or compensation measures. Important factors that shall be considered include:

- the level of productive capacity;
- the actual or potential direct and indirect contribution to sustaining the nation's Aboriginal, recreational and/or commercial fisheries resources consistent with local fisheries management objectives; and
- the extent to which compensation measures are demonstrated to be biologically sound, reasonable, and based upon practical and proven techniques.

In addition to DFO's requirement to develop and implement a fish habitat compensation plan, if a project component affects a species at risk, particularly one with a higher status designation and protection under provincial legislation (as is the case for lake sturgeon), the Proponent shall provide an overall benefit plan. The Proponent shall contact the Ontario Ministry of Natural Resources for details regarding the requirements of the overall benefit plan.

Metal Levels in Fish
The EIS will provide details of metal levels in fish. Using the baseline data on metal levels in fish muscle and liver in areas that may be impacted by effluent or seepage from the mine, the EIS shall evaluate changes in metal levels due to the Project.

2.7.2.5 Terrain and Soil

The EIS will identify potential effects on terrain and soil during all phases of the Project. The EIS will provide a terrain and soils survey that will:

- outline a conceptual baseline and monitoring program to assess trace element uptake in soils at mine closure, and where possible, during the mine life;
- outline a conceptual soil erosion and sedimentation plan for the mine site and access road; and
- include details of soil sample analysis completed and the QA/QC program followed.

Based on the results of the terrain and soils survey, the EIS will include an assessment of terrain stability. The information collected from the terrain and soil survey and mapping will be used in the soil salvage and soil erosion control assessments and preparation of the conceptual closure plan. The assessment of terrain stability will also include any maintenance access routes required for the proposed transmission line.

In order to facilitate determination of soil salvage requirements, the rooting depth, soil horizon and depth to growth impediments will be compiled in a tabular form for each profile in each soil management unit. Typical or representative soil profile descriptions shall be appended to the soil survey report.

The terrain and soil survey will be carried out following standard provincial and federal systems. In describing the survey the EIS will reference *The Canadian System of Soil Classification* (Agriculture and Agri-food Canada (1998).

2.7.2.6 Vegetation

The EIS will identify potential effects on vegetation during all phases and on all the components of the Project, including the mine site, transmission line and access road. The Proponent shall develop appropriate mapping products to assist in assessing the effects of the Project on key vegetative communities, and identifying rare ecosystems and species at risk.

The EIS will include a detailed assessment of key indicator communities, species groups or ecosystems that have intrinsic ecological or social value, are representative of overall ecosystem condition and are sensitive to Project activities. The vegetation key indicators that should be assessed include:

- forests;
- wetland ecosystems;
- riparian ecosystems;
- rare plants;
- ecological communities of conservation concern; and
- specific country foods identified by local and Aboriginal people and groups as being important.

The EIS will:

- assess the potential effects of the Project on vegetation, including species known to be important to Aboriginal people and groups;
- document ambient concentrations of trace elements in wetland and upland vegetation to determine the potential for contamination of vegetation that may be consumed by wildlife or people; and
- develop mitigation measures to minimize or eliminate Project effects on vegetation, ecosystem function and wildlife habitat.

With respect to the proposed transmission line, the EIS shall include a discussion of the following issues:

- the potential effects of invasive vegetation within the corridor and proposed methods of controlling invasive or undesired vegetation;
- whether the proposed corridor will be seeded and any potential effects on range movement; and
- identification of access requirements specific to timber harvesting activities within the transmission line and the identification of whether maintenance access routes will be required.

2.7.2.7 Wildlife

The EIS will address wildlife issues for the areas potentially affected by the Project, including the mine site, transmission line corridor and access roads and will include the following:

- the identification and assessment of the potential effects of the Project on cervids, large carnivores, furbearers, small mammals, bats, raptors, waterfowl and other birds, reptiles, and amphibians that may be affected by the Project with particular attention to riparian, wetland, cliff and forest ecotone habitats, where applicable;

- a management strategy for dealing with potential human-bear and human-wolf conflicts;
- a summary of the amount and type of wildlife habitat potentially impacted by the Project. These summaries will include wildlife habitat suitability interpretations for cervids, black bear and species of conservation concern that are known or likely to occur in the project area;
- an analysis to predict the anticipated effects on migratory birds based on anticipated changes in habitat;
- identification of mitigation measures to minimize or eliminate any adverse effects on wildlife, including wildlife habitat, and to reduce potential bird loss resulting from collisions with the transmission line, particularly in the vicinity of wetland, lake and riparian habitats and on migratory corridors; and
- an evaluation of the effect of any new road access and the creation of the transmission line corridor on wildlife mortality risk and movement patterns, and where a concern exists.

Species At Risk

The EIS will address issues related to species at risk for the areas potentially affected by the Project, including the mine site, transmission line corridor and access roads. This will include the identification and assessment of the potential effects of the Project on wildlife species of conservation concern (i.e., COSEWIC-listed species, species listed under the *Species at Risk Act* and/or *Endangered Species Act* and their habitats) including woodland caribou. A description of the reasonable steps that will be taken to minimize adverse effects on individual members of protected species shall be provided.

The EIS shall include an assessment of whether the Project is likely to 'kill', 'harm', or 'harass' an individual member of a protected species and its ability to carry out its life processes. A discussion on the likelihood of the Project to 'damage' or 'destroy' a protected habitat of a species at risk shall also be included.

In addition to those considerations listed in Section 2.7.1.5, when describing the effects the Project may have on species at risk and its habitat, the Proponent should give consideration to the following categories:

- the scale, location, and frequency of all phases of the Project;
- the immediate (short term) and delayed (long term) effects of the Project;
- the availability of the habitat feature(s) (i.e., whether the feature(s) is limited or abundant);,
- the sensitivity of the species to changes in these habitat feature(s) / characteristic(s);
- the life history of the species including the active periods for the species, its normal behavior patterns, how it carries out its various life processes, and it's natural life span;
- the habitat needs of the species that enables it to carry out its life;
- processes and how they support the life process(es) of the species);
- the fidelity of the species to any habitat feature(s)/characteristic(s); and
- the resiliency of these habitat feature(s).

With respect to woodland caribou, the EIS will discuss the effects of the Project on habitat and population management objectives of the relevant Cervid Ecological Zone and Wildlife Management Unit(s) and on the achievement of the following objectives identified in the Caribou Conservation Plan:

- Ontario will develop a management strategy for the discontinuous range management to enhance connectivity between the northern continuous range and the southern coastal Lake Superior populations. This connectivity will improve the prospects for persistence of the coastal population. Discontinuous range will not be managed broadly for caribou habitat to support self-sustaining populations. Instead it will focus on specific landscapes that may support temporary caribou occupancy or movement between the continuous range and Lake Superior.
- where caribou distribution is discontinuous, Ontario will look for opportunities through forest management planning and other land use planning to improve future connectivity between local caribou populations and isolated populations.
- the Lake Superior coastal population will be managed for population security and persistence. The focus will be to protect and manage habitat and encourage connectivity to caribou populations to the north.

2.7.3 Socio-Economics, Culture and Human Health

The EIS shall include an assessment of potential effects of the Project to the social, economic, and cultural environment and to human health. In conducting the effects assessment, consideration shall be given to the guidance provided in the subsections below.

The social, economic and cultural impact assessment shall measure both the positive and negative and direct and indirect effects of the Project on individuals, organizations, communities and governments. Information on any predicted social, economic and/or cultural benefits of the Project will be considered by the responsible authorities in assessing the justifiability of any significant adverse environmental effects.

The principles regarding establishing baseline conditions outlined in Section 2.6.2 shall be applied to the assessment of potential effects on social, economic and cultural issues.

With respect to socio-cultural and socio-economic conditions, the Proponent is requested to clearly identify which social, economic and cultural issues relate directly to changes the Project may cause in the environment.

2.7.3.1 Economic Issues

The EIS will assess the economic impacts of the Project. This includes, but is not limited to:

- an estimate of the direct, indirect and induced income for construction, operation, closure and post-closure phases of the Project;
- the effects of the Project on the Town of Marathon, and on regional and provincial economic development including the benefits of economic diversification;
- a description of future economic activity without the Project;

- an estimate of government expenditures that may be required as a result of development of the Project and describe any proposed measures to offset these expenditures (if any);
- where applicable, any education or training program that the Proponent would provide or sponsor; and
- a labour market analysis profiling the Project labour requirements and labour supply in the project area, throughout Ontario and outside the province.

The EIS will clearly document and include supporting analysis, statistics, rationale or examples and assumptions and information sources used. Where appropriate, the assessment of the various economic effects will consider the context in which those effects occur and a clear distinction between effects on the immediate local area and effects on regional centres will be made.

The EIS will estimate taxes that are net gains i.e. mining royalty, corporate income tax, sales tax on major items and incremental personal income tax and remove taxes that are "fee for services" such as fuel, property, water rentals and various municipal taxes. Estimates used in the economic analysis will be based on reasonable assumptions regarding the successful development and operation of the Project. The estimates will reflect reputable, recent research, techniques or approaches used by other similar studies.

The EIS will discuss the direct workforce requirements for each phase (construction, operation, closure and post-closure) of the Project, develop a labour supply profile for the Project describing employment, unemployment and occupational characteristics, education levels, and experience in the project area and will assess the labour supply required over the life of the Project.

2.7.3.2 Social Issues

Social effects generally include effects on population growth, social characteristics, housing and accommodation, social services, traffic and transportation and community infrastructure.

The EIS will:

- estimate the effects of the Project on the population of the project area, as well as those communities specifically identified, for each major phase (construction, operation, closure and post-closure) of the Project. Family characteristics and local constraints shall be considered in developing refined population increments resulting from the Project;
- estimate the housing requirements and evaluate the settlement options for the construction, operation and closure phases of the Project; and
- provide an assessment of transportation and traffic issues that considers social, economic, health and safety perspectives.

The assessment of workforce settlement and housing will include an assessment of the need for off-site housing and the identification of the type of housing that may be

required. This may include a review of residential development plans in local communities to estimate the future housing supply.

The assessment of traffic and transportation will include the following:

- identification of Project related traffic volumes;
- the identification of the increment of Project traffic to local traffic in affected communities;
- identification and assessment of accident rates along highway routes and potential safety issues and conflicts with existing traffic on access roads;
- evaluation of the new mine site access road in relation to other land uses currently undertaken in the area;
- assessment of the effect of the new access road on other sectors such as the economy and recreation;
- assessment of the demand that will be placed on the rail facilities;
- assessment of the demand for air service; and
- identification of required infrastructure improvements (if applicable).

Community and Health Services

For community services, the EIS will:

- assess the demands that the Project will place on services in the project area and the effect of that demand;
- describe the increase in demand, where possible and reasonable; and
- where practical, distinguish where the Project has the effect of advancing an expansion of capacity verses creating an incremental increase.

For all services assessed, base case conditions as described in Section 2.6.2 will be compared to the forecasted demand for services over the life of the Project. Specific services that will be addressed include, but are not necessarily limited to: police, health care, fire, ambulance, education, social services, recreation, basic infrastructure (water, sewer, and transportation), justice, commercial, retail and industrial services.

In assessing the effect on community services the EIS will:

- assess the demand for services generated by the Project;
- identify specific types of services that are likely to be in greatest demand;
- identify services that will be available on site;
- compare demand to existing capacity and the schedule for expanding capacity in the Project's absence;
- discuss both service ability to deal with general increased demand as well as with emergency situations; and
- identify areas where significant effects may occur.

The EIS will include an assessment of the health effects resulting from the Project and describe any proposed mitigation. This assessment will consider the facilities and services, including the supply of and demand for community based health services, provision of services at the mine site and the interaction between those services and local community services.

2.7.3.3 Effects on Resource Uses

The EIS will assess the potential effects of the Project, including both onsite and offsite components, on other regional economic activities identified, such as forestry, recreation and tourism, and agriculture. The EIS will provide relevant data to identify effects of all phases of the Project on current and forecasted land uses in the region for proposed monitoring, mitigation and compensation measures.

The EIS will also identify all land tenures and land uses potentially affected by all phases of the Project and will accurately delineate the boundaries of the mineral claims so that it is apparent where mine facilities are located relative to the claim boundaries. This identification will include asserted or established Aboriginal and treaty rights, where available. For effects related to Aboriginal use, see Section 2.7.5 below. Overlays for the land tenure and land use maps and spatially referenced databases of proposed mine facilities (e.g. pits, waste dumps, plant site, TIA) will be included in the EIS. The EIS shall also:

- compare current and forecasted land tenure and land uses within the proposed mine site area; and
- determine ancillary land uses/site developments that will be placed on Crown land and that are not covered by the permits, licenses or approvals issued by the province.

With respect to fishing, the EIS will provide an assessment of the effects of all phases of the Project on the commercial and/or recreational lake and stream fisheries affected by the Project, and present mitigation and/or compensation plans. This assessment will provide results of visitor and creel surveys conducted to examine lake and streams use, catch success, and the importance of the lake and streams in a regional and provincial context.

With respect to outdoor recreation and tourism provide an assessment of the effects of all phases of the Project on these activities. In addition, the EIS will:

- identify commercial recreation tenures and activities affected by the Project;
- identify areas that have high wilderness recreational value affected by the Project;
- assess the importance of the areas affected, relative to regional use by residents and visitors; and
- provide an estimate of the value of recreation and tourism in both the project area and in the broader area, including Pukaskwa National Park, and assess the effect of the Project on park and recreation features and on tourism and recreation opportunities.

With respect to hunting, trapping and guiding provide an assessment of the effects of all phases of the Project on these activities. In addition, the EIS will:

- identify the number of trapping and guiding territories affected by the Project and describe the nature of the effect in terms of the specific trapline and guiding area affected;

- assess the importance of the areas affected relative to overall area traplines and guiding territories and, to the extent possible, quantify the effect on guide outfitters and trappers;
- propose mitigation measures for diminished wildlife and wilderness values of the guide outfitter territories and registered traplines affected, where appropriate; and
- identify potential effects on recreational hunting opportunities in the immediate and adjacent areas.

With respect to forestry, the EIS will identify the effect of the Project footprint on the forestry values and targets identified in regional and local resource management plans for the project area such as local and landscape affects to the Kenogami, Pic River Ojibway, Black River and Big Pic Forest Management Plans. The assessment will identify how all phases of the Project will affect both current and future forest resources and uses. This assessment will include a determination of current and future forest resources and activities in the project area. These operations will be quantified to the extent practicable to provide a measure of the scale of activities.

With respect to agriculture, the EIS will include an agricultural assessment completed to identify how all phases of the Project could potentially affect both current and future agricultural resources and activities.

2.7.3.4 Navigable Waters

In order to complete an assessment of the potential effects of the Project on navigable waters, the EIS will:

- identify any Project components that will affect waterways and water bodies, including a description of any activities (e.g., dredging, alteration of water bed and/or water banks) that may affect waterways and water bodies;
- describe any ancillary and temporary works (e.g., cofferdams, detours, fencing, or temporary bridges) including, where available, approximate dimensions;
- describe the anticipated direct and indirect effects on the waterways and water bodies, including, but not limited to, changes in water level and flow; and
- provide information on current and/or historic usage of all waterways and water bodies that will be directly affected by the Project, including current Aboriginal uses, where available.

It is anticipated that upon receipt of the above information, the Navigable Waters Protection Division of Transport Canada will make a determination of the navigability of any waterways or water bodies and appropriate measures or approvals that would be required.

