APPENDIX 1.I

Hammond Reef Gold Project
Individual Environment Assessment Terms of Reference – Amended
Osisko Hammond Reef Gold Ltd.
April 2012 (Approved July 2012)

TERMS OF REFERENCE

Hammond Reef Gold Project

INDIVIDUAL ENVIRONMENT ASSESSMENT

Final Terms of Reference - Amended

Submitted by:

Osisko Hammond Reef Gold Ltd.

April 2012

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Executive Summary

The Terms of Reference (ToR) for the Hammond Reef Gold Project sets out Osisko Hammond Reef Gold's (OHRG) work plan for preparing the environmental assessment (EA) and for carrying out the required public and Aboriginal consultation. The ToR follows the outline and guidance provided in the Ministry of Environment (MOE) Code of Practice and was developed in consultation with the MOE Environmental Approvals Branch (EAB).

The major sections in the ToR are:

- Identification of the Proponent;
- Indication of how the EA is to be Prepared;
- Purpose of the Undertaking;
- Description and Rationale for the Project;
- Description and Rationale for Alternatives;
- Description of the Environment and Potential Effects;
- Assessment and Evaluation;
- Commitments and Monitoring;
- Consultation;
- Flexibility to accommodate new circumstances; and
- Additional Environmental Approvals.

The Project proponent is OHRG, a wholly owned subsidiary owned by Osisko Mining Corporation. The Project is subject to a provincial Individual EA, which will be coordinated with the federal requirement of a Comprehensive Study. The purpose of the Project is to extract gold for sale to the world market. The Project will include three main components: an open pit mine, an ore processing facility and a tailings management facility. The Project will be undertaken in three phases: construction, operations and closure. The EA will identify and assess alternative methods of carrying out the Project that are technically and economically feasible such as tailings methods and locations, access road, electrical supply, water management and waste management. The only alternative to the Project that will be considered is the do-nothing alternative. The EA Report will provide details regarding the rationale for the selected Project alternative and alternative method and will be written to meet all provincial and federal requirements.

The Project has the potential to affect the natural, cultural, social and economic environments. A preliminary list of potential effects is provided. Interactions between the alternative methods of the Project and the existing environment will be identified on the basis of the identified project activities and the likely interactions of these with the natural environment, including issues identified in consultation with Aboriginal communities, regulators and other stakeholders. The existing environment has been studied at a site, local and regional level through a field program spanning four seasons. Background research and consultation is ongoing to identify and finalize acceptable criteria and indicators to measure potential changes to the environment. The EA will evaluate criteria for the physical, biological and socio-economic environments to determine the potential effects of the alternative methods of the Project. A systematic and consistent approach will be employed in the assessment of Project alternatives and potential impacts.

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The EA will include an Environmental Management Plan (EMP) and a Social Management Plan (SMP). The EMP and SMP will identify specific corporate commitments beyond the EA process. Ongoing monitoring will take place to ensure EA predictions were accurate and government guidelines are being met. Consultation with Project stakeholders and Aboriginal communities is an important part of the EA. A stand-alone Record of Consultation Report, submitted along with the ToR, provides details regarding consultation that has taken place to date and a Public Consultation Plan and Aboriginal Engagement Plan outlining the consultation and engagement activities that are planned to take place during the EA are provided in Appendices B and C.

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1.0 IDENTIFICATION OF THE PROPONENT

Osisko Hammond Reef Gold Ltd. (OHRG) is proposing the development of the Hammond Reef Gold Project (the Project), a gold mine and associated infrastructure near Atikokan, Ontario.

Osisko Mining Corporation (Osisko) is a mid-tier gold producer based in Montreal, Quebec. Osisko operates the Canadian Malartic Gold Mine in Quebec and is pursuing resource definition in a number of properties in Canada and abroad, including Hammond Reef. OHRG is 100% owned by Osisko, there are no co-proponents for Project.

Osisko's corporate contact information is:

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2.0 INDICATION OF HOW THE EA IS TO BE PREPARED

The EA Study will be prepared in accordance with the requirements of the Ontario EAA, R.S.O. 1990, Chapter E. 18, under subsection 6.1(2).

The scope of the EA Study includes:

- Development of a detailed Project Description, that identifies all components of the Project, through all Project phases, including projected timelines;
- Identification of potential Project-environment interactions to identify potential sources of impacts, including alternatives and alternative methods;
- Completion of baseline studies to define existing socio-economic/cultural and environmental conditions;
- Development of criteria selection to allow for assessment of potential Project effects, including alternatives and alternative methods;
- Assessment of potential impacts of different alternatives to the Project and alternative methods of carrying out the Project;
- Assessment of potential effects of the Project, including alternatives and alternative methods, and development of mitigation measures, as required;
- Development of decision-making tools to identify the Project alternatives with the most acceptable level of environmental and socio-economic effects;
- Completion of a Consultation Report and development of a Consultation Plan for ongoing consultation throughout the life of the Project;
- Development of environmental and social management plans; and
- Development of monitoring plans and follow-up programs.

2.1 Purpose of the EA Study

The specific objectives of the EA Study for the Project are to:

- Fulfill the requirements outlined in the Terms of Reference as approved by the Minister of the Environment and the EIS Guidelines developed by the CEA Agency, be consistent with the purpose of the Environmental Assessment Act and the public interest;
- Describe the baseline environmental and socio-economic conditions, against which potential impacts will be assessed;
- Determine the alternative Project activities and alternative methods of carrying out the Project and identifying where these may interact with the environment;
- Develop assessment criteria and identify appropriate indicators of potential impacts;
- Describe the criteria selection and decision making process in the selection of the preferred alternative;
- Assess the residual impacts of different alternatives to the Project, after mitigation;
- Assess the residual impacts of different alternative methods of carrying out the Project, after mitigation;
- Describe the residual environmental, socio-economic and cultural heritage effects that may be generated by the Project after mitigation, during the construction, operations, closure and post closure phases;
- Propose environmental and social management plans for each stage in the Project life cycle that describe impact avoidance, mitigation and/or reclamation such that impacts are mitigated and benefits are enhanced;
- Develop monitoring programs to verify that measures taken to manage impacts and benefits are achieving identified targets;
- Describe roles and responsibilities for managing and reporting on the Project's environmental and social performance throughout the life cycle of the Project, including follow-up programs;
- Ensure the involvement of and consultation with government agencies in the EA process so that the management plans address all regulatory requirements;
- Ensure the involvement of and consultation with Project stakeholders and Aboriginal communities in the EA process so that their concerns can be addressed; and
- Describe completed consultation activities and provide a plan for ongoing consultation throughout the life of the Project.

2.2 Integration Approach

Federal and provincial EA requirements will be integrated into a streamlined approach that maximizes the use of work completed, minimizes duplication of effort and fosters cooperation between federal and provincial agencies to the extent possible. Figure 1 illustrates the proposed approach to integrating the federal and provincial EA requirements. A single report will be prepared by OHRG to address the requirements of the federal EIS Guidelines and the provincial ToR. The integration approach is described in the following sections.

To date, the agencies have indicated willingness for coordination. An administrative framework for such coordination is provided in the *Canada-Ontario Agreement on Environmental Assessment Cooperation* (Nov 2004). Federal department coordination will be provided by the CEA Agency. Provincial EA coordination will be provided by the MOE Environmental Approvals Branch (EAB). These two key agencies will facilitate the consultation, discussions and cooperation between all federal and provincial agencies through the scoping and review processes. As per the agreement signed by the Deputy Ministers of federal authorities involved in the Project, the Major Projects Management Office (MPMO) will publicly track and monitor timelines of the federal review for the EA in keeping with the *Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects* (MPMO 2010).

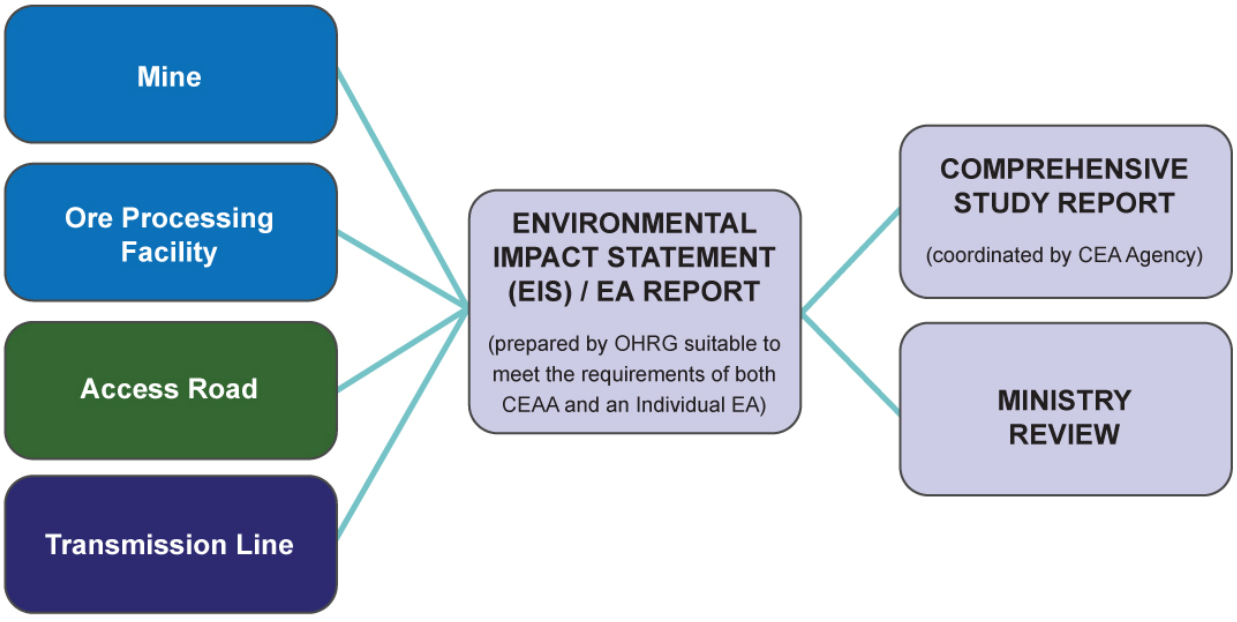

Figure 1: EA Integration Approach

2.2.1 Federal-Provincial Integration

The approach to coordination of an EA undergoing a federal Comprehensive Study is through ongoing cooperation and communication between OHRG and the federal and provincial agencies. To date the agencies have indicated willingness for coordination for which an administrative framework is provided in the *Canada-Ontario Agreement on Environmental Assessment Cooperation* (2004).

The EA process can be broken down into the following broad steps:

- Pre-EA Planning;
- Terms of Reference commencement and submission;
- EA commencement;
- Environmental studies and preparation of EIS / EA Report;
- EA decision; and
- Monitoring and follow-up.

The following sections describe the steps in the EA process and how the federal and provincial requirements can be integrated to minimize duplication of effort, and reduce the replication of review effort by the agencies involved. The steps in the federal EA process (Comprehensive Study) are shown in Figure 2, and the steps in the provincial process (Individual EA) are shown in Figure 3.

Figure 2: CEA Agency Comprehensive Study Process

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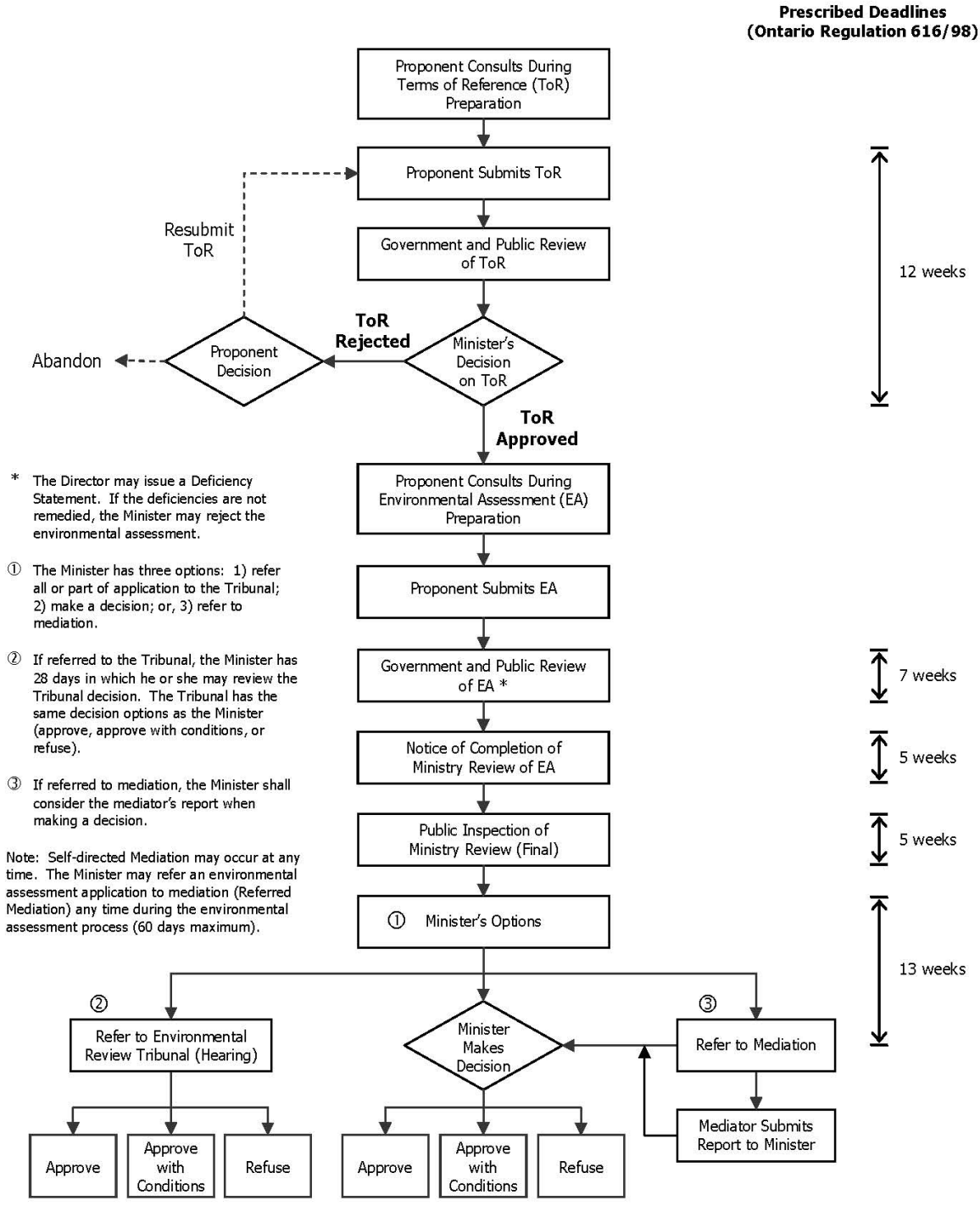

Source: MOE EAB

Figure 3: Provincial Individual EA Process

2.2.2 Pre-EA Planning

On April 28, 2011 the CEA Agency deemed the OHRG Project Description complete and initiated the 90-day pre-environmental assessment planning period. Pre-EA Planning activities were undertaken including:

- Coordination and work planning between agencies;
- Determination of the scope of the Project; and
- Determination as to whether a Comprehensive Study should commence.

Once the federal Project Description was accepted, OHRG met with the MOE EAB and made a request for a Voluntary Agreement. OHRG provided a letter to MOE EAB that included the reasons for the request to complete an Individual EA and the scope of the Project to be assessed. The Agreement was signed by OHRG and the MOE EAB Director on August 26, 2011.

The MPMO has established a Project Tracker which keeps a record of all of the steps that need to be achieved for the federal EA, links to federal EA documents, a brief summary of the Project and contact information.

Based on the accepted Project Description, the MPMO developed a Project Agreement between the Deputy Ministers of the federal departments for timing of completion of the EA and federal permits for the Project. The agreed timelines do not include the time required to amend Schedule 2 of the MMER, if deemed necessary. The Project Agreement outlines:

- Agencies involved in the EA for statutory, specialized expertise and administrative reasons;
- Planned milestones, timelines and progress tracking; and
- Issue resolution process.

2.2.3 EA Commencement

The CEA Agency initiated the federal EA process with the issuance of a Notice of Commencement on August 10, 2011. The CEA Agency has completed the following steps:

- Posted a Notice of Commencement on the Canadian Environmental Assessment Registry;
- Announced the availability of participant funding;
- Prepared the EIS Guidelines; and
- Collected public comments on the Project and the conduct of a Comprehensive Study.

The Notice provided a brief overview and identified those federal agencies with a statutory duty related to the Project. The CEA Agency considered feedback from OHRG, the public and Aboriginal stakeholders and finalized the EIS Guidelines on October 21, 2011.