2.7.3.5 Human Health

The EIS shall include consideration of the potential effects of all project phases (i.e. construction, operation, closure and post-closure) when assessing impacts to human health. The EIS will examine the potential effects of the Project on human health, specifically related to potential chemical releases to the environment. The assessment

will involve both quantitative and qualitative risk assessment methods which will be detailed and include consideration of the following:

- water supply and watersheds, including the effect on water supply and quality for local residents, communities and the mine site, as well as potential site and potential health risks from discharges (if any). Any water designated for drinking will be assessed for potential contamination and shall meet Ontario Drinking Water Quality Standards and guidelines. Use of drinking water treatment systems or drinking water alternatives as appropriate will be discussed;
- the effect of the Project on air quality around the mine site, including worker camps, and in the broader study area, and potential health risks from proposed air emissions and dust generated at the mine and by traffic related to the mine; and
- accepted standards or guidelines for protection of human health (e.g. Canada-wide Standards, National Ambient Air Quality Objectives, provincial regulations) for specific criteria air contaminants, including, but not limited to, the following:
    - sulphur oxides [SOx],
    - nitrogen oxides [NOx],
    - particulate matter [PM] including total PM, PM10, and PM2.5,
    - volatile organic compounds [VOCs],
    - carbon monoxide [CO],
    - ammonia [NH3],
    - ground-level ozone [O3], and secondary particulate matter [secondary PM]),
    - air pollutants on the *List of Toxic Substances* in Schedule 1 of the *Canadian Environmental Protection Act, 1999* (Canadian Environmental Protection Act Registry, 1999), and
    - diesel PM;
- where available, information on possible health effects from electro-magnetic field exposure and as appropriate, descriptions of the measures that will be taken to address public concerns over the possible human health effects of project-related electro-magnetic fields;
- the expected duration of noise due to Project activities during all phases and an evaluation of the severity of predicted changes in noise levels and how they may affect human health;
- mitigative measures and monitoring of air quality, water quality, noise, electric and magnetic fields, and country foods, as appropriate; and
- risks to human health from current consumption by Aboriginal people and hunters/trappers of traditional country foods exposed to:
    - pesticides/herbicides used at the mine site or along the transmission line corridor;
    - metal contaminated dust;
    - seepage;
    - runoff or effluent discharges from the mine site (if any);
    - impounded water at the mine site;
    - metal contaminated vegetation growing within the projected dust fall area surrounding Project operations; and
    - soils contaminated by metals.

The Proponent should refer to Health Canada's document *Useful Information for Environmental Assessments* for more details on assessing human health in the EIS.

2.7.4 Physical and Cultural Heritage Resources

Physical and cultural heritage resources shall be considered in the EIS. According to Canadian Environmental Assessment Agency guidance document *Reference Guide: Assessing Environmental Effects on Physical and Cultural Heritage Resources* (April 1996), a cultural heritage resource is a human work or a place that gives evidence of human activity or has spiritual or cultural meaning, and that has historic value. Cultural heritage resources are distinguished from other resources by virtue of the historic value placed on them through their association with an aspect(s) of human history. This interpretation of cultural heritage resources can be applied to a wide range of resources, including, cultural landscapes and landscape features, archaeological sites, structures, engineering works, artefacts and associated records.

When undertaking the effects assessment on cultural heritage resources, the Proponent shall follow the Guiding Principles outlined earlier in these Guidelines.

2.7.4.1 Archaeology

Referencing the recommendations of the archaeological assessment report, the EIS assess the effects of the Project on existing archaeological resources and will include proposed measures to mitigate effects to archaeological resources that conform to the Ministry of Tourism and Culture's *Standards and Guidelines for Consultant Archaeologists* (2011).

These measures may include:

- the identification of archaeological resources that can be preserved intact through project design modifications to avoid and protect archaeological resources;
- site-specific discussions of the process used to select an impact management action from the possible alternative actions;
- justification for selection of preferred mitigation measure; and
- recommendations for a tentative schedule for conducting surveillance or monitoring during project implementations.

2.7.4.2 Built Heritage and Cultural Heritage Landscapes

The EIS will assess the potential effects of on site and off site components of the Project on known and potential built heritage and cultural heritage landscapes.

2.7.5 Aboriginal Considerations

The EIS will provide information regarding the effects of the Project on Aboriginal people and groups interests and on asserted or established Aboriginal and treaty rights at the mine site, and along the transmission line corridor and access roads. Where appropriate, the effects assessment for all VECs shall include consideration of issues of concern to Aboriginal peoples and groups, including the effects of the Project on the current use of lands and resources for traditional purposes.

Based on information provided by Aboriginal groups, or, if Aboriginal groups do not provide this information, on available information from other sources, the Proponent will identify:

- any potential social and/or economic effects to Aboriginal groups that may arise as a result of the Project on a group by group basis;
- any potential effects on current and proposed uses of land and resources by Aboriginal groups for traditional purposes including, but not limited to, hunting, fishing, trapping, cultural and other traditional uses of the land (e.g. collection of medicinal plants, use of sacred sites);
- any effects on lifestyle, culture and quality of life of Aboriginal groups;
- measures to avoid, mitigate, compensate or accommodate effects on the current use of lands and resources for traditional purposes;
- any effects of alterations to access into the area on Aboriginal groups, including deactivation or reclamation of access roads;
- any effects of the Project on heritage and archaeological resources in the project area that are of importance or concern to Aboriginal groups;
- the residual impacts of any effects identified above on asserted or established Aboriginal and treaty rights; and
- a discussion of any factors may inhibit or foster the flow of economic and other benefits to Aboriginal communities.

2.7.6 Accidents and Malfunctions

The EIS will include a discussion of the potential environmental effects that may result from accidents and malfunctions that may occur in connection with the Project. The EIS will:

- identify the probability of potential accidents and malfunctions related to the Project, including an explanation of how those events were identified, potential consequences (including the potential environmental effects), the worst case scenarios and impacts;
- explain the potential magnitude of an accident and/or malfunction, including the quantity, mechanism, rate, form and characteristics of the contaminants and other materials likely to be released into the environment during the malfunction and/or accidental event;
- identify the capabilities, resources and equipment available to safely respond to any accidents and malfunctions; and
- describe the planned response such as communication between stakeholders, and alerting and warning personnel working on the mine site. The EIS will also describe the contingency, clean-up or restoration work that would be required immediately following or in the long-term after the postulated malfunctions and accidents.

The assessment of the environmental effects of potential accidents and malfunctions shall include, but is not limited to those considerations associated with the following Project activities or eventualities:

- the transport of goods which are potentially harmful to the environment, to and from the Project site, including the potential transport of concentrate to an off-site handling facility;
- waste management and disposal (solid and liquid);
- handling and use of chemicals on-site;
- evaluation of worst case scenarios (e.g. tailings impoundment structural failure, accidental explosion);
- premature closure of the Project during any phase;
- controlled and uncontrolled discharges (surface water and groundwater); and
- any other Project component or system that has the potential, through accident or malfunction, to adversely affect the natural environment.

A conceptual Environmental Protection Plan to address potential accidents and malfunctions will be included in the EIS.

2.7.7 Effects of the Environment on the Project

The EIS shall consider any change to the Project that may be caused by the environment. The assessment shall take into account how local water conditions and natural hazards, such as severe weather conditions and external events could adversely affect the Project. Longer-term effects of climate change shall also be discussed up to the end of the projected post-closure phase of the Project.

The EIS will provide details of a number of planning, design and construction strategies intended to minimize the potential effects of the environment on the Project. The EIS will consider the following types of natural environmental issues or events that could have an effect on the Project:

- climate change, including the potential long term effects of changing groundwater and surface water levels on maintaining an adequate water cover in the TIAs;
- extreme weather (severe rainstorms, snow storms, flood events, wind, drought);
- forest fires; and
- seismic activity.

Consideration of applicable climate elements shall include, but not be limited to:

- an estimate of its importance to the Project;
- an estimate of how sensitive the Project is to variations of this element;
- a discussion of climate data used; and
- changes in lake levels, stream flow.

The sensitivity of the Project to long-term climate variability and effects shall be identified and discussed. The Canadian Environmental Assessment Agency Procedural Guide, *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* (2003), provides guidance for incorporating climate change considerations in an EA.

2.7.8 Capacity of Renewable Resources

The EIS will include an assessment of 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. The EIS shall identify those resources likely to be significantly affected by the Project, and describe how the Project could affect their sustainable use. The EIS shall also identify and describe any criteria used in considering sustainable use. Sustainable use may be based on a range of ecological considerations, such as:

- integrity of the ecosystem;
- productive capacity of the resource;
- carrying capacity of the ecosystem;
- assimilative capacity of the ecosystem;
- resilience of the affected ecosystems to respond to internal and external changes; and
- cumulative environmental effects with other projects.

2.8 ENVIRONMENTAL MANAGEMENT

The EIS will describe the Proponent's Environmental Management System (EMS) for the Project. The objective of the EMS is to provide a consistent approach to environmental management through resource allocation, the assignment of responsibilities and ongoing evaluation of environmental practices, procedures and processes. The EMS is part of an overall corporate management system which includes organizational structure, planning and training activities, staff responsibilities, practices, procedures and resources for developing, implementing, reviewing and maintaining environmental policies associated with the Project.

Environmental Management Plans (EMPs) are an essential component of the EMS. The purpose of the EMPs is to ensure that proper measures and controls are in place in order to prevent or decrease the potential for environmental degradation during all phases of project development, and to provide clearly defined action plans and emergency response procedures to account for human and environmental health and safety. Furthermore, analysis of the data obtained as a result of enacting the EMPs can be used to confirm any project specific assumptions and make corrective plans where necessary. The EMPs should also be used as a means of implementing the mitigation measures identified through the environmental assessment and any follow-up requirements. The EMPs will serve to provide guidance on specific actions and activities that will be implemented to decrease the potential for environmental degradation during construction and operation, and to clearly define the Proponent's ongoing environmental commitment.

2.8.1 Environmental Management Plans

The EIS shall describe the conceptual EMPs proposed for all stages of the Project and include a commitment by the Proponent to implement the EMPs should the Project proceed. The finalization of detailed EMPs will occur after the EA through consultation with federal and provincial government agencies, Aboriginal groups, the public and other stakeholders and must be consistent with the information presented in the EIS. The EMPs will incorporate the results of the EIS with respect to identifying areas which would

benefit from the development of an EMP and identifying mitigation and follow-up and monitoring requirements. The EMPs will include direction on the following, as appropriate for the Project phase:

- construction management;
- access management;
- concentrate transfer station management;
- tailings impoundment operations plan;
- materials handling (non-mined materials);
- emergency response and spill contingency, including measures taken to prevent spills, such as policies, procedures and protocols;
- geotechnical stability monitoring;
- soil salvage and storage plan;
- surface erosion prevention and sediment control;
- air quality management;
- noise Management;
- water quality/quantity management and monitoring;
- waste management;
- ARD/ML management;
- vegetation management, including invasive species;
- protection of migratory birds
- bear-human and wolf-human conflict management;
- cultural and heritage protection;
- reclamation and closure;
- occupational health and safety;
- follow-up and monitoring;
- surface water and groundwater quality and quantity management, and monitoring; including controlled and uncontrolled seepage, run-off, and discharge;
- follow-up , compliance and effects monitoring of groundwater and surface water quality and quantity during closure and post-closure; and
- others, as appropriate.

The EIS shall also identify any EMPs or other mitigation tools that can be used to minimize potential effects on Aboriginal people and groups. Such EMPs and/or related mitigation tools will be developed in consultation with the Aboriginal groups, and may include:

- archaeological and heritage resources monitoring plan;
- traditional use monitoring plan; and
- others, as needs are identified.

2.8.2 Decommissioning and Closure Plan

The EIS will include details of a conceptual decommissioning and closure plan for the Project according to the information requirements of the Ontario Regulation 240/00 of the *Mining Act*. This shall include ownership, transfer and control of the different project components as well as the responsibility for monitoring and maintaining the integrity of some of the structures. The plan will include information on:

- short and long term plans for the dams in regard to water flows and levels;
- monitoring of biotic resources affected by the dams or diversions;
- residual soil;
- vegetated areas that will/will not be reclaimed;
- vegetative communities and species to be renewed;
- groundwater, and surface water contamination;
- maintenance and/or management of open pits, mine rock stockpiles, permanent TIAs; and
- anticipated pit overflow.

The full preparation and submission of the plan to appropriate authorities will occur prior to the decommissioning of the temporary components of the Project. The Plan will serve to provide guidance on specific actions and activities that will be implemented to minimize the potential for environmental degradation in the long-term during decommissioning and abandonment activities, and to clearly define the Proponent's ongoing environmental commitments[19].

2.8.3 Monitoring and Follow-up Programs

The Proponent shall include a framework upon which follow-up and effects monitoring, and compliance monitoring will be based throughout the life of the Project, including the post-closure phase, should the Project proceed.

Compliance Monitoring Program

The EIS shall discuss the monitoring program for the Project. Compliance monitoring verifies whether the Proponent has implemented the required mitigation measures and fulfilled the provisions of the environmental assessment with respect to public consultation, requirements for additional studies or work to be completed and all other commitments. The Proponent shall describe the compliance monitoring methods to be used, including reporting frequency, methods and format.

The Proponent shall propose a schedule for the compliance monitoring program. The schedule shall indicate the frequency and duration of monitoring. This schedule would be developed after statistical evaluation of the length of time needed to detect effects given estimated baseline variability, likely environmental effect size and desired level of statistical confidence in the results.

The results of the compliance monitoring program shall be used in the follow-up program, as outlined below.

Follow-up and Effects Monitoring Program

The EIS shall outline a follow-up and effects monitoring program, designed to verify the

[19] As a condition of the *Mining Act* (Sec. 145), financial assurance is required for all outstanding costs associated with mine reclamation. In the case of company default, the financial assurance would be used by government to effectively manage environmental issues at the site, complete any outstanding reclamation, and continue to monitor and maintain for as long as is required.

accuracy of the conclusions of the environmental assessment and to determine the effectiveness of the measures implemented to mitigate the adverse environmental effects of the Project. The follow-up and effects monitoring program will also support the EMS used to manage the environmental effects of the Project and support the implementation of adaptive management measures to address previously unanticipated adverse environmental effects. The EIS will discuss follow-up and effects monitoring program objectives, which shall include confirming the effectiveness of mitigation measures, confirming that assumptions made in the EIS were appropriate and verifying predicted effects.

The follow-up and effects monitoring program shall be designed to incorporate pre-Project information which would provide the baseline data, compliance data such as established benchmarks, regulatory documents, standards or guidelines, and real time data which would consist of observed data gathered in the field. Environmental assessment effects predictions, assumptions and mitigation actions that are to be tested in the follow-up and effects monitoring program shall be converted into field-testable monitoring objectives, as discussed below.

The description of the follow-up program shall include any contingency procedures/plans or other adaptive management provisions as a means of addressing unforeseen effects or for correcting exceedances as required to comply or to conform to benchmarks, regulatory standards or guidelines.

The follow-up and effects monitoring program shall describe roles and responsibilities for the program and its review process, by both peers and the public.

The EIS shall provide a discussion on the need for, and requirements of, a follow-up and effects monitoring program and include:

- the need for such a program and its objectives;
- a tabular summary and explanatory text of the main components of the program, including:
    - description of each monitoring activity under each component,
    - discussion on which of the program objectives the activity is fulfilling (i.e. confirming mitigation, confirming assumptions; verifying predicted effects),
    - specific statement from the EA that goes along with that generic objective and will be the focus for that activity, such as the example below:
        - follow-up objective: verify predicted effects,
        - environmental assessment effect: no adverse effects at the population level for white-tailed deer because of vehicle strikes due to increased traffic within the site study area,
    - specific monitoring objective for that activity, such as the example below:
        - monitoring objective: record occurrence of vehicular collisions with deer on-site to verify predicted effects;
- how the program would be structured;
- a schedule for the finalization and implementation of the follow-up program;

- roles to be played by the Proponent, regulatory agencies, Aboriginal people and groups and others in such a program;
- possible involvement of independent researchers;
- the sources of funding for the program; and
- information management and reporting.

The follow-up program shall be described in the EIS in sufficient detail to allow independent judgment as to the likelihood that it will deliver the type, quantity and quality of information required to reliably verify predicted effects (or absence of them), confirm assumptions from the environmental assessment and confirm the effectiveness of mitigation.

The EIS shall also include a description of how the Proponent's responses to Aboriginal issues and concerns will be monitored during Project construction and operation, and during decommissioning and abandonment of temporary facilities and will outline any process for handling issues that may arise (e.g. stop work plans, modification of design, etc.).

2.9 TABLE OF COMMITMENTS

The EIS shall summarize the Proponent's key commitments in implementing mitigations, contingency plans, monitoring, taking corrective actions, reclaiming the site and providing offsets for unavoidable Project effects. The summary of commitments shall include:

- a summary of all significant management commitments;
- any applicable standards, legislation and/or policies;
- a discussion of any special management practices or design feature commitments; and
- a table summarizing the timing and responsibility for each of the actions for which a commitment has been made.

2.10 ASSESSMENT SUMMARY AND CONCLUSION

This section of the report shall summarize the overall findings with emphasis on the main environmental issues identified.

2.11 REFERENCES

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Portt, C.B., Coker G.A., Mandrak N.E., and Ming D.L. 2008. Protocol for the detection of fish Species at Risk in Ontario Great Lakes Area (OGLA). Fisheries and Oceans Canadian. Canadian Science Advisory Secretariat. Research Document 2008/026.

APPENDIX A: List of Relevant Legislation, Policies, Strategies and Agreements

In addition to environmental assessment requirements, relevant statutes, agreements, and policies may include most (if not all) of the following, as well as others:

Federal Statues/Policies:

- *Fisheries Act*
- *Metal Mining Effluent Regulations*
- *Migratory Birds Convention Act*
- *Species at Risk Act*
- *Navigable Waters Protection Act*
- *Canadian Environmental Protection Act*
- *Explosives Act*
- *Transportation of Dangerous Goods Act*
- *Canada Transportation Act*
- *Radio Telecommunications Act*
- Federal Policy on Wetland Conservation, 1991
- Policy for the Management of Fish Habitat, 1986
- Fish Habitat Referral Protocol for Ontario, 2009

Provincial Statutes/Policies:

- Ontario *Environmental Protection Act*
- Ontario *Water Resources Act*
- *Lakes and Rivers Improvement Act*
- *Public Lands Act*
- *Fish and Wildlife Conservation Act*
- *Crown Forest Sustainability Act*
- *Aggregate Resources Act*
- Ontario *Heritage Act*
- *Public Transportation and Highway Improvement Act*
- *Mining Ac;*
- *Safe Drinking Water Act*
- *Endangered Species Act,* 2007
- Area Specific Crown Land Use Policy
- Ontario's Living Legacy Land Use Strategy
- Ontario's Biodiversity Strategy
- Moose Management Policy
- Ontario Woodland Caribou Conservation Plan
- Ontario Lake Trout Lake Policy (per: PL 4.02.01 Application Review and Land Disposition Process)
- Ontario Drinking Water Quality Standards and guidelines
- Water Management Policies, Guidelines, Provincial Water Quality Objectives of the Ministry of Environment and Energy, July 1994 (reprinted February 1999)

- *Transportation and Highway Improvement Act*, and Controlled Access Highway Criteria
- MNR Environmental Guidelines for Access Roads and Water Crossings
- Guidelines for identifying, assessing, and managing contaminated sediment in Ontario: an integrated approach, MOE, 2008
- Strategic Plan for Ontario Fisheries (SPOF II)
- Cervid Ecological Framework: Ontario Damn Safety Guidelines
- MNR Permanent Bridge Design Guideline, 2008
- Procedures for Approval Assessment under the *Lakes and Rivers Improvement Act*
- Bi-national Program to Restore and Protect the Lake Superior Basin

International/ Domestic Agreements:

- Great Lakes Water Quality Agreement
- Canada-Ontario Agreement on Environmental Assessment Cooperation, 2004
- Convention on Biological Diversity, 1993
- Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem, 2007
- Lake Superior Lakewide Management Plan
- Canada-Ontario Decision-Making Framework for Assessment of Great Lakes Contaminated Sediment, 2007

AGREEMENT TO ESTABLISH A JOINT REVIEW PANEL FOR THE MARATHON PLATINUM GROUP METALS AND COPPER MINE PROJECT

UNDER SECTION 18(2) OF THE CANADA-ONTARIO AGREEMENT ON ENVIRONMENTAL ASSESSMENT COOPERATION

Between
The Minister of the Environment, Canada
- and -
The Minister of the Environment, Ontario

PREAMBLE

WHEREAS this is a project-specific agreement pursuant to the Canada-Ontario Agreement on Environmental Assessment Cooperation signed by both Ministers on November 1st, 2004, pursuant to provincial Order in Council 1988/2004 and pursuant to paragraph 58(1)(d) of the *Canadian Environmental Assessment Act*; and

WHEREAS the Minister of the Environment, Canada (the federal Minister of the Environment) has statutory responsibilities pursuant to the *Canadian Environmental Assessment Act*; and

WHEREAS the Minister of Environment, Ontario (the provincial Minister of the Environment) has statutory responsibilities pursuant to the Ontario *Environmental Assessment Act*; and

WHEREAS Stillwater Canada Inc. is proposing to construct and operate a platinum group metals and copper mine in Marathon Township, Ontario, which is subject to environmental assessment requirements under both the *Canadian Environmental Assessment Act* and the Ontario *Environmental Assessment Act*; and

WHEREAS Stillwater Canada Inc.'s Marathon Platinum Group Metals and Copper Mine Project (Project) was referred to a review panel by the federal Minister of the Environment in accordance with section 29 of the *Canadian Environmental Assessment Act*; and

WHEREAS under section 3.1 of the Ontario *Environmental Assessment Act*, the provincial Minister of the Environment has the authority to harmonize with Canada to facilitate the effective operation of the requirements of both jurisdictions; and

WHEREAS the provincial Minister of the Environment has determined that the Joint Review Panel process will assess the Project in a manner equivalent to the requirements of the Ontario *Environmental Assessment Act*; and

WHEREAS the federal Minister of the Environment and the provincial Minister of the Environment have determined that a Joint Review Panel of the Project will avoid unnecessary duplication, delays and confusion that could arise from individual reviews by each government; and

WHEREAS the federal Minister of the Environment has determined that a Joint Review Panel should be established pursuant to paragraph 40(2) of the *Canadian Environmental Assessment Act* to consider the Project; and

WHEREAS environmental assessment provides an effective means of integrating environmental factors into planning and decision-making processes in a manner that promotes Sustainable Development to achieve or maintain a healthy Environment and a healthy economy;

THEREFORE, the federal Minister of the Environment hereby establishes a Joint Review Panel for the Project in accordance with the *Canadian Environmental Assessment Act* and with the provisions of this Agreement and the Terms of Reference attached as an Appendix to this Agreement.

1. DEFINITIONS

For the purpose of this Agreement and of the Terms of Reference for the Joint Review Panel,

"Agency" means the Canadian Environmental Assessment Agency.

"*Canadian Environmental Assessment Act*" refers to the Canadian Environmental Assessment Act S.C. 1992, c.37

"Environment" means,

(a) air, land or water,
(b) plant and animal life, including human life,
(c) the social, economic and cultural conditions that influence the life of humans or a community,
(d) any building, structure, machine or other device or thing made by humans,
(e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
(f) any part or combination of the foregoing and the interrelationships between any two or more of them.

"Environmental Effect" means,

(a) any change that the Project may cause in the Environment
(b) any change to the Project that may be caused by the Environment,

whether any such change or effect occurs within or outside Canada

"EIS Guidelines" means the direction provided to the Proponent by the federal Minister of the Environment which must be addressed in the Proponent's EIS to be prepared for the Joint Review Panel.

"Environmental Impact Statement" (hereinafter EIS) means the environmental impact statement report that is prepared by the Proponent for submission to the Joint Review Panel.

"Federal Authority" has the same meaning as set out in section 2(1) of the *Canadian Environmental Assessment Act*.

"Joint Review Panel" means a body established by the federal Minister of the Environment which meets the requirements of the *Canadian Environmental Assessment Act* and the Ontario *Environmental Assessment Act*, the members of which are appointed by the federal Minister of the Environment, based on the recommendations of both the Agency, on behalf of Canada, and the Ministry, on behalf of Ontario.

"Ministry" means the Ontario Ministry of the Environment.

"Ontario *Environmental Assessment Act*" refers to the Environmental Assessment Act R.S.O. 1990, Chapter E. 18.

"Party" means either signatory to this Agreement.

"Precautionary Principle" recognizes that, where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

"Project" refers to the project proposed by the Proponent, a description of which is outlined in Part 1 of the Terms of Reference.

"Proponent" means Stillwater Canada Inc.

"Public Registry" means the Canadian Environmental Assessment Registry established under section 55 of the *Canadian Environmental Assessment Act*, that will be maintained by the Agency in consultation with the Ontario Ministry of the Environment until the submission of the Joint Review Panel report.

"Report" means the report produced by the Joint Review Panel, which contains the Joint Panel's rationale, conclusions and recommendations, with respect to the environmental assessment of the Project. This report will serve as recommendations to both the provincial Minister of the Environment and the federal Minister of the Environment.

"Responsible Authority" has the same meaning as set out in section 2(1) of the *Canadian Environmental Assessment Act*.

"Sustainable Development" means development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

2. ESTABLISHMENT OF THE JOINT REVIEW PANEL

2.1. A Joint Review Panel is hereby established for the purposes of conducting an environmental assessment of the Project pursuant to sections 40, 41 and 42 of the *Canadian Environmental Assessment Act*.

2.2. The provincial Minister of the Environment considers that the requirements of the Joint Review Panel process, including the Terms of Reference and EIS guidelines, to be equivalent to the requirements of the Ontario *Environmental Assessment Act.*

2.3. Once established, the Agency and the Ministry will make arrangements to coordinate the announcements of the Joint Review Panel of the Project by both Parties.

3. CONSTITUTION OF THE JOINT REVIEW PANEL

3.1. The Joint Review Panel shall consist of three members, one of whom shall be the chairperson.

3.2. The Agency and the Ministry will jointly recommend a list of three candidates, and will agree on the recommendation of one candidate to be the chairperson.

3.3. The federal Minister of the Environment will appoint the members of the Joint Review Panel, including the chairperson.

3.4. At least one member of the Joint Review Panel will have experience with the Ontario *Environmental Assessment Act*, and at least one member will have experience with the *Canadian Environmental Assessment Act*. The members shall have knowledge or experience relevant to the anticipated Environmental Effects of the Project.

3.5. The Joint Review Panel members shall be unbiased and free from any conflict of interest relative to the Project.

3.6. In the event that a Joint Review Panel member resigns or is unable to continue to work, the remaining members shall constitute the Joint Review Panel, unless the Parties determine otherwise. In such circumstances, the Parties may choose to replace the Joint Review Panel member in accordance with the processes set out in 3.2 and 3.3.

4. CONDUCT OF ASSESSMENT BY THE JOINT REVIEW PANEL

4.1. The Agency and the Ministry prepared draft EIS guidelines.

4.2. The draft EIS guidelines were subject to a public comment period of 60 days. Following the close of the public comment period and in consideration of comments received, final EIS guidelines were approved by the federal Minister of the Environment and issued to the Proponent.

4.3. The Joint Review Panel shall conduct its review in a manner that discharges the requirements set out in the *Canadian Environmental Assessment* Act and the requirements of the harmonization order made under section 3.1 (2) of the Ontario *Environmental Assessment Act* by the provincial Minister of the Environment. The Joint Review Panel shall also conduct its review in a manner that discharges the

requirements set out in the Terms of Reference, attached as an Appendix to this Agreement.

4.4. The Terms of Reference will be fixed and approved by the federal Minister of the Environment and the provincial Minister of the Environment.

4.5. The Joint Review Panel may request clarification of its Terms of Reference by sending a letter signed by the chairperson to the President of the Agency and the Assistant Deputy Minister of Operations Division of the Ministry setting out the request. Upon receiving a request for clarification from the Joint Review Panel, the President of the Agency, on behalf of the federal Minister of the Environment, and the Assistant Deputy Minister of Operations Division of the Ministry, on behalf of the provincial Minister of the Environment, are authorized jointly to provide to the Joint Review Panel such clarification. Should clarification be requested, the President and the Assistant Deputy Minister shall use best efforts to ensure a joint response is provided to the Joint Review Panel's letter within 14 calendar days. The Joint Review Panel shall continue with the review to the extent possible while waiting for the response in order to adhere to the time periods of the original Terms of Reference. The Joint Review Panel shall notify the public of any clarifications to its Terms of Reference.

4.6. The Joint Review Panel may seek an amendment to its Terms of Reference by sending a letter signed by the chairperson to the President of the Agency and the Assistant Deputy Minister of Operations Division of the Ministry setting out the request. In seeking an amendment, the Joint Review Panel may recommend to the Parties whether a public comment period on the proposed amendment is warranted. The President of the Agency, on behalf of the federal Minister of the Environment, and the Assistant Deputy Minister of Operations Division of the Ministry, on behalf of the provincial Minister of the Environment, are authorized to jointly consider and, if appropriate, amend the Terms of Reference. Should an amendment be requested, the President and the Assistant Deputy Minister shall use best efforts to ensure a joint response is provided to the Joint Review Panel's letter within 14 days. The Joint Review Panel shall continue with the review to the extent possible while waiting for the response in order to adhere to the time lines of the original Terms of Reference. Any amendments to the Terms of Reference shall be posted on the Public Registry.

4.7. The Joint Review Panel will assess the EIS submitted by the Proponent as well as information obtained during the review in accordance with section 34 of the *Canadian Environmental Assessment Act* and its Terms of Reference.

4.8. The Joint Review Panel hearings shall be public and the review will provide opportunities for timely and meaningful public participation.

4.9. The Joint Review Panel shall have all the powers and duties of a panel described in Section 35 of the *Canadian Environmental Assessment Act* and those set out in the Terms of Reference.

5. SECRETARIAT

5.1. Administrative, technical and procedural support requested by the Joint Review Panel shall be provided by a Secretariat. The Secretariat may include staff from the Canadian Environmental Assessment Agency and Ontario ministries. The Agency and the Ministry shall identify co-managers who will attend hearings, and work together to manage the Secretariat in a coherent manner.

5.2. The Secretariat will support the Joint Review Panel and will be structured so as to allow the Joint Review Panel to conduct its review in an efficient and cost-effective manner.

5.3. The Secretariat will be structured to avoid any real or perceived conflict of interest.

6. RECORD OF JOINT REVIEW

6.1. A Public Registry will be maintained by the Agency in consultation with the Ministry during the course of the review in a manner that provides for convenient public access, and for the purposes of compliance with section 55 to 55.5 of the *Canadian Environmental Assessment Act.*

6.2. The Public Registry shall also serve as the Ministry's public record. The internet component of the Public Registry will be linked to the Ministry's on-line Environmental Assessment Projects database.

6.3. Subject to subsections 35(4), and 35(4.1) and section 55.5(1) of the *Canadian Environmental Assessment Act*, the Public Registry will include all records produced, collected or submitted relating to the environmental assessment of the Project.

6.4. After the Joint Review Panel's Report is submitted, the responsibility for the maintenance of the Public Registry will be transferred to the Responsible Authority.

7. OTHER FEDERAL AND PROVINCIAL GOVERNMENT DEPARTMENTS AND MINISTRIES

7.1. The Joint Review Panel may request federal authorities and provincial authorities having specialist information or knowledge with respect to the Project to make that information or knowledge available to the Joint Review Panel in a manner acceptable to the Joint Review Panel.

8. REVIEW OF THE EIS AND REPORT

8.1. Upon the submission of the EIS by the Proponent, the Joint Review Panel will assess the EIS according to EIS guidelines and the Terms of Reference. Once the Joint Review Panel is satisfied that sufficient information has been obtained, the Joint Review Panel will provide public notice and hold a public hearing in accordance with the Terms of Reference.

8.2. The Joint Review Panel will prepare a Report, which will be submitted to the federal Minister of the Environment, the provincial Minister of the Environment and the Responsible Authorities within ninety days from the date that the chairperson of the Joint Review Panel formally closes the hearing process. Simultaneously, the Report will be published and made available immediately to the public. The Joint Review Panel will also send a hardcopy of the Report to those Aboriginal groups who have participated in the Joint Review process.

8.3. If requested by Aboriginal groups, the Joint Review Panel shall have the executive summary of the Report translated into the relevant Aboriginal languages as determined by the Joint Review Panel (taking into consideration the availability of translators). The translations shall be sent to Aboriginal groups who have participated in the Joint Review process as soon as possible following the submission of the Report.