The EIS Guidelines identify the nature and extent of the information that must be prepared for the Comprehensive Study. This includes the minimum scope of the studies required to characterize the existing conditions, assess effects and determine their significance. Finally, the CEA Agency will prepare the Comprehensive Study Report.

In parallel with the preparation of the federal scoping documents, OHRG has prepared and consulted on the provincial ToR. The preparation of the ToR was done in consultation with the MOE EAB Special Project Officer and in accordance with the *Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario* (MOE 2009). The key steps in the preparation of the ToR include:

- Posting a Notice of Commencement of the ToR;
- Developing and carrying out a ToR consultation plan;
- Preparing the draft ToR; and
- Submitting the final ToR.

As shown on Figure 3, the Minister is required to make a decision on the ToR within 12 weeks of submission. All interested persons may provide comments on the ToR during the first 30 days. OHRG is responsible for addressing these comments. The Minister then has the ability to approve, approve with amendments, or reject the ToR.

The preparation of the ToR has been carried out in cooperation with the CEA Agency and other government departments so that the EIS Guidelines and ToR can be as closely aligned as possible, and result in a single EA Report. Although the requirements of the Ontario Environmental Assessment Act (EAA) and CEAA are slightly different, the documents will be drafted so that one set of Technical Supporting Documents (TSD) would meet the intent of both.

2.2.4 Environmental Studies and Preparation of the EA Report

Once the ToR and EIS Guidelines are both finalized, OHRG will prepare and submit an EA Report that meets requirements outlined in both documents. OHRG will prepare one set of TSDs to meet the needs of both the federal EIS Guidelines and provincial ToR. Drawing on the information in the TSDs, OHRG will also prepare a single EA Report that meets the requirements set out in the federal EIS Guidelines and the provincial ToR.

The preparation of this single EA Report will require such activities as:

- Characterizing the baseline environment, predicting effects and designing a follow-up program;
- Conducting public participation and considering public and Aboriginal groups' concerns; and
- Reviewing the draft EA Report by federal agencies and provincial agencies.

During this stage, OHRG will complete the baseline characterization studies to predict and assess potential environmental effects of the Project alternatives. The scope of the baseline studies will be developed in consultation with regulatory agencies. The assessment will consider direct, indirect and cumulative effects of the alternatives to and alternative methods for the Project, allowing OHRG to chose the most suitable option.

A draft EA Report will be provided to Aboriginal communities and regulatory agencies for review before publication or formal submission to MOE and the CEA Agency. A final EA Report, which incorporates feedback provided on the Draft EA Report, will be published and provided for stakeholder review. The CEA Agency will then produce a Comprehensive Study Report. This report will then be subject to a minimum 30-day public review period. Taking into account feedback received, the federal Minister of the Environment will then render a decision on the EA.

The timelines for the provincial review of the EA Report are stipulated in O. Reg. 616/98. Generally, it takes approximately 30 weeks to go through the process if there are no delays. The steps are as follows:

- Inspection/review of the EA Report by government and public (7 weeks);
- Preparation of Ministry review (5 weeks);
- Issue Notice of Completion of Ministry review (no timeline);
- Public inspection of Ministry review (5 weeks); and
- Final Ministry evaluation period (13 weeks).

2.2.5 EA Decision

Following the public review period of the Comprehensive Study Report, and the final Ministry evaluation period, the federal and provincial Ministers of the Environment will render their decisions on the EA. Under the Comprehensive Study process, the federal Minister of the Environment considers the Comprehensive Study Report, summary of Aboriginal consultation and public concerns, and will issue an EA Decision Statement. The lead role is then transferred from the CEA Agency to the Responsible Authority (RA), who will then render their EA Decisions.

During the provincial review period, Ministry staff will write and publish a review of the EA document, called a “Ministry Review”. The Ministry Review includes an analysis of all public, Aboriginal community and government department comments submitted during the seven week comment period, as well as the proponent’s (OHRG) response to the comments. The Ministry Review also discusses how the proponent is in compliance with its approved ToR and how the proponent has met the requirements of the Ontario EAA. The Minister may then exercise one of three options: refer to an Environmental Review Tribunal, make a decision, or refer to mediation. If making a decision, the Minister may give approval to proceed with the undertaking, with or without conditions, or refuse to give approval to proceed with the undertaking.

Following approval of the EA, the federal authorities will exercise their regulatory authority within the timelines agreed to in the MPMO Project Agreement (assumed three months). Provincial permitting approvals would likely follow in a similar timeframe.

2.3 Environmental Assessment Requirements

2.3.1 Overview of EA Requirements

The Project will be subject to both provincial and federal EA requirements. In addition, and number of permits and authorizations will be required as summarized in Section 11 of this ToR. If the Project components change, the EA and permitting triggers may also change. The integration approach presented is proposed to be as flexible as possible to these potential changes to minimize impacts to the overall Project schedule. Explanations of the provincial and federal triggers for an EA for this Project are discussed below.

2.3.2 Federal EA Requirements

Under the CEAA (CEAA, 1994), an EA is required when there is a project, a federal authority and a trigger, and it is not excluded, based on the conditions in the Exclusion List Regulations. The Act defines a project as the construction, operation, modification, decommissioning or abandonment of a physical work. The construction of the Hammond Reef Gold Project would be considered a project as it is not included in the Exclusion List Regulations under CEAA.

The federal triggers under CEAA relate to funding, regulatory duty, land interest and proponent. With respect to the Project, these triggers apply as follows:

- **Regulatory Duty**. There are a number of federal permits and authorizations that may be required for the Project:
    - Licence under the *Explosives Act* from Natural Resources Canada (NRCan) for the storage and manufacturing of explosives at the Mine Site;
    - Authorizations under the *Fisheries Act* from Fisheries and Oceans Canada (DFO) for the Harmful Alteration, Disruption or Destruction (HADD) of fish habitat during in-water construction activities required at the Mine Site; and
    - Approvals under the *Navigable Waters Protection Act* by Transport Canada for water crossings as part of the Mine Site.
- **Land Interest**. None of the Project components are expected to be located on federal lands, including First Nations Reserve lands and Parks Canada land.
- **Proponent**. No federal agencies or authorities are the proponent of the Project.

2.3.2.1 Comprehensive Study

The CEA Agency has determined that a Comprehensive Study is required for the Project. As defined in Section 16 of CEAA, a Comprehensive Study must consider:

- The environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and 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;
- The significance of the effects referred to above;
- Comments from the public that are received in accordance with this Act and the regulations;
- Measures that are technically and economically feasible and that would mitigate significant adverse environmental effects of the Project;
- The purpose of the Project;
- Alternative methods of carrying out the Project that are technically and economically feasible and the environmental effects of such alternative methods;
- The need for, and the requirements of, a follow-up program in respect of the Project;
- 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;
- Community knowledge and/or Aboriginal traditional knowledge; and
- Any other matter relevant to the Comprehensive Study such as the need for the Project and alternatives to the Project that the RA may require to be considered.

2.3.3 Provincial EA Requirements

Environmental assessment legislation in Ontario does not require the assessment of mining projects in their entirety; however, many of the components of a mining project do require assessment under the Ontario EAA. The aspects of the Project that require a Provincial EA are as follows:

- Use of Crown Land: requires assessment under the Class EA for MNR Resource Stewardship and Facility Development Projects (2003);
- Construction of transmission line: Ontario Regulation (O. Reg.) 116/01 Electricity Projects Regulation (2001); and
- Access road construction or upgrading: Ministry of Transportation (MTO) Class EA for Provincial Transportation Facilities (2000).

Rather than undertaking these separate provincial EAs, OHRG has entered into a Voluntary Agreement with the Ontario MOE to subject the Project to the Ontario EAA. The resulting EA will be conducted in accordance with the requirements of the Ontario EAA, R.S.O. 1990, Chapter E. 18, in accordance with the requirements under subsection 6(2)(a) as well as 6.1(2). This EA process is outlined in Figure 3.

2.4 EA Report

An EA report will be prepared which will address all requirements outlined in the ToR and the federal EIS Guidelines. The goal of the EA Report will be to fulfill the requirements outlined in the Terms of Reference as approved by the Minister of the Environment and the EIS Guidelines developed by the CEA

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Agency. The EA Report will provide details regarding the rationale for the selected Project alternative and alternative method and will be written to meet all provincial and federal requirements.

The first volume of the EA Report will be the EIS and will provide a concise summary of environmental and socio-economic impacts and mitigation measures related to the Project. Subsequent volumes of the report will provide more detailed, supplementary information.

The following lists the preliminary structure proposed for the EA Report:

- Executive summary;
- Acknowledgements and acronyms;
- Introduction, Project background and description;
- Project scoping;
- Regulatory framework (including reference to ToR requirements);
- Baseline conditions;
- Methodology for selecting preferred alternative;Impact assessment, that includes:
    - Impact of the Project and alternatives on the environment;
    - Cumulative effects assessment of the Project and other activities in the region;
    - Effects of accidents and malfunctions;
    - Effects of the environment on the Project;
    - Capacity of renewable resources.
- Mitigation measures that include:
    - Description of measures to avoid, prevent, change remedy or mitigate the effects on the environment;
- Description and assessment of alternatives;
- Final description of the preferred alternative;
- Assessment of residual effects and confirmation of mitigation measures
- Consultation Report, that includes:
    - A description of the consultation undertaken for the Project;
    - Comments/concerns received;
    - How concerns were addressed in the Environmental Assessment (EA
    - Outstanding concerns and how they will be addressed.

- Plans for ongoing and future consultation activities;

- Benefits of the Project (including benefits to Canadians and social and economic benefits);
- Environmental and social management and monitoring plans (including a table of commitments);
- Closure and decommissioning plan; and
- Summary, conclusions and references.

Separate technical appendices will be provided for each of the component studies. The components to be addressed through TSDs and will include:

- Physiography and geology;
- Atmospheric environment, including air quality, noise, climate and meteorology;
- Hydrology;
- Hydrogeology;
- Water quality and geochemistry;
- Terrestrial biology;
- Aquatic biology;
- Fish and Fish Habitat Mitigation and Compensation Plan;
- Socio-economic and cultural heritage resources; and
- Alternatives assessment for mine waste disposal.

The TSDs will include detailed descriptions of the existing environment as determined from the baseline studies (including additional field data collection), details of any modeling and data assessments undertaken, and the details of impact assessment methods, results and conclusions.

3.0 PURPOSE OF THE UNDERTAKING

The purpose of the Project is to extract gold ore for processing at an ore processing facility and to produce gold for sale worldwide.

A Project Description was prepared to meet the requirements of the *MPMO Guide to Preparing a Project Description for a Major Resource Project* (December 2008) and the Ontario Ministry of Northern Development, Mines and Forestry (MNDMF*) Project Definition Template for Advanced Exploration and Mine Development Projects* (no date). The Hammond Reef Project Description (May 2011) is available on the Project website (www.osisko.com).

As detailed in the Hammond Reef Project Description, the Project components include:

- An open pit **Mine** with waste rock and overburden surface stockpiles and associated infrastructure (e.g., on-site all-weather roads, water management facilities) at the Mine Site.
- An **Ore Processing Facility**, producing concentrate and tailings and will include a **Tailings Management Area** and associated infrastructure (e.g., piping, on-site roads, water management facilities, fuel, chemical and explosives storage facilities) located within the Mine Site property.
- An **Access Road** to facilitate movement of people and supplies between the Mine Site and the existing road network.
- A **Transmission Line** to provide electrical power to the site.

The Project Description identified a Base Case which consists of realistic and viable options for each of the Project components. Although it does not represent the preferred or final design, location or scope of the proposed Project, the Base Case was chosen to be a conservative description of Project activities.

Details contained within the Project Description may change materially, based on further evaluation of alternatives, the results of on-going studies and stakeholder consultation activities.

The purpose and details of the undertaking will be described in greater detail in the EA Report. The EA will play an important part in the development of the final Project details, through the consideration and assessment of alternatives as well as input received from Project stakeholders.

4.0 DESCRIPTION OF AND RATIONALE FOR THE PROJECT

4.1 Project Location

The Project is located approximately 23 km north of the Town of Atikokan in northwestern Ontario. It is located beside upper Marmion Reservoir (Lake) and is bordered to the west by Sawbill Bay and to the south by Lynxhead Bay. The approximate geographical coordinates are 48° 26'N, 91° 26'W (Figure 4).

4.2 Project Rationale

The rationale for the Project is a strong global demand for gold and the need for local economic development. Gold prices are currently at a historic high, and OHRG is well-positioned to supply the gold found in the Hammond Reef deposit to the world market. The economic benefits of the Project to the local community are much anticipated, bringing strong support from the municipal government. The Town of Atikokan has passed a resolution in support of the Project citing the recent closure of the two major employers, Atikokan Forest Products and Fibra Tech, as creating a great need for economic development in the area. The resolution urged regulators, consultants and OHRG to move forward with the permitting process as quickly as possible for the benefit of the community.

4.3 Project Life Cycle

The Project includes an ore processing plant with a projected throughput of 50,000 tonnes per day at a projected mine life of 14 years. This section describes in general terms the sequence of activities that will be undertaken to construct, operate and close and decommission the mine. A more detailed description of each phase in the Project life cycle will be included in the EA Report.

4.3.1 Construction Phase

Upgrading of the all-weather access road and construction of the electrical transmission line will be undertaken at the beginning of the construction phase to facilitate movement of equipment to the site. Aggregate sites will be identified, and rehabilitated upon completion, as per the *Aggregate Resources Act* Some aggregate sites will need to be kept open to provide materials for on-going maintenance of the road.

During the construction phase, equipment will be transported to the site and site preparation activities will be undertaken. Clearing, grubbing, and site levelling will be undertaken where infrastructure is to be placed. Site drainage will be constructed in the initial stages, including the draining of Mitta Lake. The ore deposit is located directly under Mitta Lake, the only alternative to draining Mitta Lake is the "do nothing" alternative. In order to meet the objective of the undertaking, the Project will include draining the lake and continual pumping to keep the pit dry. Water and fish from Mitta Lake will be put into the adjacent Marmion Reservoir. Drainage will be directed to treatment facilities to ensure that runoff does not cause erosion, flooding, or contamination in downstream areas. Additional details regarding the management of Mitta Lake will be included in the EA Report.

In the initial stage, existing access roads will be upgraded and new access roads, where required, constructed. Access roads will also be required for aggregate sites and the sites will be opened to provide access to construction materials. Pads will need to be constructed to support some of the structures, and levelling of the ground surface through cut and fill will be required in some areas. The excavated areas will provide materials for construction of the berms for the fuelling facility and explosives plant, as well as pads for various site infrastructure (e.g., temporary ore and waste rock stockpiles). During these activities, erosion protection will be constructed to limit runoff and sedimentation in adjacent watercourses.

The soils removed during opening of these areas will also be stockpiled for future use in rehabilitation. Site preparation will also necessitate removal of soils in some areas for site infrastructure. Removed soils will be stockpiled, and protected against erosion, for future use in reclamation.

Stockpile and laydown areas will be prepared for equipment and supplies that are brought to site. Laydown areas are temporary use areas that will be rehabilitated upon completion of construction. Temporary accommodation for construction workers and temporary offices for the construction camp will be located in the existing camp area that will be expanded to accommodate additional workers. The existing offices will continue to be used during the construction phase, while new office facilities are constructed. A mobile concrete plant will also be brought to site.

The site infrastructure, including a water supply pipeline, storage and maintenance areas, permanent support facilities such as a paramedic station and offices will be constructed. Construction of facilities where potentially hazardous materials are stored or used, such as fuels and lubricants will include mitigation measures, such as impermeable surfaces and spills containment and clean-up equipment, in order to minimize potential environmental impacts. Fuel storage areas will be constructed, that include berming to contain potential spills.

The tailings management facility, including a containment area and slurry pipeline will be constructed during this phase as per requirements under the Fisheries Act. The pipeline will be constructed above ground, with drainage points and spill containment areas located at naturally occurring low points along the route. The pipeline will follow the existing on-site road alignments to the maximum extent possible, the road bed may need to be widened to accommodate the pipeline. The pipeline will be protected on the inward side of the road by a berm. Similarly, on the outward side, the road bed would be bermed to protect the pipeline. Ditching would direct potential spillage to the constructed containment areas. Where the pipeline deviates from existing on-site roads, a construction access road will be constructed that will also be used as a service road for the pipeline during operations.

Spills containment and cleanup materials will be maintained on-site. A pad to prevent seepage of spilled materials into the underlying soil/rock will be constructed. Vehicle and machinery maintenance facilities will have drainage systems constructed that direct water (e.g., wash water) to the treatment facilities.

Waste management systems, including a sewage treatment system for domestic sewage will be constructed.

4.3.1.1 Compliance and Effects Monitoring

Monitoring for physical and chemical stability of the site, including the open pits, will be required throughout construction to ensure the Project is in compliance with regulatory requirements and commitments. Monitoring results will be consolidated to produce a report on an annual basis that will be made available for government and stakeholder review.