8.4. Once the Report is published, a copy of the Public Registry documentation maintained by the Agency will be provided to the Ministry.

8.5. The Agency will be responsible for the translation of documents such as public notifications, news releases and the Report, into both of the official languages of Canada. The Agency will use all reasonable efforts to expedite the translation of the Report.

9. DECISION MAKING PROCESSES

9.1. The Parties will coordinate the timing of the release of the Government of Canada response to the Joint Review Panel's Report and the announcement of the decision of the provincial Minister of the Environment to the greatest extent possible.

Federal Decision Making Process

9.2. Upon submission of the Joint Review Panel Report, the Responsible Authorities shall, in a manner consistent with the *Canadian Environmental Assessment Act,* take into consideration the Report and, with the approval of the Governor in Council, respond to the Report. In responding to the Joint Review Panel's Report, the Government of Canada shall consider the consultation undertaken with Aboriginal groups, including consultation on the Joint Review Panel's Report.

9.3. The Governor in Council and/or the provincial Minister of the Environment may, for the purpose of giving the approval referred to in 9.2 and 9.6 respectively, require the Joint Review Panel to clarify any of the recommendations set out in the Report.

9.4. The Responsible Authorities shall take a course of action decision under section 37(1) of the *Canadian Environmental Assessment Act* that is in conformity with the approval of the Governor in Council referred to in 9.2.

9.5. The Government of Canada response to the Report will be posted on the Public Registry.

Provincial Decision Making Process

9.6. The provincial Minister of the Environment, pursuant to the harmonization order made under section 3.1 (2) of the Ontario *Environmental Assessment Act*, with the approval of the Lieutenant Governor in Council, may:

(a) Give approval to proceed with the Project in accordance with the Joint Review Panel Report.

(b) Give approval to proceed with the Project subject to such conditions as the Minister considers necessary and in particular requiring or specifying:

(i) The methods and phasing of the carrying out of the Project,

(ii) The works or actions to prevent, mitigate or remedy effects of the Project on the Environment,

(iii) Such research, investigations, studies and monitoring programs related to the Project and reports thereof, as the Minister considers necessary,

(iv) Such changes in the Project the Minister considers necessary,

(v) That the Proponent enter into one or more agreements related to the Project with any person with respect to such matters as the Minister considers necessary,

(vi) That the Proponent complies with all or any of the provisions of the Report that may be incorporated by reference in the approval,

(vii) The period of time during which the Project or any part thereof shall be commenced or carried out; or

(c) Refuse to give approval to proceed with the Project.

9.7. The provincial Minister of the Environment shall consider the following matters when making the decision in 9.6:

(a) the purpose of the Ontario *Environmental Assessment Act*;

(b) the Joint Review Panel's Report; and

(c) such other matters as the Minister considers relevant to his or her decision.

9.8. The provincial Minister of the Environment shall notify the Proponent of his or her decision and shall give the Proponent written reasons for it. The provincial Minister of the Environment shall also provide a copy of the decision to the federal Minister of the Environment and the decision shall be published on the Public Registry.

10. PARTICIPANT FUNDING

10.1. Participant funding for the review will be provided by the Agency pursuant to the federal Participant Funding Program, and will be administered by the Agency in consultation with the Ministry.

11. COST SHARING

11.1. The cost sharing provisions of this agreement will only take effect commencing on the date of the establishment of the Joint Review Panel.

11.2. In consultation with the Ministry, the Agency will develop a budget estimate of expenses prior to the initiation of the Joint Review Panel's activities.

11.3. The Agency will recover all applicable expenses relating to the review from the Proponent pursuant to "The Environmental Assessment Review Panel Service Charges Order" made by the federal Minister of the Environment under Order in Council P.C. 1998-1495.

11.4. Any expenses not subject to "The Environmental Assessment Review Panel Service Charges Order" shall be shared jointly by the Parties, except for those specified in articles 11.5 and 11.6.

11.5. The Agency shall be fully responsible for the following costs:

- Salaries, benefits, and travel-related expenses associated with the review incurred by the Joint Review Panel Secretariat staff employed by Canada
- Salaries, benefits and travel-related expenses associated with the review incurred by the Joint Review Panel Secretariat staff working on assignment with the Agency;
- All costs associated with the federal Participant Funding Program;
- Translation of records and documents, and language translation and interpretation services and facilities related to the evidence of applicants, participants and local interveners as required by the Joint Review Panel; and
- Costs associated with the Public Registry established pursuant to section 55.1 of the *Canadian Environmental Assessment Act.*

11.6. The Ministry shall be fully responsible for the following costs:

- Salaries, benefits, and travel-related expenses associated with the review incurred by any Joint Review Panel Secretariat staff employed by Ontario that are not on assignment with the Agency; and
- Costs associated with the maintenance of the Ministry's on-line Environmental Assessment Projects database.

11.7. The Agency, in consultation with the Ministry, will retain independent legal counsel for the Joint Review Panel. The costs of the Joint Review Panel's legal counsel will be jointly shared by the Agency and the Ministry.

11.8. Any expenses not included in the "The Environmental Assessment Review Panel Service Charges Order" or in this agreement will need prior approval of both the Agency and the Ministry if they are to be equally shared.

11.9. The Joint Review Panel will have due regard to economy and efficiency when incurring costs during the conduct of the environmental assessment.

12. INVOICING

12.1. The Agency will be responsible for advancing funds for the payment of the shareable costs.

12.2. The Agency will inform the Ministry on a quarterly basis about the expenses incurred for the Project.

12.3. Following the submission of the Report, the Agency will issue a final invoice to the Ministry for the amounts owed under this Agreement. The invoice will cover all shareable costs to be paid by the Ministry.

12.4. The final invoice will be accompanied by a summary description of the costs paid by the Agency, the costs recovered, and the net costs that are to be shared by the Ministry and the Agency. Detailed information about incurred costs will be retained by the Agency and made available upon request.

12.5. Subject to compliance with the above requirements, the Ministry will pay to the Agency the amount stated as being owed to it in the invoice within sixty (60) days of having received such invoice.

13. AMENDING THIS AGREEMENT

13.1. This Agreement comes into force upon its execution by both Parties.

13.2. This Agreement can be amended at any time with mutual consent of both Parties. Amendments to the Terms of Reference shall follow the procedure outlined in article 4.6. The Parties shall determine whether a public comment period is necessary on any proposed amendments to the Agreement.

13.3. Either Party may terminate this Agreement prior to the completion of the joint review by providing written notice to the other party a minimum of 30 days in advance of the intended termination date.

13.4. If the written notice detailed in article 13.3. is provided, the Parties will seek to resolve differences of opinion in the interpretation and application of this Agreement at a working level, through good faith reasonable efforts.

14. SIGNATURES

WHEREAS the parties hereto have put their signatures

_____	_____
The Honourable Peter Kent Minister of the Environment, Canada	The Honourable John Wilkinson Minister of the Environment, Ontario
_____	_____
Date	Date

Appendix
Terms of Reference for the Joint Review Panel

PART I - DESCRIPTION OF THE PROJECT

Stillwater Canada Inc. proposes to develop and operate the Marathon Platinum Group Metals and Copper Mine Project ("Project") approximately 10 kilometres north of the Town of Marathon. This Project involves the establishment and operation of an open pit mine and mill for the purpose of extracting and processing ore containing copper and platinum group metals and including, but not limited to, any ancillary activities and the activities outlined below:

- the construction and/or use of equipment, buildings and structures;
- the establishment, construction and operation of tailing impoundment areas, explosives factory and magazine facilities, waste rock storage areas, water management facilities, transmission lines, temporary and emergency generation facilities, and activities to mitigate environmental impacts;
- the decommissioning, closure and abandonment of the mine and mine-related infrastructure; and
- the establishment, construction and/or modification and use of transportation infrastructure including access roads, highways and/or rail lines to support the above-mentioned activities and the transport of final mine concentrate(s).

The scope of project shall include all components of the Project as proposed by the Proponent.

PART II – FACTORS TO BE CONSIDERED IN THE ENVIRONMENTAL ASSESSMENT

2.1. The Joint Review Panel will conduct an assessment of the Environmental Effects of the Project referred to in the Description of the Project (Part I) in a manner consistent with the requirements of the *Canadian Environmental Assessment Act* and the Ontario *Environmental Assessment Act*.

2.2. The assessment by the Joint Review Panel will include a consideration of the factors listed in subsection 16(1)(a) to (d) and 16(2) of the *Canadian Environmental Assessment Act*, subsection 6.1(2) of the Ontario *Environmental Assessment Act*, and as per subsection 16(1)(e) of the *Canadian Environmental Assessment Act* and any other matter relevant to the assessment, including:

a. the purpose of the Project;
b. the rationale or need for the Project;
c. alternatives to the Project (including the "do nothing" alternative), the Environmental Effects of such alternatives to, and the advantages and disadvantages to the Environment of such alternatives to;
d. alternative means of carrying out the Project that are technically and economically feasible, the Environmental Effects of any such alternative means, and the advantages and disadvantages to the Environment of such alternative means;
e. the significance of the Environmental Effects, including the following:

- 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;

f. measures that are technically and economically feasible and that would mitigate any significant adverse Environmental Effects of the Project
g. measures to enhance any beneficial Environmental Effects;
h. 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;
i. extent to which biological diversity (e.g. ecosystems and/or species diversity) is affected by the Project, including any listed wildlife species, its critical habitat or the residences of individuals of that species as those terms are defined in subsection 2(1) of the federal *Species at Risk Act*, as well as any impact it may have on a provincially threatened or endangered species and/or its protected habitat;
j. extent of application of the Precautionary Principle to the Project;
k. the need for, and the requirements of, any follow-up program in respect of the Project.
l. description of the consultation undertaken by the Proponent with the public and Aboriginal groups during the preparation of the EIS;
m. comments from the public and Aboriginal groups that are received during the review; and
n. community knowledge and Aboriginal traditional knowledge, and the current use of lands and resources for traditional purposes by Aboriginal persons.

2.3 The description of the factors to be considered in the environmental assessment include those outlined in the document "Guidelines for the Preparation of the Environmental Assessment: Marathon Platinum Group Metals and Copper Mine Project", as finalized by the federal Minister of the Environment.

2.4. The Joint Review Panel is mandated to invite information from Aboriginal groups related to the nature and scope of asserted or established Aboriginal and Treaty rights in the area of the Project, as well as information on the potential adverse Environmental Effects that the Project may have on asserted or established Aboriginal and Treaty rights.

2.5. The Joint Review Panel will receive:

(a) information provided by Aboriginal groups regarding the manner in which the Project may adversely affect their asserted or established Aboriginal and Treaty rights; and
(b) information provided by Aboriginal persons or groups regarding the strength of claim in respect of asserted Aboriginal and Treaty rights, which may include information about the location, extent, basis and exercise of those asserted or established Aboriginal and Treaty rights in the area of the Project.

2.6. The Joint Review Panel will use the information collected pursuant to 2.4 to make recommendations which relate to the manner in which the Project may adversely affect asserted or established Aboriginal and Treaty rights and to inform its assessment of the potential Environmental Effects of the Project.

2.7. The Joint Review Panel is not mandated to make any determinations as to:

a. the validity of asserted or established Aboriginal and Treaty rights asserted by Aboriginal groups or the strength of their claimed rights;
b. the scope of the Crown's duty to consult Aboriginal groups; and
c. whether the Crown has met its duty to consult Aboriginal groups and, where appropriate, accommodate their interests in respect of the potential adverse effects of the Project on their rights, recognized and affirmed in section 35 of the *Constitution Act, 1982*.

2.8. As the Joint Review Panel is not mandated to make any determinations as to the validity of asserted or established Aboriginal and Treaty rights, for the purposes of its Report, it shall document the asserted or established Aboriginal and Treaty rights as presented and consider the adverse effects of the Project on all Aboriginal and Treaty rights as asserted.

2.9 All information obtained by the Joint Review Panel for the environmental assessment of the Project shall be made publicly available, unless the Joint Review Panel determines that sections 35(4) or 35(4.1) of the *Canadian Environmental Assessment Act* applies to the information provided by a participant.

PART III – ENVIRONMENTAL ASSESSMENT PROCESS

The main steps of the environmental assessment process will be as follows:

EIS Preparation

3.1. The Joint Review Panel will require the Proponent to prepare the EIS in accordance with the EIS Guidelines, which will be approved by the federal Minister of Environment following a public comment period.

EIS Sufficiency

3.2. Once submitted to the Joint Review Panel, the EIS will be placed on the Public Registry, and will be made available for a minimum of 60 days. The Joint Review Panel will request written comments from Aboriginal groups, the public, governments and other interested parties on the sufficiency of the EIS as measured against the EIS Guidelines and on the technical merit of the information, which may include requests for further information from the Proponent.

3.3. Within 30 days of the completion of the public review of the EIS, the Joint Review Panel, taking into consideration the comments and any information requests received and its own review of the EIS, will determine if the EIS contains sufficient information to proceed to public hearing. If the Joint Review Panel determines that the EIS contains sufficient information to proceed to public hearing, it will schedule and announce the hearing in accordance with the procedures set out in these Terms of Reference.

3.4. If the Joint Review Panel determines that the EIS is not sufficient to proceed to public hearing, it will issue a deficiency statement requesting additional information which the Proponent will provide. At the same time, the Joint Review Panel will place the deficiency statement on the Public Registry and make it available to the public.

3.5. The additional information provided by the Proponent will be placed on the Public Registry and made available to the public. The Joint Review Panel will determine the need for a public comment period on any additional information provided by the Proponent in response to deficiencies identified by the Joint Review Panel.

3.6. Upon completion of the public review of the additional information, the Joint Review Panel, taking into consideration any comments and any information requests received and its own review of the additional information, will determine within 30 days if the EIS, supplemented by the additional information, is sufficient to proceed to public hearing. The procedures described in articles 3.4 through 3.6 will apply until such time as the Joint Review Panel determines it has sufficient information to proceed to public hearing.

Announcement of Public Hearing

3.7. Once the Joint Review Panel determines that the EIS contains sufficient information to proceed to public hearing, it will announce the public hearing. The Joint Review Panel shall provide a minimum of 45 days notice of the start of the public hearing. In scheduling the public hearing, the Joint Review Panel will make reasonable efforts to take into consideration the timing of traditional activities in Aboriginal communities.

3.8. The Joint Review Panel will issue procedures for the conduct of the public hearing. These procedures will allow for the public hearings to be conducted in a manner that provides for a full examination of matters determined by the Joint Review Panel to be relevant, and encourages public input and participation in the environmental assessment process.

3.9. The procedures for the conduct of the public hearing shall be subject to a public comment period. The public hearing will provide the Proponent, federal, provincial and municipal governments, Aboriginal groups and members of the public with an opportunity to present their views on the Project and to question information that has been provided by other participants.

3.10. The Joint Review Panel will endeavour to hold the public hearing in the community(ies) in closest proximity to the proposed Project, including Aboriginal community(ies), to provide convenient public access for potentially affected Aboriginal persons and groups and the public. The Joint Review Panel will use its best efforts to complete the public hearing within 30 days.

3.11. The public hearing shall be open to the public, unless the Joint Review Panel determines that subsection 35(3) of the *Canadian Environmental Assessment Act* applies to the information provided by a participant.

Specialist Advisors to the Joint Review Panel

3.12. The Joint Review Panel may request specialist or expert information or knowledge with respect to the Project from federal and/or provincial authorities in possession of such information or knowledge. As per article 6.3 of the Joint Review Panel Agreement, any information or knowledge provided by federal and/or provincial authorities would be placed on the Public Registry.

3.13. The Joint Review Panel may also retain the services of non-governmental experts to provide advice on certain subjects within the Joint Review Panel's Terms of Reference.

3.14. Should the Joint Review Panel retain the services of non-governmental experts, the names of the experts retained and any documents obtained or created by the experts and that are submitted to the Joint Review Panel will be placed on the Public Registry, subject to the provisions in section 35 of the *Canadian Environmental Assessment Act*. For greater certainty, this shall exclude any information subject to solicitor-client privilege.

Report

3.15. Following the completion of the public hearing, the Joint Review Panel will prepare and submit to the federal Minister of the Environment, the provincial Minister of the Environment and the Responsible Authorities a Report including, but not limited to, a description of the Joint Review Panel process, and the rationale, conclusions and recommendations of the Joint Review Panel relating to the environmental assessment of the Project, including any recommended mitigation measures and follow-up programs. The Joint Review Panel shall also include within its Report a summary of any comments received, including those from the public and Aboriginal groups. The Joint Review Panel shall also provide a hardcopy of its Report to those Aboriginal groups that have participated in the Joint Review Panel process.

3.16. The Joint Review Panel shall incorporate in its Report all the commitments identified by the Proponent in its EIS, as well as any other commitments identified by the Proponent during the assessment by the Joint Review Panel. The Joint Review Panel shall provide recommendations to the provincial Minister of the Environment as to whether the Project should be given approval to proceed, or be refused, taking into consideration the Proponent's EIS and any other information obtained during the assessment by the Joint Review Panel. If the Joint Review Panel recommends that the Project should be given approval to proceed by the provincial Minister of the Environment, the Joint Review Panel may also recommend any conditions necessary to carry out the Project in a manner that provides for the protection, conservation and wise management of the Environment. The Joint Review Panel shall provide reasons for its recommendations to the provincial Minister of the Environment.

3.17. For the purposes of the *Canadian Environmental Assessment Act*, where, taking into account the implementation of any mitigation measures, the Joint Review Panel concludes that the Project is likely to cause significant adverse Environmental Effects, the Joint Review Panel shall obtain and include in its Report information with respect to the justifiability of any significant adverse Environmental Effects.

3.18. The Report shall reflect the views of each member of the Joint Review Panel.

3.19. The Joint Review Panel will submit its Report to the federal and provincial Ministers of the Environment at the earliest possible date, within 90 days following the date that the chairperson of the Joint Review Panel formally closes the hearing process.

3.20. The Governor in Council and/or the provincial Minister of the Environment may require the Joint Review Panel to clarify any of the recommendations set out in the Report.

Government of Canada
Government of Ontario

News Release

Joint Review Panel Established for the Proposed Marathon Platinum Group Metals and Copper Mine Project in Ontario

OTTAWA, August 9, 2011– Canada's Environment Minister Peter Kent and Ontario's Minister of the Environment John Wilkinson announced today the establishment of a three-member joint review panel for the environmental assessment of the proposed Marathon Platinum Group Metals and Copper Mine Project in Ontario.

Minister Kent, in consultation with Minister Wilkinson, has appointed Dr. Louis LaPierre as the Panel chair, and Dr. David Pearson and Dr. Philip H. Byer as Panel members. Biographical information on the Panel chair and members is available in the accompanying backgrounder.

The Panel has a mandate under both the *Canadian Environmental Assessment Act* and the *Ontario Environmental Assessment Act* to consider whether the project is likely to cause significant adverse environmental effects. After the conclusion of the review process, the Panel will prepare a report setting out its conclusions and recommendations relating to the environmental assessment of the project.

This is the first time that Ontario has formed a joint review panel with the federal government. This joint review panel process, will allow for careful study and a single, comprehensive assessment of both the possible impacts and benefits of the project before any decisions are made by Canada and Ontario.

Also, three documents related to the project were issued today – the final Environmental Impact Statement (EIS) Guidelines, the Joint Review Panel Agreement (JPR Agreement), and the provincial Minister's Harmonization Order.

The JPR Agreement for the environmental assessment was signed by Minister Kent and Minister Wilkinson. The JPR Agreement, which took into consideration comments received from the public and Aboriginal groups, describes the Panel's terms of reference as well as the process to be followed for conducting the joint panel review.

Minister Kent has issued the EIS Guidelines to the proponent, Stillwater Canada Inc. The EIS Guidelines, developed in collaboration with the Ontario Ministry of the Environment, provide direction to the proponent and identify the information that will be required in the EIS.

The EIS will provide an analysis of the potential environmental effects of the proposed project. The EIS Guidelines also took into consideration comments received from the public and Aboriginal groups.

Ontario's first Harmonization Order was issued by Minister Wilkinson. The Harmonization Order facilitates the integration of both jurisdictions' environmental assessment requirements through a joint panel review process.

The JPR Agreement, including the terms of reference, along with more information on this project, is available in the Canadian Environmental Assessment Registry, reference number 10-05-54755 and on the Ontario Ministry of the Environment website at www.ene.gov.on.ca/environment/ .

To receive information of the activities relating to the joint review panel process, provide a mailing address, email address or fax number to:

Marathon Platinum Group Metals and Copper Mine Project
Canadian Environmental Assessment Agency
160 Elgin Street, 22nd floor, Ottawa, ON K1A 0H3
MarathonMine.review@ceaa-acee.gc.ca

About the Project

Stillwater Canada Inc. proposes to develop and operate the Marathon Platinum Group Metals and Copper Mine Project approximately 10 kilometres north of the town of Marathon. This Project involves the establishment and operation of an open pit mine and mill for the purpose of extracting and processing ore containing copper and platinum group metals and including, but not limited to, any ancillary activities and the activities outlined below:

- the construction and/or use of equipment, buildings and structures;
- the establishment, construction and operation of tailing impoundment areas, explosives factory and magazine facilities, waste rock storage areas, water management facilities, transmission lines, temporary and emergency generation facilities, and activities to mitigate environmental impacts;
- the decommissioning, closure and abandonment of the mine and mine-related infrastructure;
- the establishment, construction and/or modification and use of transportation infrastructure including access roads, highways and/or rail lines to support the above-mentioned activities and the transport of final mine concentrate(s).

About the Canadian Environmental Assessment Agency

The Canadian Environmental Assessment Agency administers the federal environmental assessment process, which identifies the potential environmental effects of proposed projects and measures to avoid or mitigate those effects, in support of sustainable development.

About the Ontario Ministry of the Environment

The Ministry of the Environment is responsible for protecting clean and safe air, land and water to ensure healthy communities, ecological protection and sustainable development for present and future generations of Ontarians.

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Media may contact:

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Date Modified: 2011-08-09

PROJECT AGREEMENT FOR THE MARATHON PLATINUM GROUP METALS AND COPPER MINE IN ONTARIO

PREAMBLE

WHEREAS the Government of Canada is committed to improving the efficiency of the federal environmental assessment (EA) and regulatory review processes for major resource projects to enable a more effective assessment and mitigation of potential environmental effects, while protecting the health and safety of Canadians and promoting innovation and competitiveness within the Canadian resource industry sectors;

AND WHEREAS the Government of Canada is committed to undertaking a process of early, effective and meaningful consultation with Aboriginal groups, including Treaty First Nations, Non-Treaty First Nations, Métis and Inuit people, concerning contemplated federal Crown (Crown) conduct with respect to, among other things, major resource projects that may adversely affect established or potential Aboriginal and treaty rights under Section 35 of the *Constitution Act, 1982*;

AND WHEREAS the Government of Canada has created the Major Projects Management Office (MPMO) for the purpose of overseeing and tracking the federal review, which includes the EA, regulatory reviews and Aboriginal consultation activities for major resource projects;

AND WHEREAS Stillwater Canada Inc. (the Proponent) has submitted a Project Description in support of its proposal to develop and operate the Marathon Platinum Group Metals and Copper Mine approximately 10 kilometres north of the Town of Marathon, Ontario;

AND WHEREAS the Canadian Environmental Assessment Agency (CEA Agency), Fisheries and Oceans Canada (DFO), Natural Resources Canada (NRCan) and Transport Canada (TC) have regulatory and statutory duties in relation to the proposed project;

AND WHEREAS the Minister of the Environment (the Minister) has referred the proposed project to a Review Panel pursuant to the *Canadian Environmental Assessment Act* (CEAA) and has signed an agreement with the Ontario Minister of the Environment to conduct a Joint Review Panel (JRP) under the CEAA and the Ontario *Environmental Assessment Act*;

AND WHEREAS nothing in this Project Agreement (the Agreement) fetters the powers, statutory authorities and functions of federal departments/agencies and their respective Ministers;

AND WHEREAS the CEA Agency and the Ontario Ministry of the Environment have agreed to coordinate the federal and provincial EAs to the extent possible pursuant to the Canada-Ontario Agreement on Environmental Assessment Cooperation;

NOW THEREFORE the signatories (the Parties) to this Agreement commit to work together to facilitate an effective, accountable, transparent, timely and predictable federal review in relation to the proposed project and to contribute to fulfilling the Crown's duty to consult with Aboriginal groups.

1.0 PURPOSE

The purpose of this Agreement is to provide an effective tool to enable the Parties to deliver an efficient federal review process. It articulates the roles and responsibilities of each department and agency and timeline based targets for the achievement of process milestones. For further clarity, the Agreement shall be read together with the Annexes, which form part of this Agreement.

2.0 PROJECT DESCRIPTION

The proposed project consists of the establishment and operation of an open pit mine and mill for the purpose of extracting and processing ore containing platinum group metals and copper mine project approximately 10 kilometres north of the Town of Marathon (the Project) and includes, but is not limited to, the following components and activities associated with the construction, operation, modification, decommissioning and abandonment of these components:

- the construction and/or use of equipment, buildings and structures;
- the establishment, construction and operation of tailing impoundment areas, explosives factory and magazine facilities, waste rock storage areas, water management facilities, transmission lines, temporary and emergency generation facilities, and activities to mitigate environmental impacts;
- the decommissioning and closure of the mine and mine-related infrastructure; and,
- the establishment, construction and/or modification and use of transportation infrastructure including access roads, highways and/or rail lines to support the above-mentioned activities and the transport of final mine concentrate(s).

3.0 ROLES AND RESPONSIBILITIES

The following federal departments and agencies have identified an interest in the Project, and will participate in the federal review as follows:

- DFO has regulatory and statutory responsibilities under the *Fisheries Act* and, pursuant to the CEAA, is a responsible authority (RA). DFO requires that a complete application for a *Fisheries Act* authorization be submitted during the EA phase. In order to meet the regulatory timelines set out in this Agreement for a review under the *Fisheries Act*, the information requested in the application must be submitted to DFO at the latest, concurrent with the submission of the draft Environmental Impact Statement (EIS). DFO may be in possession of specialist or expert information or knowledge with respect to the Project and, on request, shall make available that information or knowledge to the JRP;

- TC has regulatory and statutory responsibilities under the *Navigable Waters Protection Act* (NWPA) and, pursuant to the CEAA, is a likely RA. TC requires that all the information described in the NWPA application form for a review under the NWPA be submitted during the EA phase to confirm whether there is a NWPA trigger. In order to meet the regulatory

timelines set out in this Agreement for a review under the NWPA, the information described in the NWPA application form must be submitted to TC at the latest, concurrent with the submission of the EIS and the Navigation Impact Assessment (NIA) has to be completed as a component of the EA. TC may be in possession of specialist or expert information or knowledge with respect to the Project and, on request, shall make available that information or knowledge to the JRP;

- NRCan has regulatory and statutory responsibilities under the *Explosives Act* and, pursuant to the CEAA, is an RA. NRCan may be in possession of specialist or expert information or knowledge with respect to the Project and, on request, shall make available that information or knowledge to the JRP;

- Environment Canada (EC) is a federal authority (FA) under the CEAA and is in possession of specialist or expert information or knowledge with respect to the proposed project, and, upon request, shall make available that information or knowledge to the RAs; and EC has responsibilities concerning proposed amendments to the *Metal Mining Effluent Regulations* (MMER) under the *Fisheries Act;*

- Parks Canada (PC) and Health Canada (HC) are FAs pursuant to the CEAA and may be in possession of specialist or expert information or knowledge with respect to the Project (expert FAs) and, upon request, shall make available that information or knowledge to the JRP;

- Aboriginal Affairs and Northern Development Canada (AANDC) has advisory responsibilities to support the Government of Canada's Aboriginal consultation activities in relation to the Project;

- The CEA Agency has administrative and advisory responsibilities pursuant to the CEAA in support of the EA and the JRP. The CEA Agency will act as the Federal Participation Coordinator, the Panel Secretariat, and the Crown Consultation Coordinator (CCC) for the EA in relation to the Project; and,

- The MPMO has administrative and advisory responsibilities under the *Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects* and the associated Memorandum of Understanding (MOU). The MPMO will provide oversight and advice throughout the entire federal review in relation to the Project to ensure adherence to the service standards and roles and responsibilities of all Parties.

For further information regarding the roles and responsibilities of the Parties, please see Annexes III, IV and V.

4.0 FEDERAL REVIEW PROCESS

The JRP is responsible for discharging the requirements set out in the CEAA and the Ontario *Environmental Assessment Act* (as varied by the provincial Harmonization Order). The Joint Review Panel Agreement (JRPA) was issued by the Minister and the Ontario Minister of the Environment, in consultation with the RAs for the Project, and in consideration of comments received from Aboriginal groups, the Proponent, and the public. The timelines outlined in the Panel's Terms of Reference (ToR) have been included in this Agreement. The Minister and the Ontario Minister of the Environment will provide the Proponent with the EIS Guidelines for the Project. The scope of the project is outlined in the ToR.

The JRP has statutory responsibilities pursuant to the CEAA and the Ontario *Environmental Assessment Act*. The JRP is not a Party to this Agreement.

The Parties will participate in and rely on the information gathered through the JRP process to fulfill their roles and responsibilities as defined under the CEAA and where appropriate, to inform their legislative decisions.

The JRPA and ToR for the JRP issued by the Minister and the Ontario Minister of the Environment on August 8, 2011, outlines the process for the establishment of the JRP and its mandate. The Minister has provided the Proponent with the EIS Guidelines on August 8, 2011 for the Project, and has also established the scope of the Project.

Annex I shows a Gantt chart of the federal review process. Annex II shows the key milestones and service standards for the EA as well as Aboriginal consultation. Annex IV shows the milestones and service standards for the regulatory review for each department.

During the EA process, RAs will confirm any regulatory or other s. 5 decisions required in relation to the Project that are triggers pursuant to the CEAA**.** As such, the Proponent is expected to submit all necessary applications to allow confirmation of triggers prior to the EA decision. Submission of the regulatory and technical information necessary for RAs to make their regulatory decision within the proposed timeframe is at the discretion of the Proponent. Although that information is not necessary for the EA decision, the Proponent is expected to submit it concurrent with the EIS, for the RAs to meet the regulatory timelines set out in this Agreement.

If a department or agency determines that it is no longer required to make a regulatory decision, it will end its participation in the EA as an RA, but may, upon request from the JRP or an RA, continue to participate as an expert FA should it be in possession of specialist or expert information or knowledge with respect to the Project.

5.0 ABORIGINAL CONSULTATION

The Parties are committed to a "Whole of Government" approach to Aboriginal consultation in the context of major resource projects to ensure that Aboriginal groups are sufficiently consulted, and where appropriate accommodated, when the Government of Canada contemplates actions that may adversely affect established or potential Aboriginal and treaty rights. To the extent

possible, and with the CEA Agency responsible for coordination during the EA Phase, the Parties will work together with the Province of Ontario toward a coordinated approach for Aboriginal consultation that is integrated with the EA phase of the federal review. Following the EA phase, the responsibility for Aboriginal consultation will be transferred from the CEA Agency to an RA for the regulatory phase. The Crown will take into account the consultation efforts of the Province, the Proponent and the JRP process, to the extent possible to meet the duty to consult.

Where applicable, the terms and conditions of all existing agreements or protocols between the Crown and Aboriginal groups will be respected and followed.

The Aboriginal consultation roles and responsibilities are identified in Annex III.