4.3.2 Operations Phase

During the operations phase, the process of removing the ore (economically valuable material) through development of the open pits begins. Mine ramps will be advanced progressively through the operating life of the mine using blasting. The mining process will generate waste rock (uneconomic material), which will be brought to surface and disposed of in the waste rock stockpiles.

As in the construction phase, the operation of the mine will involve on-going transport of equipment and supplies to the site. Mining activities will be supported by facilities for fuelling and servicing equipment. Mined ore will be brought to surface uncrushed via truck haulage and placed directly into the gyratory crusher for immediate processing or placed into the stockpiles adjacent to the processing plant for processing in the future. The ore stockpiles will be protected with berms to control runoff.

Seepage collection systems will be installed at the low points around the perimeter of the waste rock piles. This will allow the seepage water quality to be monitored. If it is unacceptable to release the seepage, it will be treated prior to release to the environment. Runoff and seepage will be directed to the storm water management system for treatment, if required, prior to discharge or re-use. Additional information on runoff and seepage systems will be provided in the EA Report.

In addition to the mine workings and the processing plant, the operating phase includes a number of facilities to support the mining operation. These include worker facilities (including First Aid facilities), offices and laboratories, and facilities to support these functions, such as sewage treatment facilities, waste disposal, and potable water supply. A worker camp will not be included as part of the Operations Phase; workers will be expected to live in Town. Domestic sewage will be treated on-site at the wastewater treatment plant, and discharged from the site. Solid wastes from the mine, offices, workshops and laboratories will be disposed of in the solid waste management facilities that include the landfill. Secondary containment, oil/grit separators and spill response measures will be implemented at the warehouse, fuel storage, vehicle maintenance and workshop areas to protect water quality.

Operation of the tailings management facility will include pumping of the tailings slurry from the ore processing facility to the selected location. Further detail about the tailings management facility is provided in Appendix A, including an initial assessment of six potential tailings alternatives. A complete assessment, including a “dry land” option will be completed for the EA as per regulatory requirements

(Environment Canada. 2011. Guidelines for Alternatives Assessments for Mine Waste Disposal. Her Majesty The Queen in Right of Canada, Environment Canada, September 2011).

4.3.2.1 Compliance and Effects Monitoring

The operations phase includes progressive reclamation, compliance and effects monitoring. Monitoring for physical and chemical stability of the site, including the open pits, will be required throughout operations to ensure the Project is in compliance with regulatory requirements and commitments. Runoff and seepage will be monitored, managed and treated if necessary. Explosives will be kept in accordance to all regulations and that all runoff from the pit walls and waste rock will be monitored for increased concentrations of nitrate and ammonia from blasting residues. Monitoring results will be consolidated to produce a report on an annual basis that will be made available for government and stakeholder review.

4.3.3 Closure and Post-Closure Phase

The closure phase includes a list of activities that are designed to ensure that the Project site is closed in a manner that reduces the potential impacts on the social and natural environment. In the closure phase, the mining activities are terminated and dismantling and closure of the site begins. Closure involves the decommissioning of the site through the removal of infrastructure that will not be needed in the post-closure phase, and the closing of waste management areas in an environmentally acceptable manner.

During the closure phase, the storage, warehousing and maintenance areas are dismantled, potentially hazardous materials such as fuels, oils, lubricants, chemicals and reagents are removed from the site by licensed contractors, and hydrocarbon contaminated soils are remediated. Mine wastes will be stabilized in place. The infrastructure is demolished, and all inert demolition debris will be disposed of appropriately. Waste disposal areas, such as the sewage treatment system will be decommissioned.

Upon completion of operations, the open pit will no longer be actively de-watered, and will naturally begin to fill from groundwater inflow, precipitation and runoff from nearby areas. The closure planning process will include details about pit closure, including potential outflow rates and locations and plans for monitoring and/or treating pit water, if required.

The surface of the tailings management facility (TMF) will be re-vegetated to prevent erosion. Ongoing runoff and seepage from the TMF will be monitored and managed as necessary during closure and post-closure. Soils from the stockpiles created during the construction phase will be used to support re-vegetation.

Rehabilitation will include active seeding of areas to promote vegetation growth that will stabilize the substrate and reduce potential erosion.

The EA will assess alternative methods for the decommissioning and closure phase which will include a list of activities that are designed to ensure that the Project site is closed in a manner that reduces the potential impacts on the social and natural environment.

The EA will include details of site decommissioning for the Project and may include a draft Closure Plan. If the Project proceeds to the regulatory phase, a certified Closure Plan (including financial assurance) as required under Ontario Regulation 240/00 of the Mining Act will be submitted by OHRG to MNDM, Aboriginal groups and the general public will be consulted prior to submission of the Closure Plan.

The decommissioning and closure assessment in the EA will include the responsibility for monitoring and maintaining the integrity of the environment and any retained infrastructure. The decommissioning assessment in the EA will include:

- Short and long-term plans for any remaining dams in regard to tailings impoundment, water flows and levels;
- Expected environmental conditions after the closure measures are implemented;
- Monitoring of biotic resources affected by the Project;
- Vegetated areas that will be rehabilitated by active measures or by natural revegetation;
- A vegetative plan that addresses communities and species to be renewed;
- Groundwater and surface water monitoring for all areas impacted by the Project;
- Maintenance and/or management of open pits, mine rock stockpiles, permanent Tailings Impoundment Areas; and,
- Anticipated pit overflow etc.

The EA will also include a decommissioning assessment that will include alternative methods for decommissioning and planning of future use of the land. The mine will be closed in a manner that reduces the potential impacts on the social and natural environment. The EA will clearly define ongoing environmental commitments.

OHRG is committed to progressive rehabilitation of the site during the entire life of the Project.

4.3.3.1 Compliance and Effects Monitoring

Closure and effects monitoring will be conducted according to the *Mining Act*. Should MMER be required, the specified environmental effects monitoring requirements stipulated under that permit will also be followed. Monitoring for physical and chemical stability of the site, including the open pits, will be required after closure and will continue on a regular basis until water quality monitoring indicates that runoff from disturbed areas of the site can be released directly to the receiving environment. Monitoring results will be consolidated to produce a report with an interpretation of conditions and changes.

5.0 DESCRIPTION OF AND RATIONALE FOR ALTERNATIVES

The following section provides a brief description of the various activities included in each phase: construction, operations, closure and post-closure of the Project. This section provides a discussion of 'alternatives to' the Project, and 'alternative methods' of completing the Project, and makes recommendations as to which alternatives should reasonably be carried forward into the EA. Detailed methods, including a description of and rationale for criteria and indicators used in the assessment of alternatives will be provided in the EA.

5.1 Alternatives to the Project

The purpose of the Project is to extract gold ore for processing at an ore processing facility and to produce gold for sale worldwide. This purpose can only be accomplished through the mining and processing of gold ore. The only feasible alternative to the Project is the do nothing alternative.

5.1.1 Do Nothing Alternative

The EA will evaluate whether the anticipated benefits of the Project outweigh the predicted impacts of proceeding. A comparison of the proposed project against the "do nothing' alternative" will evaluate the potential natural environmental impacts of the proposal against the potential socio-economic benefits.

The do nothing alternative will be used as a benchmark to compare alternative methods and will help determine:

The extent to which the alternatives address the opportunity

The advantages/disadvantages of proceeding with the Project

5.2 Alternative Methods for the Project

The EA Report will identify and describe alternative methods of carrying out the Project that are technically and economically feasible. A preliminary list of alternative methods to be considered during the EA is provided below. Alternative methods were determined through professional experience and consultation with Project stakeholders, including government, public and Aboriginal communities.

5.2.1 Mine Development Alternatives

The Base Case for mine development as outlined in the federal Project Description is to capture fish in Mitta Lake and to relocate them to Marmion Reservoir. Mitta Lake will be drained and the water will be discharged to Marmion Reservoir. The drainage plan will include mechanisms for sediment control. The ore body will be accessed through open pit mining methods, including two connected pits. Alternative methods for mine development could include:

- Underground mining
- Draining of Mitta Lake

- Avoidance of Mitta Lake

5.2.2 Ore Processing Alternatives

The Project will include the mining and processing of ore containing gold. Processing will be required to extract the gold from the mineral matrices, and refine the gold into gold bars (doré). Ore processing follows a defined method including crushing, grinding, flotation, carbon-in-pulp gold recovery, gold elution, gold electro-winning, smelting using an induction furnace, and tailings production. Cyanide has been used to leach gold from ore since the 1890s, although with some ore bodies it is possible to use a different chemical or even a biological process. Where cyanide is used in the processing, concentrations can be decreased through a combination of natural degradation or cyanide destruction treatment.

Alternative methods of ore processing could include:

- Off site ore processing
- Non-cyanide processing methods
- Processing using cyanide including a synthetic cyanide detoxification circuit
- Processing using cyanide including a natural cyanide detoxification circuit

5.2.3 Ore Stockpile Alternatives

Stockpiling of ore is necessary to allow for constant feed rates to the ore processing facility. The ore processing facility for the Project will require a temporary crushed ore stockpile with. The ore stockpiles will be temporary in nature, as the economic ore will all be processed before the Project is decommissioned. The alternative method for the ore stockpiles that will be considered in the EA is the location of the stockpile.

The final location and footprint, as well as a description of the alternatives evaluation, will be described in the EA Report.

5.2.4 Explosives Store Alternatives

The mining process will require explosives in order to remove the ore from the ground for processing. The supply of explosives will be carried out under a contractor-provided service for delivery of explosives to each blast hole. To supply the explosives, the contractor will maintain an explosives factory on-site. The explosives contractor will supply all infrastructure and vehicles required to deliver the explosive product to the hole. The explosives contractor will be required to supply the magazine(s) for storage of initiation and detonation consumables and maintain the supply for operations.

All temporary storage facilities will be constructed to meet NRCan's requirements under the *Explosives Act*. A graded area for the explosives contractor to locate the magazine(s) will be located on-site as per requirements of the explosives licence, and the contractor will be responsible for the installation of the initiation system and detonating devices at the blast site and firing.

Handling of explosives is legislated and methods will be required to meet regulations. No alternatives have been suggested by Project stakeholders for this component of the Project to date, therefore the details will be determined based on the criteria identified in Section 7.

5.2.5 Power Supply Alternatives

Electrical power will be required to support the processing plant and other infrastructure. The mine and ore processing facility will require approximately 100 Megawatts (MW) of power.

Alternative methods of achieving the required electrical supply could include:

- Electricity provided by provincial grid
    - Transmission line along Hardtack/Sawbill Road
    - Transmission line along Raft Lake Road
- On site diesel generators
- On site power generation (wind or solar)

The Base Case for electrical supply as outlined in the federal Project Description includes a new 230 kV transmission line of approximately 30 km length, feeding a main substation on site. The connection point would likely be just off Highway 622. Both alternative routes will require service roads, will cross a number of small watercourses, and could potentially cross Seine River at the Raft Lake cut. The transmission line will not require a bridge to cross Seine River, the transmission line could be strung across the gap.

5.2.6 Chemicals and Fuel Storage Alternatives

The mining and processing operation will consume cyanide, reagent chemicals and liquid fuel including diesel, gasoline, lubricating and waste oil, antifreeze/glycol and propane, as required for heavy equipment operation, heating, back-up power generation, and small vehicles.

Chemicals and fuels will be brought to site by trucks. There will be numerous storage sites located at the mine site. Separate storage sites for petroleum and other chemical and reagents will be required for the Project and will be constructed according to the *Technical Standards and Safety Act* (2000).

No alternatives have been suggested by Project stakeholders for this component of the Project to date, therefore the details will be determined based on the criteria identified in Section 7.

5.2.7 Water Management Alternatives

Water will be required for domestic use, as well as for ore processing. The processing plant will require an estimated 34,000 m^3/day of water. Processing plant water needs will be provided through re-use of process water and mine water, reclamation of tailings water, supplemented by the taking of freshwater

from adjacent water bodies. Predicted fresh water requirements based on processing plant make-up needs have been estimated as 17,000 m^3/day on average.

A detailed water balance will be developed and included in the EA Report based on an assessment of alternative methods for the following components of the water supply plan:

- Source from Turtle Bay
- Source from Hogarth Pit
- Source from Marmion Basin
- No recycle of water
- Recycle as much water as possible
- Avoid Lynxhead Bay for water discharge
- Discharge to Lynxhead Bay

5.2.8 Waste Management Alternatives

OHRG plans to undertake the assessment of alternatives for mine waste disposal (including waste rock, tailings, organic and solid waste, hazardous waste, sewage and treatment sludge) as a component of the EA to streamline the overall regulatory review process and minimize the time required to proceed with the regulatory process.

5.2.8.1 Waste Rock Storage Alternatives

Mine waste rock will be stored in a location close to the mine. Alternative methods for waste rock storage could include:

- Storage locations
- Use of waste rock as aggregate by third party

The final location and footprint, as well as a description of the alternatives evaluation, will be described in the EA Report.

5.2.8.2 Tailings Management Alternatives

A number of alternatives are under consideration for tailings management. The preliminary tailings management alternatives assessment included six options and included several discussions as well as a meeting in January 2011 and a workshop in March 2011 with the following government representatives:

- CEA Agency
- Fisheries and Oceans Canada
- Environment Canada
- Natural Resources Canada

- Transport Canada
- Ministry of Natural Resources
- Ministry of Northern Development and Mines
- Ministry of the Environment

Further detail regarding the tailings management assessment completed to date is provided in Appendix A, which provides a preliminary assessment of potential environmental effects and conceptual site layouts with different tailings location alternatives.

The Base Case tailings management alternative as defined in the federal Project Description includes pumping the combined thickened tailings to a Tailings Management Facility (TMF) located approximately 6 km to the northeast of the mine site. The Base Case has been designed to take advantage of a natural ridge that would form the northern containment for the TMF, and limits the construction of the tailings berms to the east, south and west sides. Alternative 1 is co-located with the Base Case tailings, and Alternative 2 is located to the southeast. These locations will be described further in the EA Report.

Potential alternatives methods of tailings management could include:

- Tailings technology
    - Thickened
    - Conventional
- Tailings management facility location

The preliminary data indicates the tailings would not be acid generating, and seepage collection systems would be incorporated into the design. The approximate footprint of the Base Case TMF is 10.8 M m^2.

5.2.8.3 Tailings Pipeline Alternatives

The tailings slurry will be pumped from the ore processing facility to the selected TMF. The pipeline for the selected TMF alternative would be constructed as an above-ground pipeline, with drainage points and spill containment areas located at naturally occurring low points along the route. The pipeline will follow the existing on-site road alignments to the maximum extent possible, the road bed would need to be widened to accommodate the pipeline.

The pipeline would be protected on the inward (travel side) of the road by a berm. Ditching would direct any spillage to the constructed containment areas. Where the pipeline deviates from existing on-site roads, a construction access road will be constructed that will also be used as a service road for the pipeline during operations. A return water pipeline will be constructed along the same access route as the tailings pipeline for reclaiming water from the TMF.

Potential alternative methods for the tailings management pipeline include:

- Pipeline from processing plant to Tailings Base Case

- Pipeline from processing plant to Tailings Alternative 1
- Pipeline from processing plant to Tailings Alternative 2

5.2.8.4 Organic and Solid Waste Alternatives

The Base Case for organic and solid waste management as defined in the federal Project Description includes the off-site transportation of all non-hazardous solid wastes by a licensed hauler to an authorized landfill for disposal. It is understood that the existing landfill used by the Town of Atikokan will reach capacity within 5 years.

Potential alternative methods for organic and solid waste management could include:

- Off-site landfill
- On-site landfill

The storage, handling, transportation and final disposal of waste are subject to Ontario Regulation 347 – General Waste Management. Quantities of wastes are not known at this time, but will be included in a detailed waste management plan as part of the EA Report.

5.2.8.5 Hazardous Waste Alternatives

The Base Case for hazardous waste management as defined in the federal Project Description is to store hazardous waste on site in sealed containers in lined, bermed areas for shipment off site to licensed facilities.

Hazardous waste storage facilities will comply with the MOE's *Guidelines for Environmental Protection Measures at Chemical Waste Storage Facilities.* Transporters of hazardous materials are required to be trained and registered according to the federal Transportation of Dangerous Goods Regulation.

No alternatives have been suggested by Project stakeholders for this component of the Project to date, therefore the details will be determined based on the criteria identified in Section 7.

5.2.8.6 Sewage Treatment Alternatives

Domestic sewage from on-site operations will be treated on-site for permitted disposal. Alternative sewage treatment methods will be considered as part of the Environmental Assessment. A sewage works Certificate of Approval will be required for the sanitary sewage facility.

Potential alternative methods for sewage treatment methods could include:

- On-site treatment
- Location and technology
- Off site treatment

5.2.9 Access Roads Alternatives

The Project will require the upgrading of an existing gravel road to facilitate transport of equipment and supplies to the site. As well, on-site access roads will be needed to connect site infrastructure. Access roads are owned by MNR and currently used under a Memorandum of Understanding between OHRG and MNR. The Project will respect the MNR's strategy for roads, including the decommissioning strategy. The roads will be used according to the terms of the MOU.

The Base Case for access to the site will be via approximately 30 km of road from Atikokan, using an existing series of paved and gravel roads which will be upgraded, with additional stream crossings added as required. Access from Hwy 11 is via Hwy 622 to the Hardtack Road, and from there, north along the existing Sawbill Road to the junction with main site access road (known locally as the Reef Road). A second alternative is following the Raft Lake Road, which would require a bridge over the Raft Lake cut. Premier Lake Road will not be used to access the Project due to its existing quality and the fact that it is a significantly longer route.

As part of the Project, either the Sawbill Road or Raft Lake Road will be upgraded to accommodate heavy vehicles. The selected road will remain public, and it is anticipated that the majority of the road will continue to be maintained after Project closure. A road abandonment plan for the portions of the road that will not be maintained by the public upon closure, will be included in closure planning.

Potential alternative methods of access road construction could include:

- Road alignment
- Private or public access road

Alternative routes will be described in the EA Report, and evaluated to select the preferred alternative.

5.2.10 Office and Support Facilities Alternatives

The main site will include an administration building, plant and mine truck shop. Although temporary accommodations for construction workers may be provided on site, as described in the federal Project Description permanent accommodation facilities are not planned at the site as it is expected that employees will commute to work via the mine access road. Construction workers temporarily staying on site may be considered as human health receptors for noise during the construction phase of the Project. The following ancillary structures will be constructed adjacent to the processing plant:

- Administration/technical services/first aid station/mine dry complex;
- Surface maintenance shop;
- Warehouse building;
- Cold storage building;
- Fuel storage tanks; and

- Back-up generator and compressor building.

Communication links to site will be by satellite, with on-site communications by cell phone and radio as required.

Full time security staff will be employed at site to monitor access to the site through a main control gate and maintain security on-site. They will also be responsible for providing adequate gold security, including closed circuit monitoring, restricted access to the gold refining facilities, and safe on-site transfer of refined doré bars. Gold will be trucked off site by a recognized security trucking firm, hired by OHRG. The site will have a staffed first aid room as well as an ambulance, and emergency access to the helipad which can transfer personnel in need of more intensive medical attention to hospital facilities in Atikokan as required.

Potential alternative methods of providing office and support facilities for the Project could include:

- On site worker camp
- Off site worker accommodations

5.3 Preliminary Screening of Alternative Methods

Although the EA Report will assess alternative methods based on potential environmental and socio-economic effects, and specific criteria and indicators relevant to each component (described further in Section 7), the initial evaluation of alternative methods of completing the Project was screened against the following criteria:

- Potential environmental effect;
- Engineering feasibility;
- Social acceptability; and
- Cost.

Table 1 summarizes the results of the preliminary screening of alternative methods for the Project that were considered for analysis in the EA Report. The EA will include a comparative analysis of acceptable alternatives, including an assessment of the advantages and disadvantages of each alternative and the determination of the best alternative to address the opportunity.

Methods for determining the final alternatives are summarized in Section 7, including a brief description of criteria and indicators that will be used in the EA. A detailed list of alternatives and the detailed methods used for the assessment will be provided in the EA Report.

Table 1: Preliminary Screening of Alternative Methods

Project Component	Alternative	Conclusion	Major Reasons for Conclusions
Mine Development	*Underground mining*	*Exclude*	The ore occurs as finely disseminated gold , near surface at a relatively low grade that is amenable to bulk mining methods. The infrastructure and constraints on tonnage due to limits caused by hoisting ore to surface from underground make mining the orebody using underground methods uneconomic.
	Open pit mining – drain Mitta Lake	Carry Forward	By draining Mitta Lake and using open pit mining methods, the Project can be economically feasible.
	Open pit mining – avoid Mitta Lake	*Exclude*	A smaller pit outline which avoids draining of Mitta Lake makes the deposit uneconomic because too much of the ore must be left in the ground.
Ore Processing	*Off site processing facility*	*Exclude*	Transportation of such a low grade ore to another processing facility would be uneconomic. Additionally, the Town of Atikokan and surrounding Aboriginal communities favour keeping jobs in Atikokan and the surrounding areas.
	Non-cyanide processing methods	*Exclude*	Other gold processing technologies (non-cyanide methods) were considered but do not produce adequate concentration grades and recoveries to make them economic given the finely disseminated nature of the gold.
	Processing using cyanide including a synthetic cyanide destruction circuit	Carry Forward	On site processing using cyanide including a synthetic cyanide destruction circuit is an economic alternative for the ore body.
	Processing using cyanide including exclusive use of a natural cyanide destruction	Carry Forward	On site processing using cyanide including a natural cyanide destruction circuit is an economic alternative for the ore body.
Ore Stockpiles	Alternative locations	Carry forward	Based on the final ore processing facility location alternative stockpile locations will be considered, including but not limited to avoidance of fish frequented waters, topography, etc.
Power Supply	Two different alignment options: 1) Along existing Hardtack/Sawbill Road; 2) Along Raft Lake Road (more directly to Site). See following.		
	Transmission line along Hardtack/Sawbill Road	Carry Forward	Road will need to be widened to include right-of-way for Transmission Line.
	Transmission line along Raft Lake Road	Carry Forward	Road will need to be widened to include right-of-way for Transmission Line. Road requires major water crossing (bridge).
	On site diesel generators	*Exclude*	The high carbon footprint from use of non-renewable fossil fuels was not acceptable to carry forward into the EA. This option was also cost prohibitive.
	On site power	*Exclude*	Renewable energy cannot provide power consistently

Project Component	Alternative	Conclusion	Major Reasons for Conclusions
	generation (wind or solar)		enough to allow uninterrupted operation of the mine.
Water Source, Recycle and Discharge	*Source from Turtle Bay*	*Exclude*	Turtle Bay, the next nearest watershed was considered as a possible water source but would require a 56 km pipeline (over public lands) which would have increased environmental impacts to install. Constructability and operability in a cold climate would be difficult and it would not be economically feasible.
	Source from Hogarth Pit	*Exclude*	Hogarth Pit was considered as a possible water source but would require a 30 km pipeline (over public and private lands) which would have increased environmental impacts. Constructability and operability in a cold climate would be difficult and it would not be economically feasible.
	Source from Marmion Basin	Carry Forward	Marmion Basin is adjacent to the proposed Project and is technically and economically feasible as a water source.
	No recycling of water	*Exclude*	Not carried forward as the environmental impacts are not acceptable.
	Recycle as much water as possible	Carry Forward	Fresh water will be needed for potable water sources, gland water and reagent make-up water. Recycled water will be used as much as possible.
	Discharge to Sawbill Bay	Carry Forward	The EA analysis will look at alternative discharge points.
	Discharge to Lynxhead Bay	Carry Forward	The EA analysis will look at alternative discharge points.
Waste Rock	Waste rock location 1	Carry Forward	The EA analysis will look at alternative waste rock stockpile locations.
	Waste rock location 2	Carry Forward	The EA analysis will look at alternative waste rock stockpile locations.
	Recycling and/or re-purposing of waste rock by third party	Carry Forward	Feedback during consultation has resulted in the suggestion that crushed waste rock may be useful for roadbase and construction preparation. This option will be evaluated and carried forward based on the results of geochemical testing and the ability of the waste rock to meet regulatory requirements for aggregate.
Tailings Management: Deposition Methods and Alternative Locations	Thickened tailings	Carry Forward	Thickened tailings may reduce the footprint required for a tailings impoundment area and will be evaluated in the EA.
	Conventional tailings	Carry Forward	Conventional tailings deposition will be evaluated in the EA.
	Hogarth Pit	*Exclude*	Deposition of tailings into Hogarth Pit was evaluated but will not be carried forward due to unacceptable and unknown long-term liabilities for Osisko; permitting timing constraints; operating challenges for a 30 km pipeline in a cold climate and cost. This option will not be carried forward into the EA.
	Lizard Lake	*Exclude*	Environmental impacts of depositing tailings into

Project Component	Alternative	Conclusion	Major Reasons for Conclusions
			Lizard Lake were deemed unacceptable. This option will not be carried forward into the EA.
	Northeast location	*Exclude*	This location was further from the mine site and did not provide any environmental advantages over the base case or alternatives 1 & 2. It was not economically feasible and included additional environmental impacts to construct a longer pipeline. This option will not be carried forward into the EA.
	Base Case	Carry Forward	The Base Case Tailings Management location will be evaluated in the EA.
	Location 2	Carry Forward	The Alternative #1 Tailings Management location will be evaluated in the EA.
	Location 3	Carry Forward	The Alternative #2 Tailings Management location will be evaluated in the EA.
Tailings Pipeline	Alternative alignments	Carry forward	Based on the final tailings location alternative alignments will be considered, including but not limited to avoidance of fish frequented waters and topography.
Waste alternatives	Offsite landfill	Carry Forward	An off-site landfill alternative will be evaluated in the EA. The Town of Atikokan's current landfill is reaching the end of its useful life and they are looking for an industry partner to assist with construction of a new landfill site.
	On site landfill	*Exclude*	An on-site landfill requires additional permitting and does not meet the Town of Atikokan's desire for industry use of the new planned landfill. The Town of Atikokan has already pursued permitting for a new landfill.
Sewage treatment	On site treatment	Carry Forward	On-site sewage treatment, including alternative methods for treatment, will be evaluated in the EA.
	Off site treatment	*Exclude*	Transportation for off-site treatment of sewage is not economically feasible.
	Location and technologies	Carry forward	The EA analysis will consider various locations within the Mine Study Area as well as comparing the use of a septic tank and tile field with a package sewage treatment plant.
Access Road	Widening of Sawbill road	Carry Forward	Alternative access road alignments will be evaluated in the EA.
	Widening of Raft Lake road	Carry Forward	Alternative access road alignments will be evaluated in the EA.
	Widening of Premier road	*Exclude*	This option was deemed unacceptable to carry into the EA as it would increase the commute time for workers and supplies from Atikokan by an hour. This option will not be carried forward into the EA.
	Private road	*Exclude*	Purchasing the land for either existing roads or

Project Component	Alternative	Conclusion	Major Reasons for Conclusions
			developing a new access road was considered but is not economically feasible and would increase the negative environmental impacts by disturbing untouched habitat. This option will not be carried forward into the EA.
	Public road	Carry Forward	The preferred alternative alignment (either Hardtack / Sawbill or Raft Lake Road) will not be privatized and will remain a public access road. This alternative will be carried forward into the EA.
Support facilities	*On-site worker camp*	*Exclude*	Constructing and operating a permanent on-site worker camp is not favoured by the Town of Atikokan and surrounding communities as they are interested in the socio-economic benefits of increased populations in town. This option will not be carried forward into the EA.
	Worker accommodation in Town	Carry Forward	Worker accommodation in the Town of Atikokan and surrounding communities will be evaluated in the EA.

In summary, the do-nothing alternative and the alternatives that indicate *Carry Forward* in the "Conclusion" column will at a minimum be carried forward and assessed as part of the EA. Where Project-environment interactions are determined, mitigation measures will be applied. Further assessment will take place only where a potential for significant negative effects have been identified.

6.0 DESCRIPTION OF THE ENVIRONMENT AND POTENTIAL EFFECTS

The following description of the existing environment is based on preliminary information and an initial understanding. A more detailed description of the existing environment will be provided in the EA, once the baseline studies have been completed.

The existing environment will be further described based on field studies conducted using standard protocols and scientifically defensible methods for each discipline. Methods will be further described in the EA, and will include collection of information such as:

- Site water quality and quantity;
- Groundwater quantity, quality, movement and flow patterns;
- Soils and sediment type and quality;
- Vegetation and wetland communities;
- Wildlife communities;
- Aquatic communities;
- Physiography, geology and geochemistry;
- Atmospheric environment, including air quality, noise, climate and meteorology;
- Socio-economic conditions; and
- Cultural heritage resources including archaeology, built heritage and cultural heritage landscapes.

6.1 General Site Information

The Hammond Reef property is located within the Thunder Bay Mining District in northwestern Ontario. The property is approximately 170 km west of Thunder Bay, Ontario and approximately 30 km northeast of the town of Atikokan, Ontario (Figure 4). Atikokan is located 3 km north of Highway 11 and has a population of approximately 3,400.

Access to the Hammond Reef property is presently via two routes: the Premier Lake Road, a gravel road that intersects Highway 623 near Sapawe and the Hardtack-Sawbill Road, a gravel road that intersects Highway 622 northwest of the Town of Atikokan (Figure 4). The exploration camp is located at the northern end of Sawbill Bay in Upper Marmion Reservoir. The property is also accessible by water from the southwest end of the Marmion Reservoir at its access point from Highway 622. The existing Hardtack-Sawbill road located to the north of Finlayson Lake has been upgraded to provide an improved and more direct linkage to the site in support of the expanded exploration program.

The Hammond Reef deposit is located mainly on a peninsula of land extending into the north end of the Upper Marmion Reservoir. The peninsula containing the deposit is surrounded by the Marmion

Reservoir on three sides with Sawbill Bay to the northwest and Lynxhead Bay to the southeast. The property also contains a number of smaller lakes. Mitta Lake is a small, steep-sided waterbody located atop mineralized zones of the deposit. Due to its location, the planned open pit mine and secondary pit areas will encompass Mitta Lake.

6.2 Physiography, Geology and Geochemistry

The Project site spans an area of bedrock that encompasses primarily Precambrian Shield (Fenwick, 1976). The Marmion Reservoir Batholith, which encompasses the site, is at the southern margin of the Wabigoon subprovince of the Superior Province. The batholith is surrounded by the Sapawe, Steep Rock, Finlayson and Lumby Lake greenstone belts. These rocks, including the Marmion Reservoir batholith, are dominantly of Mesoarchean age (pre 2900 Ma). They are some of the oldest rocks within the Wabigoon Subprovince. The Quetico Fault which marks the boundary between the Wabigoon and Quetico Subprovinces is located along the southern edge of the present study area. The Hammond Reef gold property is located within the northeast trending Sawbill Bay deformation zone. The gold mineralization occurs in quartz veins within shear zones associated with northeast – trending lineaments in the batholith (Dyer, 1999).

Gentle topography is characteristic of the area. The granitic rocks of the site are characterized by rounded hills and shallow slopes compared to the more rugged terrain of the greenstone belts (Dyer, 1999).

Overburden mapping by the Ontario Geological Survey (OGS) indicates limited overburden in the vicinity of and surrounding the site. Overburden types that are found in the area surrounding the site are glacio-lacustrine (near shore beach deposits, ice contact deposits and basin/quiet water deposits) and till deposits from the Pleistocene and fluvial deposits (modern flood plains) and organic deposits from the Quaternary (Barnett, et al., 1991).

Gold mineralization at the Hammond Reef property is hosted by quartz stockworks within the Marmion granitoid suite. This suite is characterized by fresh to intensely altered tonalite-trondhjemite; subordinate, unaltered granitoid gneiss; and minor mafic lenses (typically highly altered). The quartz stockworks overprint all phases but is only weakly developed in the mafic lenses. Disseminated gold mineralization was delineated in two deposits situated along a northeast-southwest trend: the A Zone and the 41 Zone.

A detailed geochemical characterization program is currently underway to determine the potential for acid generation and metal leaching. These tests include acid-base accounting (ABA), net acid generation (NAG), elemental composition, short-term leach testing, mineralogy and kinetic testing and water quality analysis of the tailings process water. The geochemical test work completed to date indicates that the rock types encountered and tailings are generally non-acid generating.

The method of sample collection, number of samples, testing performed and interpretation is consistent with internationally accepted guidance provided in Price (1997), MEND (2009) and the GARD Guide (www.gardguide.com).

6.3 Atmospheric Environment

The Project is located approximately 23 km north of the town of Atikokan, within the boreal forest region of Ontario. Existing air quality conditions in the project area are expected to be typical of background values in northern Canada. The existing air quality for the Project will be characterized using published literature and air quality data from established long-term monitoring stations in northern Ontario and western Canada, which represents the upwind catchment for air flowing into the region.

Existing noise levels in the project area are expected to be typical of background noise for the boreal region, dominated by natural sounds and the effects of wind. Existing noise levels will be established using published literature and accepted background noise levels for remote areas in Ontario.