6.0 TIMELINES

Timelines identified in the Agreement represent the time expected to be taken by federal departments and agencies and the JRP in carrying out their respective tasks for the federal review. The timelines do not account for time taken by participants who are not signatories to this Agreement, such as the Proponent, the Province, the JRP, etc. The target timelines for the federal review are detailed in the Gantt chart in Annex I, and are as follows:

a) Completion of the EA - 23.5 months, from the referral to Panel by the Minister of the Environment to the posting of EA course of action decisions on the Canadian Environmental Assessment Registry Internet Site (CEARIS) (does not include time for Governor-in-council's decision).
b) Regulatory decisions pursuant to the *Fisheries Act* and NWPA – 90 calendar days from the EA course of action decisions posted on the CEARIS, assuming submission of all applications no later than the time of the submission of the EIS.
c) Regulatory decision pursuant to the *Explosives Act* – 1 month from the submission of a complete and acceptable application for an Explosives Factory License.
d) If appropriate, amendment to the *Metal Mining Effluent Regulations* – 8 months from the EA course of action decisions posted on the CEARIS.
e) If appropriate, issue an Order in Council (OIC) exemption under s.23 of the NWPA – 11.5 months from the EA course of action decisions posted on the CEARIS.

The following are examples of situations where the MPMO may pause the timelines of the JRP process:

a) the JRP process is delayed at the request of the Proponent and/or another jurisdiction;
b) the JRP has indicated that the Proponent is required to provide additional information necessary for the completion of the review, or that the information provided is insufficient;
c) the review cannot proceed as a result of circumstances related to Aboriginal consultation; or,
d) litigation or other court action prevents the completion or continuation of the federal review.

7.0 MITIGATION MEASURES AND FOLLOW-UP PROGRAM

The RAs have responsibilities under the CEAA to ensure the implementation of any mitigation measures and the design and implementation of a follow-up program taken into account by the RAs in reaching a conclusion on the significance of adverse environmental effects and which the RAs can ensure. The RAs will work with the expert FAs, the Proponent and the province, to satisfy those responsibilities. Expert FAs will provide assistance requested by the RAs in ensuring the implementation of a mitigation measure or aspect of the follow-up program on which the expert FA and RAs have agreed.

8.0 ADMINISTRATION

Tracking Progress

The milestones, timelines and service standards set out in this Agreement, subject to any amendments, will provide the basis against which the MPMO will monitor the progress of the federal review and report on this progress in the MPMO Tracker.

Issues Resolution

The Parties will use their best efforts to resolve any differences of opinion in the interpretation or application of this Agreement in an effective and timely manner.

Issues not related to the panel process will be resolved through direct discussions and collaboration between the involved Parties, supported by the MPMO.

Should issues remain outstanding, they will be referred to the appropriate senior level committee.

Post-Project Evaluation

The Parties will participate in an informal evaluation of the effectiveness of the JRP process in relation to the Project within 90 days of the completion of the regulatory review. The level of effort and format of the evaluation will be appropriate to the scale of the issues encountered.

Amendments

The Parties may recommend to the MPMO whether a change to the federal review or to the project warrants an amendment to the Agreement. Where there is agreement that an amendment is warranted, and where such amendment is considered significant, the MPMO will provide the proposed amendment to the Major Projects Deputy Ministers for consideration.

Unless otherwise determined by the MPMO in collaboration with the Parties, amendment of the Agreement shall not cause the federal review to stop with respect to any Agreement-related activities that might be ongoing at the time when the need for amendment is identified.

9.0 SIGNATORIES

The Parties hereto have signed the Project Agreement, in counterpart, on the dates indicated below.

_____ 2011-09-22
Serge P. Dupont *Date*
Deputy Minister
Natural Resources Canada

_____ 2011-09-27
Elaine Feldman *Date*
President
Canadian Environmental Assessment Agency

_____ 2011-09-27
Claire Dansereau *Date*
Deputy Minister
Fisheries and Oceans Canada

_____ 2011-09-28
John Forster *Date*
Associate Deputy Minister, Infrastructure Canada
(on behalf of Yaprak Baltacioğlu
Deputy Minister, Transport Canada)

_____ 2011-09-29
Paul Boothe *Date*
Deputy Minister
Environment Canada

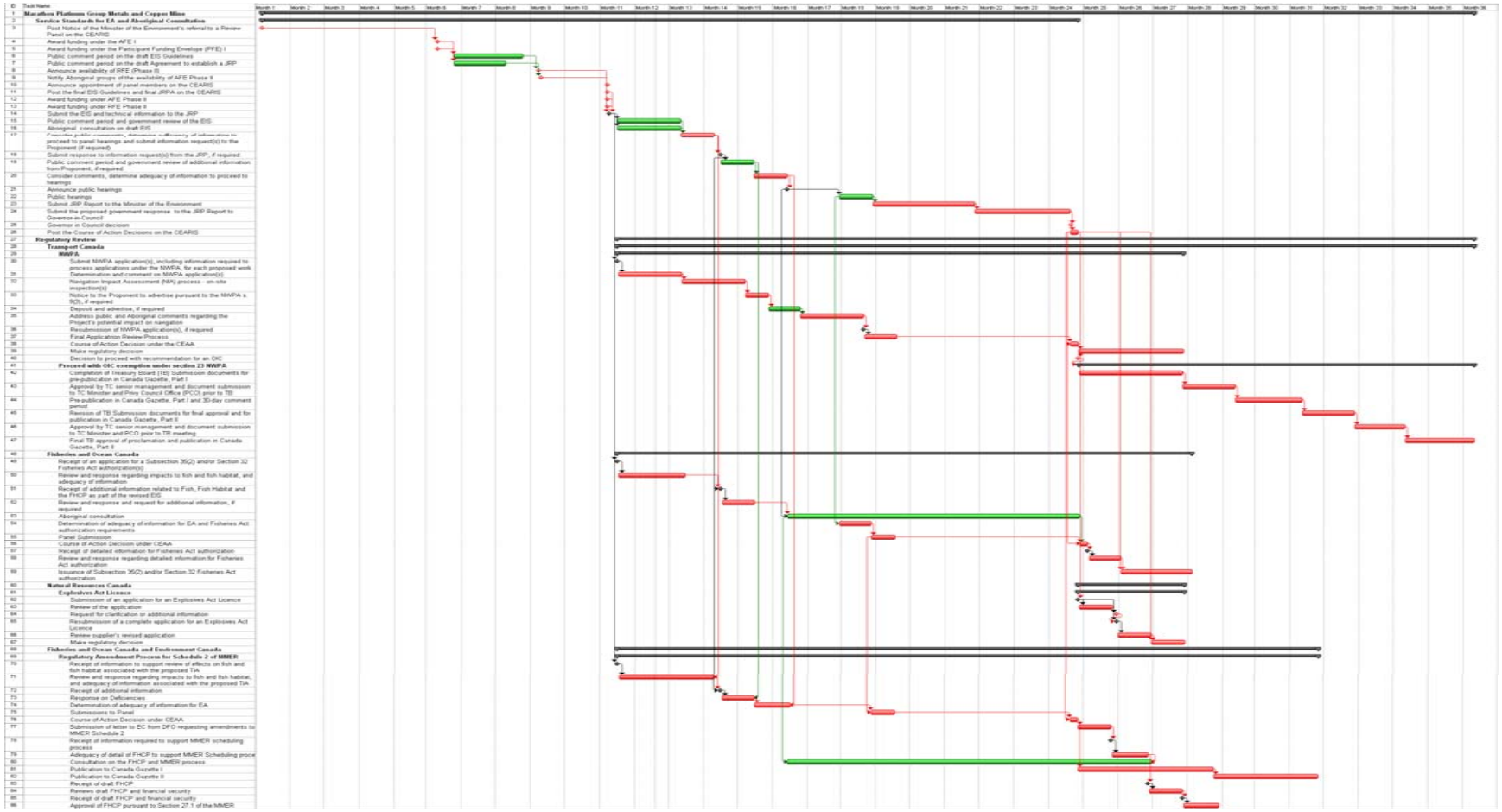
_____ 2011-09-26
Michael Wernick *Date*
Deputy Minister
Aboriginal Affairs and Northern Development Canada

Annexes

Annex I	Gantt Chart: Target Timelines for the Federal Review of the Project
Annex II	Key Milestones and Service Standards for the Environmental Assessment and Aboriginal Consultation
Annex III	Aboriginal Consultation Approach and Associated Roles and Responsibilities
Annex IV	Responsible Authorities: Roles, Responsibilities, Key Milestones and Service Standards
Annex V	Other Departments and Agencies: Roles and Responsibilities

Annex I

Gantt Chart: Target Timelines for the Federal Review of the Project[1]



[1] The Gantt chart is a baseline against which the timelines, identified in the JRPA and the Project Agreement, and expected to be taken by the JRP, and the federal departments and agencies in carrying out their respective tasks for the federal review, will be tracked. The timelines do not account for time taken by participants who are not signatories to this Agreement, such as the JRP, the Proponent, provinces, Aboriginal groups, the public or other stakeholders.

Annex II

Key Milestones and Service Standards for the Environmental Assessment and Aboriginal Consultation

	Milestone	Lead	Support As Needed	Service Standard, or Completion Date
1	Post Notice of the Minister of the Environment's referral to a Review Panel on the CEARIS	CEA Agency		October 7, 2010
2	Award funding under the Aboriginal Funding Envelope (AFE) I	CEA Agency		March 11, 2011
3	Award funding under the Regular Funding Envelope (RFE) I	CEA Agency		March 11, 2011
4	Public comment period on the draft EIS Guidelines	CEA Agency	RAs, expert FAs	March 25, 2011 to May 24, 2011
5	Public comment period on the draft Agreement to establish a JRP	CEA Agency	RAs, expert FAs	March 25, 2011 to May 9, 2011
6	Announce availability of RFE (Phase II)	CEA Agency		June 8, 2011
7	Notify Aboriginal groups of the availability of Aboriginal Funding under the AFE (Phase II)	CEA Agency		June 10, 2011
8	Announce appointment of panel members on the CEARIS	CEA Agency		August 8, 2011
9	Post the final EIS Guidelines and final JRPA on the CEARIS	CEA Agency		August 8, 2011
10	Award funding under AFE (Phase II)	CEA Agency		Prior to the start of the public comment period on the EIS
11	Award funding under RFE (Phase II)	CEA Agency		Prior to the start of the public comment period on the EIS
12	Submit the EIS and technical information to the JRP	Proponent	RAs, expert FAs	To be determined by the Proponent
13	Public comment period and government review of the EIS	JRP	RAs, expert FAs	For a minimum of 60 days.
14	Aboriginal consultation on the EIS	JRP	RAs, expert FAs	Concurrent with public comment period and government review of the EIS
15	Consider public comments, determine sufficiency of information to proceed to panel hearings and submit	JRP	RAs, expert FAs	Within 30 days from close of the public comment

	Milestone	Lead	Support As Needed	Service Standard, or Completion Date
	information request(s) to the Proponent (if required)			period
16	Submit response to information request(s) from the JRP, if required	Proponent	RAs	To be determined by the Proponent
17	Public comment period and government review of additional information from Proponent, if required	JRP	RAs, expert FAs	Within 30 days from receipt of information from the Proponent
18	Consider comments, determine adequacy of information to proceed to hearings	JRP		Within 30 days of close of public comment period on the additional information
19	Announce public hearings	JRP		Upon the determination of adequacy
20	Submit written government interventions.	JRP		To be determined by JRP, prior to the commencement of the public hearing.
21	Public hearings	JRP		Within 45 days after the announcement of the public hearings on CEARIS (Minimum duration of 30 days)
22	Submit JRP Report to the Minister of the Environment	JRP		Within 90 days from the close of public hearings
23	Submit the proposed government response to the JRP Report to Governor-in-Council	RAs	CEA Agency, expert FAs	Within 12 weeks from the submission of the JRP Report.
24	Governor-in-Council decision	Privy Council Office	CEA Agency, RAs, expert FAs	Determined by Cabinet
25	Post the Course of Action Decisions on the CEARIS	RAs	CEA Agency	Within 1 week of Governor-in-Council Decision

Annex III

Aboriginal Consultation Approach and Associated Roles and Responsibilities

1.0 Context

The Government of Canada consults with Aboriginal people for reasons of good governance, sound policy development and decision-making as well as for legal reasons. Canada has statutory, contractual and common law obligations to consult with Aboriginal groups. The Government of Canada will take a "Whole of Government" approach to Aboriginal consultation in the context of major resource projects to ensure that Aboriginal groups are sufficiently consulted, and where appropriate accommodated, when it contemplates actions that may adversely affect established or potential Aboriginal and treaty rights. These rights are recognized and affirmed in section 35 of the *Constitution Act, 1982*.

This approach is mandated by both the *Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects* and the associated Memorandum of Understanding (MOU) (June, 2007). The *Directive* states that Parties will work together towards a coordinated approach for Aboriginal consultation that is integrated with the EA, to the extent possible. The approach for federal consultation of Aboriginal groups for major resource projects was created in accordance with *Aboriginal Consultation and Accommodation: Updated Guidelines for Federal Officials to Fulfill the Legal Duty to Consult* (AANDC; March 2011).

2.0 Identifying Aboriginal Groups

The CEA Agency, along with RAs, will:

- work with the Proponent to identify Aboriginal groups for consultation that may be affected by the Project;
- conduct background research on Aboriginal groups in the area and their potential and established rights;
- identify potential adverse impacts of the proposed project/activity;
- undertake initial assessment and analysis (including prima facie strength of claim assessment); and,
- based on the potential severity of the adverse impacts of the proposed project on the potential or established Constitution Acts s. 35 rights, establish the initial form and content of a consultation process.

Aboriginal groups engaged may change over time based on information received during the course of the assessment and information received from Aboriginal groups, as may the level of consultation activities undertaken by the Crown.

3.0 The Crown Consultation Process

The "Whole of Government" approach for Aboriginal consultation activities will be implemented throughout the entire federal review. Best efforts will be made to ensure that the

timeframe for consultation activities coincides with key milestones and processes. It is important to acknowledge that timeframes for consultation activities may diverge from pre-established federal review timeframes, based on consultation requirements. Should modifications to timeframes be required due to the consultation process, revisions will be discussed by all Parties.

Where accommodation is appropriate, the Crown, coordinated by the CEA Agency during the EA phase, will monitor and determine whether identified mitigation measures reasonably address concerns regarding potential adverse impacts on established or potential Aboriginal and treaty rights. The Crown may also examine the role of third parties in addressing adverse impacts on established or potential Aboriginal and treaty rights. The Crown will work with Aboriginal groups and attempt to identify options or solutions that balance the interests of those Aboriginal groups with other societal interests. The Crown will take into account the consultation efforts of the Province and the Proponent and the JRP process, to the extent possible to meet the duty to consult.

Following the EA phase, the CEA Agency will transfer the role of the CCC to an assigned RA for the regulatory review phase.

4.0 Roles and Responsibilities of Parties

The CEA Agency will:

- Act as the CCC for the EA phase of the federal review in relation to the Project, coordinate and facilitate the Crown's consultation activities before and during the EA, and ensure a smooth transition to the regulatory review if required. As the CCC, the CEA Agency will:
    - Develop and implement a Crown consultation plan that is consistent with a whole-of-government approach to Crown consultation by the federal Crown through close collaboration with responsible authorities and with support from expert federal authorities as appropriate;
    - Coordinate federal Crown consultation activities with those of the Province;
    - Invite Aboriginal groups to participate in the EA process and make their concerns known about EA matters, as well as the project impacts on their established or potential Aboriginal and treaty rights;
    - Coordinate the involvement and provide updates to responsible authorities and Federal Authorities regarding federal Crown consultation activities with Aboriginal groups as it relates to the EA;
    - Represent the federal Crown with responsible authorities during consultation activities, and work with those authorities to appropriately consider and address issues raised by Aboriginal groups;
    - Compile the Crown consultation record, including a tracking table for those issues that may require a response from the responsible authorities and federal authorities;
    - Provide funding for consultation activities in support of the JRP process through the Aboriginal Funding Envelope of the CEA Agency's Participant Funding Program;
    - Coordinate the evaluation of the scope, nature, and sufficiency of the Crown's consultation efforts, with input from the DOJ, AANDC and RAs;

- Coordinate the response, with input from AANDC and the RAs, on behalf of the Government to Aboriginal groups on how concerns were addressed during the EA;
- Coordinate discussions amongst the RAs for the purposes of identifying a lead CCC for Aboriginal consultation activities related to the regulatory phase; and,
- Document lessons learned.