Climate describes the long-term weather conditions for the area, and has been characterized using the climate normals data for the Environment Canada monitoring station in Atikokan. The climate for the project area is typical of the boreal climate region, which is characterized by long, usually very cold winters, and short, cool to mild summers. In the summer, hot weather occasionally reaches even the northernmost parts of Ontario, although humidity is generally lower than in Southern Ontario. With no major mountain ranges blocking arctic air masses, winters are generally very cold, especially in the far north and northwest. The snow can remain on the ground much longer in the region; the first snowfall often comes in October and the last snow can come as late as May. The annual temperature average is 1.6˚C for Atikokan with a seasonal average of 16.2˚C for summer while the average winter temperature is -15.4˚C.

The annual normal total for precipitation is 739.6 mm for Atikokan with a seasonal maximum of 299.0 mm for the summer period. Spring, summer and fall rainfall contribute on average 564 mm, with the remainder occurring as snowfall.

The annual average wind speed for Atikokan is 14.2 km/hr with a predominant westerly direction for the year. Mean monthly wind speeds show little variability form month to month.

Meteorology describes the variability in the hour-to-hour weather conditions and is important for understanding how the Project may affect the atmospheric environment. Long-term, reliable meteorological data are available from the Environment Canada monitoring station in Atikokan, and will be relied on for describing the existing meteorological conditions. These data will be augmented by the data collected from a short-term monitoring stationed commissioned at the Project site. This short-term meteorological data set will not be relied on in assessing the effects of the Project on atmospheric

environment, but will provide confirmation that the data from the nearby station in Atikokan are appropriate for the assessment.

In addition, the Ontario Ministry of the Environment have developed 5-year regional dispersion modelling meteorology data sets for use in assessing air quality effects. The dispersion modelling meteorological data recommended for use in this region covers the period from 1996 through 2000, and comes from the airport in International Falls, Michigan. As part of the characterization of existing meteorological conditions, this regional data will be compared to data for Atikokan over the same time period (i.e., 1996 to 2000) and the most recent Atikokan data to ensure the current meteorological conditions are accurately assessed. If the analysis of existing meteorological conditions suggest that the local meteorology is sufficient different than the regional data set from the Ontario Ministry of the Environment, a specific application will be made with justification for using alternative meteorological data.

6.4 Hydrology

The Project is located in the Seine River watershed (6,250 km^2) in north western Ontario in Canada's Boreal Forest Zone. The Seine River originates in the Savanne River at Raith, flows east-west for about 250 km and empties into Rainy Lake near Fort Frances and the Canada-U.S. border. The watershed has an average slope of 0.55 m/km over the length of its main channel. It is characterized mainly by cool water lakes connected by short stretches of river. Water covers 14.5% of the watershed and wetlands an additional 7%. Most of the area (77%) is covered by forest. Soil cover comprises glacial deposits. The eastern (upper) watershed is covered by outwash deposits characterized by high contents of coarse sand and gravel. However, Aeolian and beach deposits consisting of finer textured soils are the most common (49% of the watershed area) and are found in the southeastern and central portions of the watershed. The western (lower) watershed is covered by ground moraine deposits dominated by sand and boulders.

The 2004 to 2014 Seine River Water Management Plan was reviewed to provide background hydrology information. The plan specifies operating rules for the Seine River water control structures which include Raft Lake dam. The objective of the operating plan for Raft Lake dam is the optimization of power generation values from the river system. The EA will give consideration to the potential effects of the Project on Seine River water management, in particular at Raft Lake dam and water power facilities downstream.

Three bodies of water are used as reservoirs for power production and cooling water along the Seine River: Lac des Mille Lacs, Upper Marmion Reservoir and Lower Marmion Reservoir. The proposed mine will be located on a peninsula in northwest Upper Marmion Reservoir, approximately 9 km from its outflow at Raft Lake Dam. Upper Marmion Reservoir has a surface area of 55.3 km^2, representing 1.2% of its total watershed area (4,426 km^2).

The Lac des Mille Lacs, Upper Marmion Reservoir and Lower Marmion Reservoir reservoirs stabilize downstream flows by storing water during high flow events (in the spring) and releasing it during times when natural flows are low (in the winter). Lower Marmion is separated out of the system during the winter to maintain head for cooling water pumps. Operating plans for the water control structures are described in the 2004 to 2014 Seine River Water Management Plan (Boileau, 2004). Water levels in the three reservoirs are regulated as follows:

- Upper Marmion Reservoir levels are controlled between a minimum elevation of 412.5 masl and a maximum elevation of 415.5 masl. Lake levels can be no higher than 413.7 masl on 1st April of each year to provide capacity for the spring freshet.
- Lower Marmion Reservoir drawdown is constrained to a minimum elevation of 414.80 masl to ensure suction head for cooling water pumps for Atikokan thermal generating station. Lower Marmion Reservoir covers 25% of its watershed area (1.557 km²). However, the lake is not dependent on its local watershed for water replacement. Water is replaced with inflows from Upper Marmion Reservoir during the spring refill.
- In all three reservoirs, lake levels will be stable or rising between 15th April and 15th June to enhance spawning of walleye and pike.

Lake levels and outflows at the water control structures are monitored by the owners/operators and provided to the local Ministry of Natural Resources (MNR) offices under the compliance monitoring programme. A bathymetry study was also conducted to determine the volume of lakes and the topography of lake beds.

Water Survey of Canada gauges of natural stream flows nearest to the project are located on the Atikokan River, in adjacent watersheds to the south and west of the Seine River watershed. Annual mean runoff rates are 11 to 12 L/s/km² to Eye River, and 9 L/s/km² to Atikokan River. The highest flows are recorded in April and May in response to the spring freshet. The lowest flows are recorded in February. The period from December through February represent months with the lowest precipitation.

6.5 Hydrogeology

A baseline hydrogeological work plan has been developed and initiated in February, 2011 to address the field component of the groundwater assessment for the EA Report. The study will obtain sufficient hydrogeological information, including baseline groundwater quality, flow directions and hydraulic conductivity to allow for the identification of impacts that may occur as a result of the undertaking. The assessment will include an analysis of contaminant attenuation capacities and incorporation of appropriate mitigation measures.

Boreholes were drilled between March 17 and May 2, 2011 at 34 locations for the purpose of collecting information about the subsurface material and to facilitate the installation of monitoring wells. On December 20, 2011 OHRG obtained a permit to take water to perform additional pumping tests in the vicinity of the pit in order to determine dewatering requirements.

Monitoring wells (nested and single) were generally screened into the upper section of the bedrock and an offset monitoring well was completed in the overburden soils if a sufficient thickness was present. Following installation, a stabilized depth to water measurement was completed, each monitoring well was developed and then a single well response test was completed to determine the permeability (hydraulic conductivity) of the screened interval. Data loggers have been installed in select wells for the automatic reading of groundwater levels.

Small and larger scale pumping tests on existing small and larger exploration drill holes are being completed. This information will be used to develop estimates of hydraulic conductivity at various locations and depths around the location of the proposed pit. The information obtained from the pumping tests, in addition to recently completed packer testing on several geotechnical drill holes, will be used to develop a two-dimensional box model in order to estimate pit inflows.

Groundwater levels ranged from approximately 15 metres below ground surface to artesian conditions. Downward and upward gradients were observed, generally corresponding to the topography of the area around the monitoring well nests. While much of the snowmelt and seasonal rain runs off via local streams; a portion will infiltrate into the ground, principally into the shallow fractured bedrock. This shallow fractured bedrock comprises the primary aquifer in the Project area. Groundwater flow in the shallow fractured bedrock generally follows the local topography with discharge to local streams or ultimately to Sawbill Bay and Marmion Reservoir. With the exception of glaciolacustrine deposits in the vicinity of tailings Base Case and Alternative 1 and locally at the west end of the open pit, according to mapping in the area, overburden is generally thin and discontinuous and a continuous overburden aquifer is not anticipated to be present throughout the Project area.

Ongoing baseline groundwater water levels and quality are currently being collected to establish background conditions of the Project site prior to development.

6.6 Water Quality

Water quality and sediment quality sampling was conducted at a number of locations in Marmion Reservoir, as well as inflow streams and smaller water bodies that could be affected by Project infrastructure. Sampling has been conducted on a seasonal basis in order to understand temporal changes in water quality. Sampling has also included assessment of limnological conditions through water column profiling. A full assessment of existing water and sediment quality will be provided in the EA.

All aquatic features potentially affected by the Project, including the outflow of Mitta Lake, have been assessed over multiple seasons to determine if they support fish. Channel features including depth, substrate and cover were mapped in order to characterize habitat features. Fishing gear including nets and backpack electroshockers were utilized to determine fish species present. The benthic invertebrate community was also assessed. Where project related impacts cannot be mitigated, habitat will be

quantified so that appropriate habitat compensation can be determined, incorporating habitat requirements of the fish species present.

Water quality data were available from previous studies for Mitta Lake. As noted earlier, development of the Project will require the draining of Mitta Lake. Osisko has initiated consultations with the DFO regarding draining of this lake prior to mine operation. A 2009 assessment of Mitta Lake included bathymetric profiling, fish netting and benthic invertebrate community sampling. More detailed assessments of Mitta Lake and potentially affected water bodies are currently underway.

The available water quality results for Mitta Lake are summarized below:

- Mitta Lake is largely steep-sided with a limited catchment area of approximately 82 ha indicating minimal inputs from surface runoff. Some portion of water inputs may be provided by groundwater recharge.
- Substrate sampling indicated a limited amount of organic material in portions of the lake.
- Dissolved oxygen, pH, temperature and conductivity were measured at 1 m intervals throughout the water column at the deepest point of Mitta Lake in June and July, 2009 and the results can be summarized as follows:
    - all readings below 6 m depth indicated an absence of oxygen;
    - the pH trended from slightly alkaline conditions at surface (pH of 8.4) to near-neutral values at lower depths (i.e., pH of 6.5 at lake bottom);
    - a thermocline was recorded at a depth of approximately 5 m where the temperature decreased by approximately nearly 5°C over a 1 m interval;
    - conductivity readings, measured in June 2009, increased with depth ranging from approximately 35 µs/cm at 1 m depth to greater than 60 µs/cm at 14 m; and
    - a Secchi depth of 2.8 m was recorded at this location.

Water samples were taken from Mitta Lake at depths of 1.5 m and 12 m below surface in July of 2009 and submitted for analysis. Total phosphorus and iron in the 12 m depth sample exceeded the Provincial Water Quality Objectives (PWQOs). Given the anoxic conditions recorded at this depth interval and the presence of organic material, this is likely representative of natural background levels.

6.7 Biology

6.7.1 Terrestrial Environment

The study area lies within the boreal forest region of Ontario, near the transition zones with the Great-Lakes-St. Lawrence mixed forest region and the prairie grasslands. The forest communities of the area are dominated by black spruce, jack pine, trembling aspen and white birch. Over 52 species of mammals and approximately 250 species of birds have been recorded in the Quetico and Atikokan area. Faunal species common to the area include timber wolf, black bear, moose, beaver, bald eagle, great blue

heron and common loon. Terrestrial studies are based on the presence of wildlife and wildlife habitat in the Project area and the natural corridors and/or linkages beyond. The methods for conducting baseline investigations have been developed in consultation with the Ontario Ministry of Natural Resources and Environment Canada.

Wetlands in the Project area have been extensively investigated through the Ontario Wetland Evaluation System (OMNR 1993) to determine if the Project has the potential to affect wetlands that are scored as Provincially Significant. Data on the ecological, hydrological, social and traditional aboriginal values of the wetlands/wetland resources in the Project site have been collected and compiled for the evaluations. In particular, the wetland evaluation system scores the presence of wild rice (*Zizania palustris*) which is a traditional use plant that is being specifically investigated and considered in the assessment of the Project.

Publically available data pertaining to species at risk that may be present within the Project area, acquired through web-based searches of the Ontario Natural Heritage Information Centre (NHIC) and the Ontario Breeding Bird Atlas (OBBA) websites, identified few concerns related to terrestrial species identified under the Ontario *Endangered Species Act* and the Canadian *Species at Risk Act* (SARA) (TBTE, 2009). Records were found for the bald eagle (*Haliaeetus leucocephalus*), the Canada warbler (*Wilsonia canadensis*), and Common nighthawk (*Chordelies minor*).

The bald eagle is a species of special concern in Ontario, however a total of 50 nests have been noted in the area of Quetico Provincial Park (The Quetico Foundation, n.d.). There are no known eagle nests recorded on the Hammond Reef property (MNR 2010). The MNR was consulted regarding eagles nest data and Golder was provided with the MNR values database (NRVIS). A review of the data indicated that there were records of eagles nests at a distance from the HR Project Site, but no records on or in the immediate vicinity of the Site. Additionally, local bird expert Dave Elder was contacted to discuss his knowledge of the area. Mr. Elder indicated that there were bald eagle nesting in the area, but he did not have records of nests within the OHRG property. Extensive ecological field investigations in 2010 and 2011 (particularly during nesting seasons) have included nest searches. Records of adults and juvenile eagles flying around the larger waterbodies (Sawbill Bay and Lizard Lake), suggests they are nesting somewhere nearby but no confirmed active nests have been recorded to date on the OHRG lands.

The Canada warbler is identified as a threatened species under SARA, but no specific protections are currently in place and the species is considered to be special concern in Ontario. In addition, MNR has noted that whip-poor-will may be present in the Project area, and this has been a focus of the terrestrial baseline investigations. However, the two surveys conducted to date have not resulted in any visual or auditory observations. MNR will be notified of any known species at risk encountered at the site.

Trumpeter swans (*Cygnus buccinator*) and osprey (*Pandion haliaetus)* are known to exist in the area. As a policy, MNR requests that any significant nesting sites located in the area be reported to the Atikokan office.

Short summers and severe winters limit the diversity of reptiles and amphibians that inhabit the area. There are 11 species of amphibians common to this area including blue spotted salamander (*Ambystoma laterale)*, central newt (*Notophthalmus viridescens louisianensis*), American toad (*Bufo americanus*), spring peeper (*Pseudacris crucifer*) and gray tree frog (*Hyla versicolor*). The range of only four reptile species encompasses this area and these are common snapping turtle (*Chelydra serpentine)*, western painted turtle (*Chrysemys picta belli*), eastern garter snake (*Thamnophis sirtalis sirtalis*) and red-bellied snake (*Storeria occipitomaculata*) (Oldham and Weller 2000). The common snapping turtle is considered to be of special concern federally (COSEWIC 2010) and provincially (COSSARO 2010).

Based on range mapping, the Hammond Reef property is located approximately 50 km south of the southern limit of the range of forest-dwelling boreal population of woodland caribou (*Rangifer tarandus caribou*), a species that is designated as threatened on both Schedule 1 of the *Species at Risk Act* (COSEWIC 2010) and the *Endangered Species Act* (COSSARO 2010). MNR has confirmed that the Project area is beyond the current range of the woodland caribou and therefore is not a concern for this Project.

6.7.2 Aquatic Environment

The Project is surrounded, on three sides by the Upper Floodwaters (Upper Marmion Reservoir). Marmion Reservoir is a warm water reservoir created in 1927 by a hydroelectric project. Several dams were constructed in the 1940's, as part of the Seine River diversion, dividing Marmion Reservoir into upper and lower portions. Upper Marmion Reservoir is a popular destination for both local and tourist anglers, and the sport fisheries it supports, consisting of walleye (*Stizostedion sanders*), northern pike (*Esox lucius*) and small mouth bass (*Micropterus dolomieu*) are actively managed. Water levels, controlled at the Raft Lake Dam are managed to optimize habitat conditions during the walleye spawning periods (i.e., April 15 to June 15) and to facilitate recreational use. An assessment of water bodies that will be potentially affected by the Project, including mine waste disposal, has been initiated and will be included in the EA Report.

Lynxhead Narrows is a known walleye spawning area in Upper Marmion Reservoir, located approximately 1.3 km southeast of the property. Personal communications with Atikokan MNR staff has indicated that based on radiotelemetry studies walleye congregate in this area during the spawning season. It is also suspected that wetlands located along the north shoreline of the upper reservoir south of the the A Zone and the 41 Zone provide important nursery habitat for fish species inhabiting the upper reservoir.

A number of small ponds and streams drain the areas potentially affected by the Project. The Project has the potential to directly affect biota and alter habitat associated with aquatic features within the proposed pit, waste rock storage and tailings areas footprints. Water quality and quantity of small watercourses draining the Project area may also be potentially affected. Many of the small streams discharge directly or indirectly to the Upper Floodwaters. If the Project were to result in significant changes to flows in the Seine River, lake sturgeon habitat in the lower reaches of the river could be affected. Lake sturgeon is a designated species under Ontario's Species at Risk Act

Assessment of Mitta Lake, located directly over the ore body, within the proposed pit area, was initiated in 2009. Data collected to date indicates that this lake supports common white sucker (*Catostomus commersoni*), ninespine stickleback (*Pungitus pungitus*), fathead minnow (*Pimephales promelas*), slimy sculpin (*Cottus cognatus*) and dace (*Chrosomus* spp) (TBTE, 2009). Habitat and fish community assessment data collection was completed by Golder in 2010 and2011.

6.8 Socio-Economic and Cultural

6.8.1 Local and Regional Municipalities

The Project is located within the Rainy River District in Northwestern Ontario. The City of Thunder Bay is the region's centre for mining activity. The Kenora, Rainy River and Thunder Bay Districts have been identified as the regional study area for the socio-economic component. This regional area will likely provide the majority of the labour force and goods and services required to construct and operate the mine and potentially experience regional labour market, economic development and government finance effects. The local study area for socio-economics has been defined as the towns of Atikokan, Fort Frances and the City of Thunder Bay. These are the communities in proximity to the Project that will provide some of the labour force and goods and services required to construct and operate the Project, and potentially experience local labour market, economic development and government finance effects. The local study area may also experience changes in population due to in-migration as a result of job and business opportunities, and effects on housing and property values, public services and/or infrastructure.

The Project is located approximately 170 km west of the City of Thunder Bay and approximately 30 km north-east of the Town of Atikokan. Atikokan (population approximately 3,400) is expected to accommodate the majority of workers during the operation of the mine. The Town of Fort Frances (located approximately 150 km west of the Project) is the main service and infrastructure hub of the Rainy River District and may also be a source of goods and services for the Project. The City of Thunder Bay is the largest city in Northwestern Ontario and is also an important service and resource centre for the mining industry. Thunder Bay could potentially provide a large amount of goods and services required by the Project and may also have a pool of qualified specialized workers that are not necessarily available locally.

It is expected that Atikokan will experience the majority of effects from the Project on services and infrastructure. An influx of a large operational workforce into Atikokan could place additional demands on housing availability, and affect property values. Increased demands on local services such as health, education, emergency, security, police, fire and transportation may result from mine activities and an influx of a large operational workforce and their families. Atikokan is also expected to experience positive economic benefits from increased economic activity, training, employment and business opportunities.

Historically, economic activity in Atikokan was dependant on mining and forestry industries. Since the closure of major mine and forestry operations, the town has refocused its economic development on tourism. The Project is located between two provincial parks: Quetico Park and Turtle-River White Otter Lake. Many rivers, lakes and forests in the area are used for fishing, hunting and recreational sports. The Project could potentially affect the tourism industry and recreational activities in Atikokan, and the surrounding region.

6.8.2 Aboriginal Communities

The Project lies within the traditional lands of Treaty 3, and there are a number of Aboriginal communities in the vicinity of the Project. First Nations communities that have an interest in the Project have been identified as the Lac des Milles Lacs First Nation, Wabigoon Lake First Nation and the seven First Nations represented by the Fort Frances Chiefs Secretariat (Couchiching, Lac La Croix, Mitaanjigamiing (formerly known as Stanjikoming), Naicatchewenin, Nigigoonsiminikaaning, Rainy River and Seine River First Nations). The closest First Nations reserve is the Lac des Mille Lacs 22A2 reserve, located approximately 25 km to the east of the Project location. Lac des Mille Lacs has the smallest on reserve population since they had to largely abandon their reserve lands in the 1950s due to flooding. The largest on reserve population is at Couchiching First Nation, which has a registered population of 651.

The Project also lies within the traditional territory of a rights-bearing Métis community; the Rainy Lake/Rainy River/Lac Seul region as defined by the Métis Nation of Ontario. Four Metis community councils are included in this region: Northwest Metis Council, Sunset Country Metis Council, Kenora Metis Council, and the Atikokan and Surrounding Area Metis Council. These communities assert and exercise aboriginal rights and title throughout the territory.

First Nations and Métis communities have Aboriginal and treaty rights to traditional land and resource uses in Treaty 3 including trapping, fishing, harvesting, hunting, cultural andspiritual practices. Project construction and operations have the potential to infringe on these Aboriginal and treaty rights.

6.8.3 Cultural Heritage Resources

Cultural heritage resources, including archaeological resources, cultural heritage landscapes and built heritage will be assessed as part of the EA. This assessment will include a screening for built heritage and cultural heritage landscapes in the Project area, using the Ministry of Culture and Sport's standard checklist for identifying potential heritage sites. If it is determined that the Project may impact built heritage and cultural heritage landscapes, a heritage impact assessment will be conducted.

Archaeological research in the region suggests that the area was occupied by humans as early as 7,000 years before present. These early humans, known as the Shield Archaic Culture, tended to locate themselves near caribou river crossings. Previous archaeological research has also shown that within this region primarily deer and fish were exploited by Aboriginal peoples from *circa* 1000 A.D. to contact with Europeans.

Evidence also suggests that the region was intensively hunted during the historic fur trade. Previous research has indicated that the study area is located within a region that was explored by the mid-to-late 18th century. Additionally, there is a history of mining in the region spanning from the early 20th century until the present.

A desktop study and property inspection has found that the majority of the mine site area has low archaeological potential. The property inspection was carried out in October 2011, and included a First Nations field monitor. Archaeological potential is determined through the presence of the following features:

- Water sources
- Accessible shoreline
- Elevated topography
- Pockets of well drained sandy soil
- Distinctive land formations that might have been special or spiritual places
- Resources areas
- Areas of Euro-Canadian settlement and early historical transportation routes

The low potential is based on the high amount of disturbed lands, permanently wet areas and lack of fish commonly consumed by humans in the small ponds and some lakes at the mine site. However, several dry upland areas have been identified as having archaeological potential and will require further assessment.

6.9 Potential Effects

The potential direct and indirect effects of the Project on the environment are considered with respect to the major Project activities. The major potential sources of impacts are discussed briefly below. Additional impacts may be identified throughout the EA process.

Open Pit Mining

- Loss of trees, plants, creeks, wetlands and streams
- Loss of Mitta Lake
- Changes to air quality due to air emissions from the open pit mining operations
- Changes in noise levels from blasting and machinery
- Water quality changes from pumping and exposure to dust
- Water quality changes due to run off from ore and waste rock stockpiles and the tailings management facility.
- Water quality changes due to seepage from tailings, ore and waste rock stockpiles

Water Management Systems

- Water quality changes in downstream creeks and streams due to suspended solids in wash areas and maintenance facilities
- Increased use of water in Marmion Reservoir for ore processing
- Drawdown of groundwater from pumping out the open pit
- Effects to fish and fish habitat from discharge water

Waste Management Systems

- Loss of trees, plants, creeks, wetlands and streams
- Seepage to soils and groundwater due to runoff from waste rock stockpiles, tailings management facility, overburden and low grade ore stockpiles
- Changes in water quality due to spills at fuelling and servicing areas
- Changes in water quality due to domestic water needs
- Changes in water quality due to discharge of treated water
- Seepage to soils and groundwater and runoff to surface water from landfill
- Loss of lakes and streams within the mine waste disposal area

Main Access Road and Electrical Transmission Line

- Loss of trees and plants
- Impacts to creeks, wetlands and streams
- Temporary loss of habitat and possible siltation due to development of borrow pits
- Loss/alteration of aquatic habitat due to water crossing installations
- Increased erosion and sedimentation of waterbodies from road runoff
- Changes to air quality due to vehicles travelling along the access road

Changes to noise levels due to vehicles travelling along the access road*Ore Processing*

- Changes to air quality due to air emissions from the processing plant
- Changes in noise levels from the processing plant
- Loss of trees and plants
- Loss of wetland habitat and potential loss of Provincially Significant Wetlands
- Changes to water quality due to water discharges from ore processing
- Possible soil contamination from spills of chemicals, tailings, ore, etc

TERMS OF REFERENCE

Potential Socio-Economic Effects of Mine Operations

- Increased employment
- Increased procurement of goods and services
- Strain on community services and infrastructure due to increase in population
- Decreased tourism and recreation opportunities
- Changes to current use of traditional lands and resources by Aboriginal people
- Visual impact of the Mine Site and associated infrastructure

Potential Effects of Closure and Post-Closure

- Decreased employment
- Decreased need for goods and services
- Decreased population
- Decreased requirements for municipal services and infrastructure
- Reduction in visual impact as mine site infrastructure is removed
- Natural and planned re-vegetation of previously disturbed areas resulting in an increase in habitat
- Reduction in changes to air quality from reduced Project vehicle traffic and equipment operation
- Reduction in noise emissions from Project vehicle traffic and operation of mine equipment

7.0 ASSESSMENT AND EVALUATION

This section presents the methods by which the Project alternatives (including alternatives to the Project and alternative methods of carrying out the Project) will be evaluated to determine the Project design for which OHRG is seeking EAA approval. The assessment focuses on evaluation of alternative methods, as the only "alternative to" the Project that will be evaluated is the "do nothing" alternative, to be used as a benchmark. The assessment of alternatives will employ a formal evaluation. Methodology will be described in greater detail in the EA Report.

7.1 Define Study Areas

The EA study area can be defined as the geographic range over which potential effects are anticipated to occur as a result of the Project. Because the magnitude of an impact depends in part on the geographic extent of the impact, the impact assessment will be considered with respect to specific areas. For the purposes of this assessment, the impacts are considered with respect to areas described below.

The potential impacts at the mine site are assessed on the basis of three areas of increasing size around the site.

- **The Mine Study Area**: this is the area containing the mine infrastructure, the deposit, and associated servicing and maintenance areas. Due to the local topography, the mine area is linear, since the mine and associated infrastructure are confined to the peninsula upon which the deposit occurs (Figure 4).
- **The Local Study Area:** this area includes the Mine Area, and an area around the mine where impacts could be expected (Figure 5).
- **The Regional Study Area**: this includes both of the above areas, and extends beyond the Local Area, and will encompass the maximum geographic area that impacts from the Project are anticipated (Figure 6).

A similar approach will be used to assess the potential impacts along the access road and electrical transmission line. These three study areas are currently under development and will be refined in the detailed Project Description. The study areas will be chosen to encompass each alternative.

The figures presented are preliminary; the size and extent of the study areas will differ for each environmental study component. For example, the study area for assessing terrestrial biological effects will differ from the hydrological study areas. The detailed Project description will define specific study areas as noted above for each of the study components.

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TAILINGS MANAGEMENT FACILITY ALTERNATIVE 1

TAILINGS MANAGEMENT FACILITY BASE CASE

TAILINGS MANAGEMENT FACILITY ALTERNATIVE 2

Serpent Lake

Cornell Lake

CAMP

HELIPAD

SUBSTATION

CORE SHACK

Sawbill Bay

HELIPAD 1

41 ZONE PIT

ORE STOCKPILE

A ZONE PIT

PROCESS FACILITY

Mitta Lake

CRUSHER

ORE STOCKPILE

Lynxhead Bay

WASTE ROCK OPTION 1

WASTE ROCK OPTION 2

Light Lake

Upper Seine Bay

Hawk Bay

Marmion Reservoir

610000 620000 630000

LEGEND

- Exploration Base Camp
- Raft Lake Cut Location
- Potential Discharge Location
- Weather Station
- Helipad Location
- Road
- Existing Site Access Road
- Hardtack / Sawbill Access Road Alternative 1
- Raft Lake Access Road Alternative 2
- Proposed Powerline Alternatives
- River/Stream
- Lake
- Wetland
- Project Location
- Open Pit
- Proposed Process Facility Footprint
- Ore Stockpiles
- Waste Rock Storage Areas (Approximate)
- Tailings Management Facility Base Case
- Tailings Management Facility Alternative 1
- Tailings Management Facility Alternative 2

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd.
Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4
Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

1,000 0 1,000 2,000 3,000

SCALE 1:80,000 METRES

PROJECT

HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE

MINE STUDY AREA

Golder Associates
Mississauga, Ontario

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	REV. 1.0
DESIGN	CGE	14 Nov. 2008	FIGURE: 4	
GIS	CGE	12 Jan. 2012		
CHECK	SP	12 Jan. 2012		
REVIEW	RJ	12 Jan. 2012		

G:\Projects\2010\10-1118-0020_BrettResources_HammondReef\GIS\MXDs\FinalToRMineStudyArea.mxd

600000 610000 620000 630000

5430000 5420000 5410000 5400000

Sergent Lake
Cornell Lake
CAMP
Lizard Lake
Sawbill Bay
Light Lake
OPEN PIT
Lynxhead Bay
Finlayson Lake
Upper Seine Bay
Hawk Bay
Marmion Reservoir
HIGHWAY 622
ATIKOKAN LOWER BASIN A WETLAND
Atikokan
HIGHWAY 11

N

LEGEND

- City/Town
- Exploration Camp
- Water Access Point (Marimon Resivoir)
- Atikokan Lower Basin A - Wetland
- Airport
- Raft Lake Cut Location
- Road
- Site Access Road
- Existing Railway
- Existing Power transmission line
- River/Stream
- Lake
- Wetland
- Project Location
- Open Pit

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd.
Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4
Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

2,500 0 2,500 5,000 7,500
SCALE 1:150,000 METRES

PROJECT
HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE
LOCAL SETTING

Golder Associates
Mississauga, Ontario

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	REV. 2.0
DESIGN	CGE	14 Nov. 2008		
GIS	CGE	12 Jan. 2012		
CHECK	SP	12 Jan. 2012		
REVIEW	RJ	12 Jan. 2012		

FIGURE: 5

G:\Projects\2010\10-1118-0020_BrettResources_HammondReef\GIS\MXDs\FinalToRt\LocalSetting.mxd

LEGEND

- City/Town
- First Nation Community
- Road
- Existing Railway
- Existing Power transmission line
- River
- Waterbody
- Provincial Park
- Project Location

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd.
First Nations Communities from Indian and Northern Affairs Canada.
Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4
Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

25 0 25 50 75 100
SCALE 1:2,000,000 KILOMETRES

PROJECT
HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE
REGIONAL SETTING

Golder Associates
Mississauga, Ontario

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	REV. 1.0
DESIGN	CGE	14 Nov. 2008	FIGURE: 6	
GIS	CGE	12 Jan. 2012		
CHECK	SP	12 Jan. 2012		
REVIEW	RJ	12 Jan. 2012		

G:\Projects\2010\10-1118-0020_BrettResources_HammondReef\GIS\MXDs\FinalToRI\ProjectLocation.mxd

7.2 Data Collection

Baseline data collected will be of the quality and relevance needed to meet requirements for the EA, consistent with provincial and federal requirements. The baseline studies will be conducted using standard protocols and scientifically defensible methods, as described in Section 7.2.1. Field study plans will be prepared and carried out in consultation with regulatory authorities. The EA will provide detailed information on the methods and approach of each baseline study.

The objectives of the baseline studies are to:

- Describe the physical, biological and socio-economic conditions and trends in areas potentially affected by the Project in order to understand potential impacts and develop appropriate mitigation and management measures;
- Describe the geochemical characteristics of the mineral resource extraction process and the mine wastes that will be generated by the Project in order to develop an understanding of the factors that could affect the environment;
- Inform the selection of alternatives to minimize environmental impacts of the Project and compare advantages and disadvantages;
- Establish benchmarks for monitoring programs that will be implemented during the construction, operation, closure and post closure phases of the Project, such that Project impacts can be iteratively addressed as necessary as the project proceeds; and
- Interact with potentially affected populations, in the course of baseline data collection in order to exchange information on the Project and to provide people the opportunity to express their concerns and preferences with regard to Project development.

7.2.1 Criteria and Indicators

The EA will evaluate criteria for the physical, biological and socio-economic environments to determine the potential effects of the alternative methods for the entire life-cycle of the Project, including construction, operations, closure and post-closure.

The process of assessing and evaluating the impacts of the Project alternatives is based on an integration of a number of criteria, indicators and sources of information, including site specific information and a review of external data sources. Site-specific information will include empirical data from the site, modelling studies, and consultation with stakeholders and regulators, as well as a review of the broader technical and scientific literature.

The following tables provide examples of specific criteria and indicators considered to determine the potential effects of the Project to the identified physical, biological and socio-economic components. These lists are preliminary and it is anticipated that they will be refined as the planning process moves forward. Final criteria and indicators will be developed based on consultation with the regulators, the public and Aboriginal communities and will be provided in the EA Report. Where Project-environment interactions are determined, mitigation measures will be applied. Further assessment will take place only where a potential for significant negative effects have been identified.

The preliminary physical criteria and potential data sources are listed below in Table 2.