The MPMO will:

- Provide oversight to ensure the overall consistency, accountability, and transparency of the Aboriginal Crown consultation effort, for the entire federal review;
- House and maintain the official Record of Crown Consultation Activities for the Project; and,
- Incorporate information relating to consultation activities into the MPMO Tracker.

RAs will:

- Contribute to the "Whole of Government" approach by participating in consultation activities through the entire federal review (including before, during and after the EA) in areas relevant/appropriate to their mandates and areas of statutory and policy responsibility;
- Represent the Crown with the CCC and the province, and work with the Proponent and other Parties to address Aboriginal issues, as appropriate/required;
- Take on the role of the CCC from the CEA Agency following the EA course of action decision;
- Report on consultation activities to the CEA Agency and the MPMO in accordance with the established records-management process;
- Provide input into the response to Aboriginal groups on how concerns were addressed;
- Support issues analysis work, where required;
- If appropriate, conduct a *prima facie* strength of claim analysis with input from DOJ, AANDC and the CCC;
- Contribute to the evaluation of the scope, nature, and sufficiency of the Crown's consultation efforts, with CEA Agency, the Department of Justice (DOJ), and AANDC; and,
- Develop, review and approve the Aboriginal consultation work plan for the regulatory phase if required.

Expert FAs will:

- Support any of the above activities upon request of the CCC and/or RAs, as appropriate.

The DOJ and AANDC will:

- Provide legal services (DOJ), information and advice to the CEA Agency, MPMO and RAs as appropriate and required throughout the federal review; and,
- Assist in the evaluation of the scope, nature, and sufficiency of the Crown's consultation efforts.

Annex IV

Responsible Authorities
Roles, Responsibilities, Key Milestones and Service Standards

EA

- Participate in meetings with other federal/provincial authorities, where appropriate;
- Review, comment on and approve the EA work plan and Aboriginal consultation work plan;
- Review and comment on the EIS Guidelines and the JRPA;
- Review and comment on the EIS, and participate in the analysis of comments on the EIS;
- Participate in public hearings as an expert FA with respect to its mandate, regulatory responsibilities and areas of interest, where appropriate;
- Engage and consult with affected/potentially affected Aboriginal groups as described in Annexes II and III, as appropriate;
- Among the RAs, a lead will be established and be accountable for the development of the Government Response to the JRP Report;
- Review and provide input into the Government Response to the JRP Report;
- Take EA course of action decision following the Government Response to the JRP Report;
- Work with other RAs, expert FAs, the Proponent and the province to ensure implementation of mitigation measures and the design and implementation of a follow-up program; and,
- Where appropriate, work with other RAs, expert FAs, the Proponent and the Province to identify measures or means to accommodate adverse impacts on potential or established *Constitution Act* s. 35 rights.

Regulatory

- Prepare regulatory work plan;
- Participate in meetings with other federal/provincial authorities as appropriate;
- Participate in public comment period, public notice and possible public consultations, as appropriate;
- Provide expert advice with respect to its mandate, regulatory responsibilities and areas of interest, where appropriate;
- If appropriate, take regulatory decision following the EA course of action decision;
- Undertake any required activities related to its mandate, regulatory responsibilities and areas of interest, including consulting with affected/potentially affected Aboriginal groups as appropriate, to support regulatory decisions; and,
- Conduct site visits to support regulatory decisions, as required.

Transport Canada

Note: The following milestones represent the key activities associated with the regulatory process for the Project and are not intended to reflect the entire work plan schedule associated with this Project. Furthermore, these milestones may need to be adjusted as additional information is made available.

MILESTONE	ACTIVITIES/DESCRIPTION	LEAD	SERVICE STANDARD
Liaise with the Proponent regarding potential works in regards to impacts on navigability **Applicable to NWPA s.5 and s.23*	Liaise with the Proponent regarding proposed works that could potentially impact navigation and on potential alternatives and mitigation strategies to ensure that navigability is maintained.	TC	Ongoing.
Submit NWPA application(s), including information required to process applications under the NWPA, for each proposed work **Applicable to NWPA s.5 and s.23*	Provide TC with a completed application for each proposed work no later than the time of submission of the EIS.	Proponent	Determined by the Proponent.
Determination and comment on NWPA application(s) **Applicable to NWPA s.5 and s.23*	Review application package and information/plans for adequacy to support NWPA review. Request further information if required to proceed with application. Review draft Fish Habitat Compensation Plan (FHCP) for potential impacts to navigation and provide comments to DFO with respect to the navigability of the watercourse and any concerns regarding potential mitigation measures with respect to navigation.	TC	8 weeks after application submission. Within 2 weeks of receiving the draft FHCP
Navigation Impact Assessment (NIA) process - on-site	Complete on-site NIA of the Project, site and waterway(s), subject to weather and time of	TC	Site inspection within 2 months of receipt of completed application,

MILESTONE	ACTIVITIES/DESCRIPTION	LEAD	SERVICE STANDARD
inspection(s) **Applicable to NWPA s.5 and s.23*	year.		then as necessary until completion of public comment process.
Notice to the Proponent to deposit plans and to advertise pursuant to s. 9 of the NWPA, if required **Applicable to NWPA s.5 and s.23*	Provide the Proponent with advertisement package pursuant to NWPA s. 9.	TC	Within 3 weeks of completed initial on-site inspection and following the assessment of navigational issues arising from any changes to the Project due to EA issues.
Deposit and advertise, if required **Applicable to NWPA s.5 and s.23*	Deposit all plans in the local land registry or land titles office or other place specified by the Minister and advertise in the Canada Gazette and in one or more newspapers that are published in or near the place where the work is to be constructed. Provide proof of deposit and advertising to TC.	Proponent	Advertisement process is to occur for a minimum of 30 +1 calendar days.
Consult with Aboriginal groups regarding navigational impacts, if required **Applicable to NWPA s.5 and if appropriate, s.23*	Seek information regarding navigational concerns from the Proponent or directly from Aboriginal groups through the federal EA process, if possible. Or, if not possible, through departmental Aboriginal consultation processes.	TC	To be completed within the EA phase; however, consultation would be ongoing until duty has been met to the satisfaction of the Minister of Transport.
Address public comments and issues raised by Aboriginal groups, regarding the Project's potential impact on navigation	Should TC receive concerns from the public regarding navigation, the Proponent and TC will work together to resolve concerns. Should TC receive concerns from Aboriginal groups regarding navigation, the Proponent and TC will work together to resolve the concerns.	Proponent and TC TC	To be completed within 2 months of completion of the advertisement process.

MILESTONE	ACTIVITIES/DESCRIPTION	LEAD	SERVICE STANDARD
**Applicable to NWPA s.5 and s.23*	Additional requirements might be deemed necessary by TC in regard to potential impacts on navigation posed by proposed works. TC will facilitate public comment process if required.		
Resubmission of NWPA application(s), if required **Applicable to NWPA s.5 and s.23*	Resubmission of NWPA application(s) where applicable and re-deposit and re-advertising of plans in one or more local papers and the Canada Gazette is required if substantial changes to proposed work(s) are required. *[Furthermore, DFO FHCP will have to be reviewed prior to issuing an approval.]*	Proponent	Determined by the Proponent, if required.
Final application review process **Applicable to NWPA s.5 and s.23*	Perform a final review of all information on file, including technical information and ensure all public comments are addressed.	TC	4 weeks.
Course of Action Decision under the CEAA[2] **Applicable to NWPA s.5*	TC reaches course of action decision under CEAA.	TC	As per EA work plan.
Make regulatory decision	Make regulatory decision under NWPA.	TC	Within 90 calendar days after TC makes an appropriate course of action decision if the NWPA application(s) submitted no later than the time of the submission of the EIS. The regulatory decision

[2] Any proposed changes to the FHCP after the Course of Action Decision under CEAA, such as the addition of a new component, an increased size of a component or a change in location of a component, may affect the timing of subsequent regulatory decision-making steps.

MILESTONE	ACTIVITIES/DESCRIPTION	LEAD	SERVICE STANDARD
			will be contingent on: 1. The discharge of any legal Aboriginal consultation obligations associated with the approval(s). 2. An EA course of action decision under s. 37(1)(a) of CEAA. 3. Mitigation of public concerns to the satisfaction of the Minister of Transport.
Decision to proceed with recommendation for an OIC ***Applicable to NWPA s. 23**	TC refers to EIS for development of Triage and regulatory impact analysis statement (RIAS) requirements	TC	Upon posting of the Minister of the Environment's EA Decision Statement on the CEARIS Note: Submission of draft Treasury Board Submission documents for an NWPA s.23 exemption are contingent upon the issuance of all NWPA s.5 approvals.
Proceed with OIC exemption under section 23 NWPA ***Applicable to NWPA s.23 only**	Completion of Treasury Board (TB) Submission documents for pre-publication in Canada Gazette, Part I (i.e. Triage and RIAS)	TC	Within 3 months following the EA Course of Action decision.
	Approval by TC senior management and document submission to TC Minister and Privy Council Office (PCO)	TC	Within 1.5 months following the completion of draft TB Submission documents.

MILESTONE	ACTIVITIES/DESCRIPTION	LEAD	SERVICE STANDARD
	prior to TB meeting		
	Pre-publication in Canada Gazette, Part I and 30-day comment period	TC	Within 2 months following the submission of draft documents to PCO.
	Revision of TB Submission documents for final approval and for publication in Canada Gazette, Part II (i.e., RIAS)	TC	Within 1.5 months following Canada Gazette, Part I comment period.
	Approval by TC senior management and document submission to TC Minister and PCO prior to TB meeting	TC	Within 1.5 months following the completion of revised TB Submission documents.
	Final TB approval of proclamation and publication in Canada Gazette, Part II	TC	Within 2 months following the submission of documents to PCO.

Fisheries and Oceans Canada

Note: The following milestones represent the key activities associated with the regulatory process for the Project and are not intended to reflect the entire work plan schedule associated with this Project. Furthermore, these milestones may need to be adjusted as additional information is made available.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
The following milestones occur after DFO's review of a complete Project Description and determination that an authorization under Subsection 35(2) and/or Section 32 of the *Fisheries Act* is likely to be required. If such an authorization is likely to be required, DFO will request that the Proponent submit an application for authorization for review. Appropriately detailed information associated with the assessment of effects on fish and fish habitat and mitigation (including compensation) to address those effects must be provided in the proponent's Environmental Impact Statement (EIS) submission during the EA to support the determination of the significance of adverse effects on fish and fish habitat. This information will be identified through DFO's input to the EIS guidelines or terms of reference. Aboriginal consultation activities related to the EA are captured in *Annex II: Key Milestones and Service Standards for the Environmental Assessment and Aboriginal Consultation*.			
Receipt of an application for a Subsection 35(2) and/or Section 32 *Fisheries Act* authorization(s)	DFO receives an application from the Proponent for the authorization of impacts to fish habitat under Subsection 35(2) and/or the destruction of fish under Section 32 of the *Fisheries Act*. The application must be complete and be supported by adequate plans, maps, reports and data to support the review. The application should also be supported by proposed mitigation (as part of the authorization or in the EIS) to minimize impacts on fish and fish habitat and a proposed fish habitat compensation plan (FHCP) associated with a Subsection 35(2) authorization (if it is determined that one is	Proponent	Dependent upon timing of the submission of the application by the proponent but, at the latest, it must be submitted concurrently with the submission of the EIS.

[3] If the project will require amendments under the MMER, separate authorizations and FHCP(s) will be required, refer to separate MMER workplan.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	appropriate). This information will be used to support the *Fisheries Act* review and EA.[3]		
Review and response regarding impacts to fish and fish habitat, and adequacy of information	DFO reviews the application package/EIS (including proposed mitigation, proposed FHCP and associated estimate of financial security, if provided, and other related information) for adequacy and responds to the JRP as part of DFO comments on the EIS. If the FHCP is provided separately from the EIS, DFO will ensure that the FHCP is provided to Transport Canada for review of potential impacts to navigation (14-day comment period). Should the information be incomplete, DFO will request the required information, through the JRP Information Request process, from the Proponent in order to be able to proceed with the review.	DFO	Within a minimum of 60 days of submission of the EIS.
Receipt of additional information related to Fish, Fish Habitat and the FHCP as part of the EIS	DFO receives additional information.	Proponent	Dependent upon timing of the submission of the additional information by the proponent.
Review response and request for additional information, if required	DFO reviews additional information related to fish, fish habitat and the FHCP. DFO requests further information, if required, to proceed with the review of the application. This may	DFO	Within a minimum of 30 days of submission of the additional information from Proponent on EIS.

[4] Sufficiency review is an iterative process until the JRP determines it has sufficient information to proceed to the public hearing. Additional information may be requested by DFO to support the regulatory decision.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	include information on fish habitat compensation since it will form part of the mitigation plan for the EA.[4]		
Determination of adequacy of information for EA and *Fisheries Act* authorization requirements	DFO determines that information of appropriate detail on fish and fish habitat, mitigation measures, including FHCP, has been provided to make a conclusion on significance of adverse effects on fish and fish habitat[5]. DFO informs the JRP that information is sufficient to support the determination relative to the significance of environmental effects as needed for the EA. DFO also informs the proponent of any additional information requirements that may be necessary to make the regulatory decision, including the requirement for financial security in relation to compensation. DFO will also, as appropriate, undertake or participate in coordinated Aboriginal consultation activities relative to fish and fish habitat issues.	DFO	During the public hearing (minimum of 30 days).
Panel Submission	DFO prepares submission for Government of Canada written intervention.	DFO	To be determined by the JRP.
Course of Action Decision under CEAA	DFO reaches a course of action decision under CEAA that will determine whether the authorization(s) may be issued.	DFO	Within 1 week of Governor in Council Decision.

[5] At this stage, the proponent must have provided a sufficient level of detail in the FHCP for DFO to be reasonably certain that compensation is achievable. Any proposed changes to the FHCP after the Course of Action Decision under CEAA may affect the timing of subsequent regulatory decision-making steps and in some cases, may require that steps, including EA steps, be reconsidered if a revised FHCP introduces changes such as the addition of a new component, an increased size of a component or a change in location of a component

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	If the course of action decision allows for proceeding with authorization(s), the subsequent activities and milestones will apply.		
Aboriginal consultation	Through coordinated Aboriginal consultation activities, DFO will undertake additional consultation, as appropriate, based upon results of consultation undertaken during the EA. Activities and service standards will be identified in Aboriginal Consultation work plan after analysis of results of consultation activities undertaken during the EA.	DFO	As per Aboriginal Consultation work plan developed after analysis of results of consultation activities undertaken during the EA.
Receipt of detailed information for *Fisheries Act* authorization	DFO receives detailed FHCP, including information on financial security (if required) in a level of detail necessary to make a regulatory decision. Upon receipt, DFO will ensure that a copy of the detailed FHCP is provided to Transport Canada for a 14-day comment period.	Proponent	Dependent on timing of the submission by the proponent.
Review and response regarding detailed information for *Fisheries Act* authorization	DFO notifies the proponent that the FHCP is acceptable or if additional information is required to allow for the regulatory decision to be made. Sufficient information is required before the next step can be undertaken.	DFO	Within 30 days of receipt of the information. If multiple information requests are required DFO will respond within 15 days of the proponent responding to the previous request.
Issuance of Subsection 35(2)	If appropriate, DFO issues a *Fisheries Act* authorization[6] to the	DFO	DFO issues the authorization 60 days

[6] Fisheries Act authorization may be issued based upon policy guidance the *Policy for the Management of Fish Habitat*, 1986; Practitioners Guide to Writing an Authorization for the Habitat Provisions of the Fisheries Act, (v2.0); Practitioners Guide to habitat compensation for DFO Habitat Management staff, (v1.1); and Practitioners Guide to Letters of Credit (v1.0).