Table 2: Physical Components, Criteria and Potential Data Sources

Environment	Criterion	Preliminary Indicator	Potential Data Source
Natural	Effect on soils and soil quality	• Soil quality parameters (ie properties of soil types and compatibility with activities	• On-going 2010-2012 site baseline investigation study • Reg. 153 Standards for Soils • CCME Soil Standards
	Effect on hydrogeology	• Flow direction • Hydraulic conductivity • Advective transport • Diffusive transport	• On-going 2010-2012 site baseline investigation study; • Ontario Ministry of Environment (MOE) water well records
	Effect on groundwater quality	• Groundwater quality parameters	• Ontario Drinking Water Quality Standards (June 2006); • Provincial Water Quality Objectives (July 1994) • Reg. 153 Standards for Contaminated Sites • Ministry's Reasonable Use Policy (Guideline B-7)
	Effect on hydrology	• Seasonal stream flow • Seasonal water levels in Marmion Reservoir and surrounding wetlands	• Site and local flow/water level data collected under the Hydrology baseline study 2010-2012; • Regional flow/water level data for Water Survey of Canada (Environment Canada) hydrometric stations; • 2004-2014 Seine River Water Management Plan (March 2004); • Ministry of Natural Resources' Waterpower, Water Management Planning, Guidelines for Waterpower (May 2002)
	Effect on surface water quality	• Substrate metal content • Amount of organic material • Dissolved oxygen • pH • temperature • Total phosphorous • Total and dissolved metal concentrations in water • Nutrient content in water • Total Dissolved Solids • TKN, TP	• Ongoing 2010-2012 water and sediment quality site baseline investigation study; • Ongoing 2010-2012 geochemical site baseline investigation study (Acid-base accounting, net acid generation, elemental composition, short-term and long-term leach testing) • Ontario Drinking Water Quality Standards (June 2006); • Provincial Water Quality Objectives (July 1994);

Environment	Criterion	Preliminary Indicator	Potential Data Source
		• Anions, cations • Conductivity	• MISA; • Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the Protection of • Aquatic Life, Update 7.1 (December 2007); • Canadian Council of Ministries of the Environment Guidelines, Updated 2002; Freshwater PEL (Probable Effect • Level) and Freshwater ISQG (Interim Sediment Quality Guideline); • Minister of the Environment Provincial Sediment Quality Guideline, August 1993; LEL (Lowest Effect Level) and • SEL (Severe Effect Level). • Available overburden and bedrock geological mapping. Sources include mapping by the Ontario Geological Survey and Geological Survey of Canada
	Effect on air quality	• Air predictions and ambient air quality will be compared to the Ontario Ministry of the Environment's Ambient Air Quality Criteria (AAQCs)	Existing conditions will be characterized using available literature and monitoring data from stations in the North. This data will be used to determine the background concentrations of the indicator compounds for the Project. Existing meteorological data will be taken from the Environment Canada station in Atikokan, as well as from the MOE regional modelling data set based on data from International Falls. The short-term meteorological monitoring data at the Project site will not be relied on, but will be used to compare to the Atikokan and International Falls data. Emissions of the indicator compounds will be calculated for the open pit mining operations, vehicles on the access road and the ore processing activities. These emissions will be calculated using accepted equations and be based on the activities described in the Project Description.

Environment	Criterion	Preliminary Indicator	Potential Data Source
			The calculated emissions of indicator compounds, along with the existing meteorology, will be used as inputs to an accepted dispersion model in order to predict concentrations of the indicator compounds. The background concentrations and model predictions will be combined to predict the ambient air quality. Modelling methods will be consistent with the air dispersion modelling guidance issued by the Ontario Ministry of the Environment. This guidance allows for the use of alternative models and meteorological data on a case-by-case basis should the analysis indicate there is a need. If such a need is identified, discussions will be held with MOE representatives to get agreement prior to proceeding with the necessary analysis.
	Effect on noise levels	• Sound levels at sensitive points of reception as per Noise Pollution Control (NPC) Guidelines 232	Existing noise conditions are expected to be typical for the remote areas of the province and will be based on literature. Noise emissions from the various elements of the Project will be developed using the activities described in the Project Description, data in published literature and Golder's database of similar noise sources. The noise emissions for the Project, along with detailed topographic data will be used as inputs to a numerical noise model accepted by the Ontario Ministry of Environment. The assessment of noise effects will be done in accordance with the Ontario Ministry of the Environment Noise Pollution Control (NPC) Guideline Publications (October 1995). In addition, the assessment of noise effects will be

Environment	Criterion	Preliminary Indicator	Potential Data Source
			consistent with the guidance set out in Health Canada National Guidelines for Environmental Assessment: Health Impacts of Noise (Draft Version, May 2005), and Health Canada Noise Impact Assessment Orientation Document for Projects Triggering CEAA (Draft Version, May 2005).

In addition to predictions of changes to physical environmental components, the EA will include a determination of significance based on the biological and human receptors that are subject to those changes. Although numerical guidelines for physical parameters such as water quality, noise and air quality will be used as data sources and indicators to ensure compliance with provincial regulations, the significance of potential exceedances lies in determination of effects on, or risks to, human and biological receptors.

Consequently, the environmental impact assessment also addresses biological resources. Many of the pathways of effect relate to changes in the physical environmental components listed above. Potential impacts may also arise from project-related activities that physically displace or alter habitat and also from indirect socio-economic factors such as increased human population density and improved access that can result in changes in exploitation of local biological resources.

The preliminary biological criteria and indicators are listed below in Table 3

Table 3: Biological Components, Criteria and Indicators

VEC	Rationale for Selection	Indicators
Habitat VECs		

Wetlands	• Supports the ecological integrity of the boreal region
	• Important as wildlife habitat
	  ◦ Support migratory waterfowl breeding;
	  ◦ Supports critical habitats for beaver, moose, etc.
	• Important spawning and nursery habitat for fish
	• Hydrological functions
	• Supports traditional use plants (e.g. wild rice)
	• Agency concern
		• Extent of wetland habitat and natural linkages
		• Composition/diversity of wetland plant communities
		• Hydrological function and changes

Black Spruce dominated forest	• Dominant forest plant community that supports the ecological integrity of	• Extent of forested habitat and natural linkages

VEC		Rationale for Selection	Indicators

community		the boreal region
		• Important as wildlife habitat
		  • Supports populations of large carnivores such as black bear, wolves and lynx as well as prey animals such as hare, marten and red squirrel
		  • Abundance of migratory birds utilize habitat for breeding
		• Socio-economic importance
			• Composition of forest plant community
			• Suitability of habitat in supporting wildlife populations

Species At Risk	Bald Eagle	• Observed in the vicinity of the Project site. • Cultural significance • Provincially, bald eagles are designated as Special Concern under Ontario's Endangered Species Act.	• Habitat suitability and availability for bald eagle
	Common Nighthawk	• Bird SAR observed on and in the vicinity of the Project site • Provincially, Common nighthawk is designated as Special Concern under Ontario's Endangered Species Act. • Breeding habitat occurs on the Project site.	• Habitat suitability and availability for common nighthawk
	Canada warbler	• Bird SAR observed on and in the vicinity of the Project site • Provincially, Canada warbler is designated as Special Concern under Ontario's Endangered Species Act. • Breeding habitat occurs on the Project site.	• Habitat suitability and availability for Canada warbler
	Snapping turtle	• Herpetofaunal SAR observed on and in the vicinity of the Project site • One of few reptile species in this northern ecosystem • Indicator of wetland function	• Habitat suitability and availability for snapping turtle
	Lake Sturgeon	• Species at Risk that occupies the lower Seine River	• Changes in water quality and quantity within receiver

VEC	Rationale for Selection	Indicators
Furbearers	• Common and abundant in the Project site • Important prey species for many carnivores in northern environments • Some species may be tolerant of human activities, but may be affected by habitat loss • Traditional and non-traditional uses	• Presence/persistence of furbearers • Habitat suitability and availability for furbearers
Moose	• Observed on and in the vicinity of the Project site • Important subsistence and cultural species • Large herbivorous mammal requiring a large home range • Prey species for large carnivores	• Presence/persistence of moose in the area • Habitat suitability and availability for moose
Wild rice	• Traditional use plant • Sensitive to fluctuating water levels	• Presence/persistence of wild rice in the area • Habitat suitability and availability for wild rice
Lower reaches of small streams draining footprint including any mainstem ponds, and stream crossings	• Potentially affected (altered, diverted) by Project infrastructure • Alteration may result in loss of fish and productivity (e.g. critical habitats, food resources for fish) • Changes can measured using a variety of standard indicators available (e.g. provincial and federal government criteria) • Agency concern	• Benthic invertebrate community • Fish habitat suitability • Fish community (resident assemblages/species present)
Marmion Reservoir (receiver)	• Socio-economic importance (tourism, angling) • Sensitive receiving water environment • Receiving Bays (mouths of small streams) potentially affected (altered, diverted) by Project infrastructure • Receiving Bays may represent significant habitat for locally important fish species. Alteration of habitats may result in loss of fish and productivity (e.g. critical habitats, food resources for fish) • Changes can measured using a variety	• Benthic invertebrate community • Fish habitat suitability (receiving bays) • Fish community (resident assemblages/species present in receiving bays) • Contaminants in fish tissue

VEC	Rationale for Selection	Indicators
	of standard indicators available (e.g. provincial and federal government criteria) • Agency concern	
Lizard Lake (receiver)	• Socio-economic importance (tourism, angling) • Sensitive receiving water environment • Receiving Bays (mouths of small streams) potentially affected (altered, diverted) by Project infrastructure • Receiving Bays may represent significant habitat for locally important fish species. Alteration may result in loss of fish and productivity (e.g. critical habitats, food resources for fish) • Changes can measured using a variety of standard indicators available (e.g. provincial and federal government criteria) • Agency concern	• Benthic invertebrate community • Fish habitat suitability (receiving bays) • Fish community (resident assemblages/species present in receiving bays) • Contaminants in fish tissue
Walleye	• Socio-economic importance (angling) • Traditional resource use (First Nation concern) • Long lived, top predator species (piscivorous), will accumulate contaminants • Human health; consumed by anglers, subsistence fishers	• Walleye habitat • Contaminants in walleye flesh
Smallmouth Bass	• Socio-economic importance (angling, Bass Classic fishing derby)	• Smallmouth Bass habitat
Baitfish Species	• Socio-economic importance (commercial baitfish fishery) • Important food resource for large fish species (e.g. walleye)	• Baitfish habitat

Potential Data Sources for the Biological Assessment

- Ongoing 2010-2012 site baseline investigation studies;
- Data resulting from field plan studies as per section 7.2
- Natural Resource Values Information (NRVIS) data base (e.g. spawning locations)
- Fish community studies conducted by the MNR (e.g. angler surveys, index netting projects, lake surveys)

- Natural Heritage Information Centre, MNR
- Field guide to the forest ecosystem classification for Northwestern Ontario (Sims et al. 1997)
- Significant Wildlife Habitat Technical Guide (MNR 2000)
- Ontario Crown Land Use Policy Atlas (MNR 2011)
- Land Information Ontario (MNR 2011)
- Ontario Breeding Bird Atlas, MNR;
- Local bird expert Dave Elder was contacted to discuss his >20 years of birding data and knowledge in the area
- Ontario Wetland Evaluation System, MNR
- Field Guide to the Wetland Ecosystem Classification for Northwestern Ontario (Harris et al. 1996)
- Ongoing 2010-2012 site baseline investigation study;
- Endangered Species Act, MNR
- Species at Risk Act (Government of Canada 2002)
- Addressing Species at Risk Act Considerations Under the Canadian Environmental Assessment Act for Species Under the Responsibility of the Minister responsible for Environment Canada and Parks Canada
- The Species at Risk Act Environmental Assessment Checklists for Species Under the Responsibility of the Minister Responsible for Environment Canada and Parks Canada

Taken together, the physical and biological impact assessments comprise this section of the environmental impact assessment, and are used to predict changes to the quality and quantity of resources in the defined study areas.

The characterization of socioeconomic conditions is based on the most current publicly available data and generally reflects the historical trends, as well as projected conditions since the last census date. The following criteria were identified through best practice and previous socio-economic impact assessments in Northwestern Ontario, as well as through consultation with stakeholders and engagement with Aboriginal communities. The socio-economic impact assessment will take into consideration potential environmental effects during the construction, operations and closure stages of the Project. This impact analysis will be used to determine the preferred alternative for the Project.

The socio-economic criteria and indicators are listed below in Table 4.

Table 4: Social and Cultural Component Criteria and Indicators

VSC	Rationale for Selection	Indicators
ECONOMIC		
Demographic Change	• Population change may result in changes/pressure on social and physical services and infrastructure • Population and other demographic changes can affect social and cultural composition of communities • Population change may affect community health, safety and well-being • The influx of workers due to the	• Population Growth • Age distribution; dependency ratios • Gender distribution • Language • Mobility

VSC	Rationale for Selection	Indicators
	Project could benefit long-term economic and community development, supporting community vibrancy and improved social infrastructure (e.g. housing, organized recreation, support for local business, etc.)	
Local Employment, Income Generation and Training	• Employment and training opportunities provide economic benefits to households, communities and local governments • Income generating opportunities contribute to the general well-being of individuals, families and communities • Employment generation is important to community well-being and population stability • Local communities are interested in local recruitment, training and long-term employment • Local sustainable employment can be supported via training, education and opportunities to develop transferable skills and experience • Timing and number of employment opportunities could offset current/projected layoffs in other sectors • Experience has shown that loss of employment and income generation at closure has negative effects on individuals and families, particularly where project-related mitigation measures are lacking	• Unemployment rates • Participation rates • High school/post-secondary completion rates • Local/regional economic development plans and implications for employment • Median income • Income disparities between males/females
Economic Development	• Local procurement can create additional jobs beyond those resulting from direct hire by the Project, and can lead to local income generation, economic diversification within Aboriginal and non-Aboriginal communities • Impacts to existing businesses (can be difficult to hire people for jobs that pay less wages) • Project-related requirements for goods and services are a source of revenue and skill development for	• Opportunities to provide goods, services and personnel for the Project • Economic development plans and implications for business development • Trends in provincial and regional GDP

VSC	Rationale for Selection	Indicators
	business owners, and economic benefit to local government • Generation of business opportunities are important to Aboriginal communities and perceived as a benefit of resource development projects • A sustainable economy contributes to employment, income generation and community health and well-being • Experience has shown that loss of business opportunities at closure has a negative effects on individuals and families, particularly where project-related mitigation measures are lacking	
LAND AND RESOURCE USE (NON-TRADITIONAL)		
Outdoor Tourism and Recreation	• The Project may affect tourism and recreation activities and opportunities • The Project may occupy land base which supports hunting, trapping, fishing and guiding activities • Accommodation requirements for temporary Project workers may compete with local accommodation requirements	• Existing land available for recreational land use and associated tourism infrastructure • Contribution of tourism to the local economy (types of activities, revenue, generation, employment, etc.) • Number and types of visitors to the study area • Tenured trapping, bear management and baitfish areas and harvest volumes • Wildlife management (e.g., moose, deer and bear)and fishing areas, licence sales and harvest volumes • Recreational fishing participation (e.g., Atikokan Bass Classic) • Visual Aesthetic and Noise Indicators • Availability of temporary accommodation
Extractive Resources Base	• The Project may affect current and future extractive resource activity (e.g., mining, oil and gas)	• Current local and regional land use and tenure (including mining, oil and gas, and crown land uses)

VSC	Rationale for Selection	Indicators
		• Local and regional land use plans
Forestry	• The Project may occupy productive forest land, disrupting access to existing or future harvest land	• Land capability for forestry • Timber harvest land base • Regional forest sector base revenue
Water Use and Access	• The Project has the potential to directly affect the use of and access to water bodies such as the Marmion Reservoir • The Marmion Reservoir is an important resource for recreational fisheries and tourism, hydro-electric power and other commercial and industrial uses.	• Recreational fishing participation (e.g., Atikokan Bass Classic) • Water availability for hydro-electric power and other industrial and commercial uses
SOCIO-COMMUNITY		
Housing Availability	• Influx of a large number of workers and families can lead to pressures on housing and other accommodation availability and cost • Changes in the availability and cost of housing could affect existing and prospective property owners' economic well-being	• Status and trends in local housing availability and cost • Status and trends in temporary accommodation availability and cost • Housing and accommodation construction starts/permits • Local and regional development plans for housing and accommodation
Transportation and Traffic	• The Project may cause strain on existing transportation (primarily road) infrastructure due to movement of Project workers, equipment, supplies and products	• Traffic volumes, patterns and levels of service of relevant access roads • Capacities of potentially-affected intersections • Quality of existing road infrastructure • Local/regional development plans for traffic/transportation management and road infrastructure
Public Services and Infrastructure	• Access to, and quality of services including social services, health services, protection services and education services are important to the quality of life and the health and well-being of residents and visitors • Access to and availability of potable water, wastewater disposal and solid	• Status and trends in local education, health, social and protection services (location, number, capacity to meet existing and future demand) • Status and trends in local water, waste water and solid waste infrastructure (location, capacity to