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
and/or Section 32 *Fisheries Act* authorization	Proponent for impacts to fish and fish habitat.		following the determination that the FHCP is acceptable (including financial security), and the discharge of any Aboriginal consultation responsibilities with respect to the *Fisheries Act* authorization. Issuance of the authorization(s) may also consider the Proponent's timing needs for the authorization(s) in that, should an authorization not be required until much later than the timeline above, DFO will issue it when it is appropriate. If the above conditions have been met, an authorization for impacts to fish and fish habitat associated with a work/undertaking directly related to a Tailings Impoundment Area requiring scheduling under the *Metal Mining Effluent Regulations* (MMER) will be issued within 14 days of *Canada Gazette II* publication.

Fisheries and Oceans Canada and Environment Canada

Note: The following milestones represent the key activities associated with the regulatory process under the Metal Mining Effluent Regulations for the Project and are not intended to reflect the entire work plan schedule associated with this Project. Furthermore, these milestones may need to be adjusted as additional information is made available.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
The following milestones occur after the review of a complete Project Description by Fisheries and Oceans Canada (DFO) and Environment Canada (EC) and a determination that a water body proposed for use as a Tailings Impoundment Area (TIA) requires listing under Schedule 2 of the *Metal Mining Effluent Regulations* (MMER). Adequate information associated with the assessment of effects on fish and fish habitat and mitigation (including compensation) to address those effects must be provided in the proponent's EIS submission during the environmental assessment (EA) to determine the significance of adverse effects on fish and fish habitat. In addition, an alternatives assessment of options for mine waste disposal must be conducted during the EA process in order to meet the timelines set out in this Agreement. This information will be identified through DFO's and EC's input to the EIS guidelines or terms of reference.			
Receipt of information to support review of effects on fish and fish habitat associated with the proposed TIA and alternatives assessment of options for mine waste disposal	The scheduling process under the MMER is a separate process from the Section 32/Subsection 35(2) *Fisheries Act* authorization process with its own information requirements. For a project which requires the listing of a water body as a TIA under Schedule 2 of the MMER, the proponent is required to submit specific information to support the EA decision and regulatory processes. At a minimum, the proponent must undertake a thorough assessment of alternatives for mine waste disposal. It is strongly recommended that this assessment be undertaken in accordance with the *Guidelines for the Assessment of*	Proponent	Dependent on timing of the proponent but should be submitted with the EIS.

[7] The proponent is required to submit a fish habitat compensation plan for approval by DFO before depositing a deleterious substance into the TIA that is added to Schedule 2 of the MMER.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	Alternatives for Mine Waste Disposal that have been developed by EC. This process must be undertaken during the EA process in order to meet the timelines set out in this Agreement and to minimize the time required to proceed with the MMER amendment process, should that be recommended. This alternatives assessment must objectively and rigorously assess all feasible options for mine waste disposal. The proponent must demonstrate through the EA and this assessment that the proposed use of the water body as a TIA is the most appropriate option for mine waste disposal from environmental, technical, socio-economic and economic perspectives. The proponent must also provide the proposed mitigation measures and fish habitat compensation plans[7] (FHCPs) to offset the loss of fish habitat associated with the deposit of deleterious substance(s) into the TIA (as per Section 27.1 of the MMER) and to offset the loss of fish habitat from works and undertakings associated with the TIA (as per Subsection 35(2) of the *Fisheries Act*). The FHCP(s) must clearly indicate those aspects of compensation that are intended to offset the habitat losses resulting from the deposit of deleterious substance into the TIA and those aspects intended to offset the harmful alteration, disruption or destruction of fish habitat pursuant to Subsection 35(2) *Fisheries Act*.		

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	DFO's requirement is for the proponent to submit a separate FHCP which specifically offsets the loss of fish habitat associated with the deposit of deleterious substances into the TIA. This information will be used to support the EA decision and the amendment to Schedule 2 of the MMER.		
Review and response regarding impacts to fish and fish habitat, and adequacy of information associated with the proposed TIA	DFO and EC review the information (including the assessment of alternatives for mine waste disposal, proposed mitigation, proposed FHCP(s) and associated estimate(s) of financial security, if provided) for adequacy and respond to the Joint Review Panel (JRP) as part of DFO/EC comments on the EIS. EC will lead the review to determine the adequacy of the information in the alternatives assessment submitted by the proponent and, in consultation with DFO, will provide comments to the JRP on any noted deficiencies. The proponent will be invited to respond to such comments with the objective being to provide federal officials with sufficient information to determine whether or not the proposed disposal option should proceed with review. Should the information be incomplete, DFO/EC will request the required information through the JRP Information Request process in order to be able to proceed with review.	DFO/EC	As per EA & Aboriginal Engagement and Consultation Annex II on response to EIS.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
Receipt of additional information[8]	DFO/EC receives the additional information.	Proponent	Dependent on timing of the submission by the Proponent.
Response on Deficiencies [2]	DFO, with EC input, will review the additional information related to fish, fish habitat and the FHCP to offset the loss of fish habitat associated with the proposed TIA. EC, with DFO input, will review the additional information related to the alternatives assessment and the associated justification that it is the most appropriate option. DFO/EC requests further information, if required, to proceed with the review.	DFO/EC	As per EA & Aboriginal Engagement and Consultation Annex II.
Determination of adequacy of information for EA	DFO determines that adequate information on fish and fish habitat, including FHCP(s), has been provided for in the EA.[9] DFO advises the JRP that information is sufficient to allow a determination relative to the significance of adverse effects on fish and fish habitat for the EA. DFO and EC also inform the Proponent of any additional information requirements that may be necessary to support the regulatory decision and associated	DFO with EC	Adequate information on the FHCP, considered mitigation for the EA, must be provided during the EA for inclusion in the EA report before it can be completed. As per EA & Aboriginal Engagement and Consultation Annex II.

[8] These steps are iterative until DFO/EC are satisfied that the information is adequate to support the EA.

[9] At this stage, the proponent must have provided a sufficient level of detail in the FHCP for DFO to be reasonably certain that compensation is achievable prior to making final submissions before JRP. Any proposed changes to the FHCP after the Course of Action Decision under CEAA, such as the addition of a new component, an increased size of a component or a change in location of a component, may affect the timing of subsequent regulatory decision-making steps.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	process for MMER scheduling, including the requirement for financial security in relation to the FHCP. DFO, with EC support as required, will undertake or participate in coordinated Aboriginal consultation activities relative to fish and fish habitat issues associated with the TIA, when appropriate. EC will utilize the JRP process to undertake local consultations on the proposed addition of the new TIA(s) to Schedule 2 of the MMER. EC will also undertake consultation in the National Capital Region to inform representatives of the major national Aboriginal organizations and the ENGO community.		
Submissions to Panel	Submission of Government of Canada written interventions to JRP.	EC and DFO	As per JRP timelines.
Course of Action Decision under CEAA	DFO reaches a course of action decision under CEAA that will determine whether a recommendation can be made to the Governor in Council on MMER scheduling. If course of action decision allows for the MMER scheduling process to proceed, then the following subsequent activities and milestones will apply.	DFO	As per EA and Aboriginal Engagement and Consultation Annex II.
Submission of letter to EC from DFO requesting	DFO will submit a letter to EC indicating that EC can begin the process to schedule a water body to	DFO	Within 30 days of the EA course of action decision being posted on the

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
amendments to MMER Schedule 2	be used as a TIA under MMER Schedule 2.[10]		CEARIS.
Receipt of information required to support MMER scheduling process	DFO receives additional information required to support MMER scheduling process, including detailed FHCP and financial security. Information on the FHCP is included in the Regulatory Impact Analysis Statement (RIAS) which is published in *Canada Gazette,* Part I. **Note:** A detailed FHCP for fish habitat losses associated with the TIA must be approved, and financial security received, by DFO prior to the deposit of deleterious materials into the waters that have been added to Schedule 2 of the MMER as a TIA (i.e. once the TIA has been published in *Canada Gazette*, Part II), as per section 27.1 of the MMER.	Proponent	Dependent upon timing of the Proponent.
Adequacy of detail of FHCP to support MMER scheduling process	DFO reviews and determines adequacy of the FHCP to support MMER scheduling process and informs the Proponent and EC of any deficiencies. If the FHCP is considered adequate, DFO will inform the Proponent and EC.	DFO/EC	Within 30 days of receipt of detailed FHCP.
Consultation on the FHCP and MMER process	DFO will consult with Aboriginal groups on the final FHCP, as appropriate.	DFO with respect to FHCP EC with respect to	As per Aboriginal Consultation work plan developed after analysis of results of consultation activities undertaken during the EA.

[10] The overall target timeline for the MMER process is 8 months from the EA course of action decision being posted on the CEARIS. Within this 8 month process, the timing of individual steps may vary as indicated and is contingent upon the schedule of the Treasury Board.

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
	DFO will provide Transport Canada a copy of the final FHCP.	MMER process	
Publication in *Canada Gazette,* Part I	EC leads the development of the regulatory package for pre-publication of the intent to amend Schedule 2 of the MMER for the consideration of Treasury Board.	EC	Within 4-5 months of the EA course of action decision being posted on the CEARIS. Timeline contingent upon schedule of Treasury Board.
Publication in *Canada Gazette,* Part II	EC leads the development of the regulatory package for final publication of the amendment of Schedule 2 of the MMER for the consideration of Treasury Board.	EC	Within 3-4 months after publication in *Canada Gazette*, Part I. Timeline contingent upon: 1. the discharge of any legal Aboriginal consultation obligations associated with the scheduling; and 2. the schedule of Treasury Board.
Receipt of draft FHCP	DFO receives finalized FHCP designed to offset the loss of fish habitat from the deposit of deleterious substance into the TIA.	Proponent	Dependent upon timing of the Proponent.
Reviews draft FHCP and financial security	DFO reviews finalized FHCP and financial security pursuant to Section 27.1 of the MMER. DFO informs proponent of any additional information requirements that may be necessary to support the approval of the compensation plan pursuant to Section 27.1 of the MMER.	DFO	Within 30 days of receipt of finalized FHCP and financial security. Timeline contingent upon: • the discharge of any legal Aboriginal consultation obligations associated with the FHCP.
Receipt of draft FHCP and financial security	DFO receives additional information.	Proponent	Dependent upon timing of the Proponent – must be provided 60 days prior to deposit of deleterious

MILESTONE	ACTIVITIES / DESCRIPTION	LEAD	SERVICE STANDARD
			substance into the scheduled TIA.
Approval of FHCP pursuant to Section 27.1 of the MMER	If appropriate, DFO approves the (final) FHCP pursuant to Section 27.1 of the MMER.	DFO	Within 30 days of receipt of final FHCP and financial security and 30 days prior to deposit of deleterious substance into the TIA.
For related Section 32 /Subsection 35(2) *Fisheries Act* authorizations Authorization(s) for impacts to fish and fish habitat associated with a structure supporting a TIA requiring scheduling on Schedule 2 of the *Metal Mining Effluent Regulations* will be issued within two weeks following the *Canada Gazette*, Part II publication.			

Natural Resources Canada

Note: The following milestones represent the key activities associated with the regulatory process for the Project and are not intended to reflect the entire work plan schedule associated with this Project. Furthermore, these milestones may need to be adjusted as additional information is made available.

MILESTONE	ACTIVITIES/DESCRIPTION	LEAD	SERVICE STANDARD
Submission of an application for an *Explosives Act* Licence	The Explosives Supplier compiles information and submits an application to NRCan for a Licence under *the Explosives Act* paragraph 7(1) (a) for an explosives factory and magazine.	Explosives Supplier selected by the Proponent	Determined by the Proponent and its Explosives Supplier; may not occur until late in the Project.
Review of the application	NRCan reviews the Explosive Supplier's application to ensure that all of the required information is included.	NRCan	If the application is complete, require 30 days to review and process the application and issue the *Explosives Act* Licence.
Request for clarification or additional information	If there are aspects of the application that are unclear or additional information is required, NRCan will request clarification or additional information from the Explosives Supplier.	NRCan	Within 15 days of receipt of the application.
Resubmission of a complete application for an *Explosives Act* Licence	Explosives Supplier re-submits a completed application for an *Explosives Act* Licence.	Supplier	Dependent on the Explosives Supplier.
Review Supplier's revised application	NRCan continues its review of the application, which includes clarifications or additional information requested.	NRCan	Within 30 days from receipt of revised application.
Make regulatory decision	Once a determination under the CEAA has been rendered and a Notice of Decision has been posted on the CEARIS, NRCan can make a decision under the *Explosives Act* for an explosives factory(ies) or magazine(s).	NRCan	Within 30 days from the receipt of all necessary information to form a complete application (as per *User Fees Act* performance standard commitments).

Annex V

Other Departments and Agencies
Roles and Responsibilities

PARTY	ROLES / RESPONSIBILITIES
Expert Federal Authorities	
	Upon request from an RA or the JRP, expert FAs will perform and fulfill the following roles and responsibilities: • Review and submit comments on the EA work plan and Aboriginal Consultation work plan; • Participate in federal project review committee meetings for provision of relevant expertise that is available; • Review and submit comments on EA documents as appropriate; • Provide support to the design and implementation of the follow-up program and/or mitigation measures that arise from expert FA recommendations made, and as agreed to with the RAs/Agency; • Participate in meetings of other federal/provincial authorities as appropriate; • Support aboriginal consultation activities as appropriate; • Provide advice in respect of their respective mandate and area of expertise when requested by the RAs. Advice will be provided within timelines requested by an RA; and, • Review and submit comments on the EIS and comments received.
Area of Expertise/Interest	
HC	• Air quality health effects; • Contamination of country foods (e.g. fish, wild game, garden produce, berries, etc); • Drinking and recreational water quality; • Radiation effects; • Electric and magnetic fields; • Noise impacts; • Health risk assessment and risk management; • Federal air, water, and soil quality guidelines/standards used in human health risk assessments; and, • Toxicology (multimedia - air, water, soil).
EC	• Wildlife, including: o Migratory birds; o Species at risk; o Biodiversity; and o Wetlands. • Water quality, including: o Metal mining effluent; and o Sanitary wastewater. • Metal leaching/acid rock drainage;

PARTY	ROLES / RESPONSIBILITIES
	• Waste rock and effluent management; • Mine design alternatives; • Air quality; • Chemicals management; • Solid waste management; • Ecosystem management; • GHG emissions; and, • Environmental emergencies.
NRCan	• Explosives, • Hydrogeology, • Engineering Geology, • Geology and geological hazards, • Metal leaching and acid rock drainage, • Mine effluents, and • Minerals and metals science.
CEA Agency – Panel Secretariat	• Provide administrative, procedural and technical advise to the Joint Review Panel; • On behalf of the JRP, communicate to the proponent the information requirements for the preparation of the EIS; • Maintain the public registry including comments related to the EA; • Provide regular updates to federal departments and other interveners on the JRP process; as allowed taking into consideration the laws of natural justice; and, • Document lessons learned.

CEA Agency – Federal Participation Coordinator	• Coordinate the delivery of training and guidance for effective participation in public hearings;
	• Coordinate communication among the federal participants during the JRP review through the establishment and management of a federal working group. The federal working group would have as part of its mandate to:
	  • Facilitate discussions between RAs and FAs to identify any technical issues and any conflicting or overlapping perspectives; and,
	  • Assist departments in ensuring consistent approach to federal submissions and presentations to the JRP;
	• When the federal and provincial governments are applying different approaches to conducting an environmental assessment, work with federal departments to apply administrative procedures that will encourage consistency in the information being presented to the provincial and federal processes;
	• Work with the agency coordinating provincial input into a federal review panel to obtain information on provincial interests and perspectives, and where appropriate, encourage dialogue between provincial and federal departments on common issues; and,
	• Document lessons learned.

PARTY	ROLES / RESPONSIBILITIES
CEA Agency	• Make participant funding available and maintain funding program (as per section 58(1.1) of the CEAA.
AANDC	• Provide advice in regard to Aboriginal consultation.
MPMO	• Coordinate the development and approval of the Agreement; • Monitor and report on the progress of the Project through the federal review; • Take proactive steps to identify opportunities to streamline the federal review to meet government timelines and identify bottlenecks that could cause delay; and, • Incorporate information received from the Agency, expert FA(s) RA(s), and proponent on the EA and regulatory milestones into the MPMO Tracker.