VSC	Rationale for Selection	Indicators
	waste management systems are important to health and well-being of residents and visitors • Local residents value services; quality and capacity of services contributes to overall standard of living and quality of life in communities • Project workforce-related population increase may require an increase in the capacity of existing services and infrastructure	meet existing and future demand) • Local and regional development plans and priorities for services and infrastructure • Local and regional government finances (revenues and expenditures)
Community Health, Safety and Well-Being	• Resident, visitors and workers' health and safety is important to their quality of life • Potential for the public health and safety issues during construction and operations due to influx of workers; work shifts, increased income, crime and substance abuse and high risk behaviours • Potential for changes in public health and safety due to project-related changes in air quality, noise, water quality and traffic	• Community character • Community Well-Being Index • Status of local community health, emergency and protection services • Crime incidence • Trends in substance abuse • Transportation and Traffic indicators • Air Quality, Noise, Water Quality and Human Health Risk Assessment Indicators
ABORIGINAL INTERESTS		
Traditional Land and Resource Use	• The current use of lands and resources for traditional purposes by Aboriginal and non-Aboriginal groups is important to community well-being and identity	• Existing land, water and resources available for practice of hunting, fishing, trapping, camping, recreation, travel and spiritual activities • Use and harvesting of plants for food and medicine or other cultural/ceremonial practices • Air quality, hydrology and surface water quality, aquatic environment, terrestrial environment, human health indicators
Aboriginal Employment, Income Generation and Training	• Aboriginal communities are interested in maximizing recruitment, training and long-term employment opportunities • Employment and training opportunities provide economic	• Unemployment rates • Participation rates • High school/post-secondary completion rates • Training opportunities • Aboriginal community economic

VSC	Rationale for Selection	Indicators
	benefits to households and communities • Income generating opportunities contribute to the general well-being of individuals, families and communities • Experience has shown that loss of employment and income generation at closure has a negative effects on individuals and families, particularly where project-related mitigation measures are lacking	development plans and implications for training and employment • Median income • Income disparities between Aboriginal and non-Aboriginal populations
ABORIGINAL HERITAGE RESOURCE		
Aboriginal Heritage Resources	• Aboriginal heritage, such as archaeological resources may be affected by the excavation of previously undisturbed lands • Cultural or spiritual sites may be affected	• Project-related changes to archaeological/burial sites and artifacts • Location of Project in relation to cultural or spiritual sites
NON-ABORIGINAL HERITAGE RESOURCES		
Non-Aboriginal Heritage Resources	• The Project may affect Euro-Canadian archaeological sites	• Project-related changes to archaeological sites and artifacts
Industrial Heritage Sites	• The Project may affect mid-20th century area mining sites.	• Project-related changes mid-20th century area mining sites.

Potential Data Sources for Social and Cultural Assessment

- Ongoing 2010-2012 site baseline investigation studies (including economic modelling to estimate direct and indirect employment, income and fiscal benefits generated by the Project);
- Reports prepared for the Ontario Mining Association;
- Ontario Ministry of Northern Development, and Mines reports; Economic development agency reports;
- Atikokan Retail and Service Sector Community Gap Analysis;
- Atikokan, Fort Frances and Thunder Bay municipal financial statements;
- Key informant interviews with Rainy River Future Development Corporation, Atikokan Economic Development Corporation, Fort Frances Chamber of Commerce, and Atikokan Chamber of Commerce;
- Key informant interviews with local tourism operators
- Statistics Canada census community profiles (2006, 2001, and 1996 census data);
- Ontario Ministry of Finance population projections;
- Training and Adjustment Board reports and statistics;
- Local municipal planning and development reports;

- Immigration Northwestern Ontario community information
- Ontario Ministry of Health and Long-Term Care reports;
- Key informant interviews with the Atikokan Family Health Team doctors, Atikokan Family Health Team Board, and Atikokan General Hospital staff members
- Key informant interviews with local real estate agent;
- District School Board reports and statistics;
- Key informants interviews with school board staff;
- Town of Atikokan Global Plan Summary;
- Town of Atikokan Annual Landfill Report;
- Key informant interviews with Town of Atikokan staff and other local service providers;
- Key informant interviews with provincial park staff
- Ongoing 2010-2012 site baseline investigation studies (including a traffic and transportation impact study);
- Ministry of Transportation traffic volumes statistics;
- Other existing traffic reports where available
- Ontario Ministry of Natural Resources NRVIS data, and land use data including tourism, hunting and fisheries;
- Atlas of Canada data
- Ministry of Tourism and Culture's Archaeological Site Data Base (list of all registered sites in Ontario)
- Canadian Registry of Historic Places (including the Register of Government of Canada Heritage Buildings and the Directory of Designation of National Historic Significance of Canada)
- Ontario Heritage Trust (listing of historic places designated by the province of Ontario)
- Ministry of Tourism and Culture's
- Criteria for Evaluation Archaeological Potential (2011)
- Standards and Guidelines for Consulting Archaeologist (2011) – standards and guidelines all licenced archaeologists in Ontario are required to follow as a condition of their licence
- Canadian Environmental Assessment Act
- Reference Guide on Physical and Cultural Heritage Resources (1996)
- Parks Canada Guidelines for the Management of Archaeological Resources (2005)
- Government of Canada Archaeological Heritage Policy Framework (1990)
- Aboriginal population profiles and health data (2006, 2001, and 1996 Statistics Canada census data)
- Aboriginal Communities in Profile: Northwestern, Ontario Trillium Foundation (2007)
- Information collected from existing reports and Aboriginal community websites
- Results from key informant interviews, Aboriginal Engagement and Traditional Knowledge Studies

7.2.2 Baseline Characterization Tools

Preliminary baseline studies have been conducted for identified physical, biological and social components. Baseline studies were conducted for 1 year, addressing seasonal variations and alternative methods. Methods for conducting Baseline studies were developed in consultation with regulatory agencies using standard protocols and field studies and will be included in the EA. Additional data was also collected beyond the initial scope of work to address gaps identified by government regulators.

Baseline characterization studies will continue as needed to provide further detail for the feasibility study phase of the Project, and support the development of an EA that meets federal and provincial requirements. To date, baseline studies have included assessment of:

- Water quality and quantity;
- Groundwater quantity;
- Soils and sediment type and quality;
- Vegetation communities;
- Wildlife communities;
- Aquatic communities;
- Physiography, geology and geochemistry;
- Atmospheric environment, including air quality, noise, climate and meteorology;
- Socio-economic conditions; and
- Cultural heritage resources including archaeology, built heritage and cultural heritage landscapes.

Baseline studies will be conducted in detail, focusing on quantitative assessments of existing conditions. Baseline studies will include:

- Sampling and analysis of relevant environmental media (e.g., meteorological conditions, water, sediment, soil, vegetation, fish tissues, etc.);
- Assessment of ecological features (e.g., aquatic and terrestrial habitats, wetlands) following standard protocols;
- Assessment of species present, including any rare, threatened or endangered species, and their usage of existing habitats; and
- Assessment of socio-economic conditions through collection, and analysis of secondary data sources, key informant interviews and the consideration of information obtained through engagement and consultation with Aboriginal communities and stakeholders.

7.2.3 Indicators

The EA Report will explain and justify methods used to predict the effects of the Project on the environment, including physical, biological, socio-economic. The assessment will consider all potential Project-environment interactions, but will focus on those which are likely to be measurable. These measurable components of the environment are described as indicators, or Valued Ecosystem Components (VECs).

The specific indicators for the EA have not yet been selected for the Project, but will correspond with the criteria listed in Tables 3 through 5.

The EA will describe how the indicators were selected and what methods were used to predict and assess the adverse environmental effects of the Project on these indicators. Regulators, public and Aboriginal communities will also be consulted regarding what ecosystem components are of value to them and should be included as indicators in the EA (further detailed in Appendix B, Consultation Plan and Appendix C, Aboriginal Engagement Plan).

7.3 Evaluate Alternative Methods

Each of the "alternatives methods" will be evaluated in a qualitative comparative process to determine the preferred alternative. The comparative evaluation will take into consideration the finalized criteria and indicators (a preliminary list of which is provided in Tables 2 to 4 of this ToR).

For each of the finalized criteria, the corresponding technical discipline will undertake a quantitative assessment (to the extent contemplated by the indicator) of each alternative. This assessment will be based on the data sources (including data collection activities and work programs) described for each criterion. Based on the assessment completed, each discipline will rank the preference of the alternatives for each criterion.

The methodology for the environmental impact analysis will include the following steps:

- Identification of project and environmental interactions that could result in measurable impacts;
- Identification of the suitable physical, biological, and socio-economic components that could be affected by project activities;
- Prediction of environmental and socio-economic impacts;
- Evaluation of potential effects of alternatives to and alternative methods of carrying out the Project;
- Evaluation and selection of the preferred project alternative and alternative method;
- Evaluation of advantages and disadvantages of alternatives to and alternative methods of carrying out the Project;
- Identification of mitigation measures to minimize identified impacts; and
- Assessment of the significance of the potential impacts.

Methodology will be described in greater detail in the EA Report.

The identification of potential environmental impacts will be undertaken on the basis of the identified Project activities and the likely interactions of these with the natural environment, including issues identified in consultation with Aboriginal communities, regulators and other stakeholders.

A systematic and consistent approach will be employed in the assessment of Project alternatives and potential impacts, including an assessment of advantages and disadvantages. Proposed mitigation measures will be considered in order to determine residual impacts and their net significance.

7.3.1 Numerical Modelling

While the approach used to assess potential impacts on each environmental component is generally specific to that component, and follows acceptable practices within the scientific discipline, the impact assessment is based on a similar framework for each component.

Changes in the environment are predicted based on the information and details provided in the Hammond Reef Project Description Report. The predictions typically make use of numerical models. Environmental component studies that typically make use of predictive models include:

- Hydrology, where standard models may be used to predict changes in stream flows and lake levels on a seasonal basis as a result of the Project;
- Air quality and noise, where standard models are available to predict air quality and noise levels resulting from air and noise emissions from the various Project components;
- Hydrogeology, where standard models are used to predict changes in groundwater quantity and flows;
- Water quality, where geochemical information is combined with the results of the hydrological and hydrogeological models to predict changes in surface and groundwater quality;
- Biology, where standard ecological risk assessment models are used to predict effects on biological communities due to changes in water and air quality, and surface water quantity.

Modelling methods used by the various disciplines will be described in detail in the Technical Support Documents and summarized in the EA Report.

7.3.2 Impact Management

Mitigation measures are proposed where a Project activity may have an adverse effect on the environment. In many cases, the Project activities described include mitigation measures, with the result that these activities typically do not result in adverse effects. Where additional mitigation measures are warranted, these will be proposed. Where additional mitigation measures are identified, a second assessment is undertaken to determine the potential significance of the impact with the mitigation measures applied.

Management plans, that include monitoring plans, are developed for the Project, based on the Project design, and the outcome of the impact assessment.

7.3.3 Net Effects

Determination of the net effects of an impact is often assessed relative to existing criteria, such as regulatory guidelines. A complete list of policies, guidelines, criteria, standards and methods will be provided in the EA Report. As a result, physical components, such as air quality, surface water and groundwater quality, and soils and sediment quality are assessed with respect to the environmental standards applicable to the Project. Environmental standards/criteria applicable to the Project would include provincial and federal criteria, standards, and/or guidelines for air, noise, water, soil, sediments and biota. The net effects for the physical components will be described in detail in the EA Report.

Exceedance of a regulatory criterion is not necessarily a significant effect in itself, and it does not automatically provide a measure of net effects to human or ecological receptors. Each environmental change must be interpreted according to the degree of risk of impact to the biological communities based on specific attributes of pathway, exposure and receptor characteristics, as well as the likelihood of measurable effects on populations or communities. The rationale for selection of specific biological indicators will be provided in the EA Report.

Selection of biological indicators recognizes that effects at the community or population level can have much longer lasting impacts than effects on individuals. . The net effects for the biological components will be described in detail in the EA Report.

The determination of net effects is based on the potential impacts on biological receptors, rather than the physical environment. Since the effects on physical components, such as water quality, are determined with respect to their potential biological effects (e.g., water quality guidelines have been developed with the purpose of protecting biological resources), the assessment of net effects is considered within this context.

The assessment will be based on the Hammond Reef Gold Project Description, and include all mitigation measures currently incorporated into the Project design. Where potentially significant impacts to the environment are identified, additional mitigation measures will be incorporated, where feasible, to minimize the residual impacts, which are then re-evaluated to determine the final net effects of the likely impact.

The assessment will be conducted with the use of tables that organize and summarize the process described above into comparable and intuitive presentations for each of the construction, operations, and closure and post-closure phases.

7.4 Identify the Preferred Methods

After evaluation of the preferred methods is complete, the preferred methods will be identified using methods that provide a rationale for choices made. The net effects of the predicted changes in the environment will be assessed relative to measurement criteria. The assessment of net effects will be

conducted in consideration of different assessment categories that are used to predict the magnitude and likelihood of an effect. The categories to be considered are:

- **Direction:** whether a potential impact will be positive, neutral or negative;
- **Geographic Extent:** the area over which an impact will be experienced;
- **Duration:** the period of time over which an impact occurs;
- **Frequency:** how often an impact occurs within a given time period;; and
- **Magnitude:** describes the results of an impact in a measurable way by means of specific criteria (e.g., area of habitat lost, density or numbers of species affected), relative to the baseline condition and to relevant provincial or federal standards, guidelines, or criteria.

The generic categories used for the assessment of net effects may not be applicable to all socio-economic criteria and may therefore requirement modification be modified for the socio-economic component. The assessment will be conducted with the use of tables that organize and summarize the process described above into comparable and intuitive presentations for each of the construction, operations, and closure and post-closure phases.

7.5 Identify the Proposed Undertaking

Based on the alternative methods evaluation, the EA Report will provide a description of all the components of the Project, as described in Section 5. The Project description will include the following details:

- The Project footprint;
- The materials to be used;
- Technologies, procedures and processes;
- The products, by products and waste generated; and
- Hazardous materials, water and waste management systems.

8.0 COMMITMENTS AND MONITORING

Based on the environmental and socio-economic impact assessment, the EA Report will outline two impact management plans, an Environmental Management Plan (EMP) and a Social Management Plan (SMP). These plans will:

- Provide a comprehensive list of commitments made by OHRG during the ToR process, and detail where or how they have been dealt with in the EA;
- Provide a list of commitments made during the preparation of the EA;
- Reflect the results of consultations and be predicated on an ongoing program of consultations over the life of the Project;
- Include compliance and effects monitoring;
- Describe the mitigation and benefit enhancement measures that will be put in place to address significant residual Project impacts specific to each of the construction, operations, closure and post closure phases;
- Describe the monitoring of impact mitigation and benefit enhancement measures;
- Describe how the implementation of mitigation and benefit enhancement measures will be managed to ensure success – this will take into account institutional capability to participate in management of the Project environmental and social performance where such participation is deemed appropriate; and
- Present monitoring costs, schedules and frameworks, as developed during the preparation of the EA.

8.1 Environmental Management Plan

The objective of the EMP is to set out clearly the key components of environmental management for the Project and thereby ensure that the following concepts are realized throughout the construction, operation, closure and post-closure phases of the Project:

- Negative impacts on the physical and biological environments are mitigated;
- Benefits that will arise from the development of the Project are enhanced; and
- Compliance with existing legislation and consistency with provincial guidelines and best practice is achieved.

The EMP will address:

- Management of physical environment;

- Management of biological environment;
- Emergency preparedness and response;
- Contingency planning;
- Health and safety;
- Closure and post closure; and
- Management plan implementation.

For each of the above referenced subject areas the EMP will identify policies, practices and/or procedures – including monitoring, inspections and audits.

In addressing emergency preparedness and response, the EMP will identify the principal environmental risks associated with the Project, evaluate each risk qualitatively and propose measures to minimize the potential for occurrence, and in the event of occurrence, to minimize the potential for negative effects.

In addressing closure and post closure, the EMP will set out objectives and propose measures, including contingency measures, for achieving those objectives. In addition, the EMP will address progressive rehabilitation, describe expected post closure conditions and propose post closure monitoring.

8.2 Social Management Plan

The Social Management Plan will address the avoidance of, minimization of, and/or compensation for negative socio-economic effects that could result from the Project. As well, it will address the enhancement of positive benefits that could result. Mitigation and enhancement could involve:

- Selecting alternatives for particular Project components that reduce the potential for negative impacts and/or enhance the potential for benefits;
- Developing Project practices and procedures that reduce the potential for negative impacts and/or enhance the potential for benefits;
- Identifying social impacts and benefits that can be directly mitigated and/or enhanced, developing specific measures that address those impacts and benefits; and
- Identifying other social impacts that are difficult to completely mitigate, such as changes resulting from migration, developing broad measures that contribute to the quality of life of the affected populations.

The Social Management Plan will also set out the monitoring required to ensure that identified objectives are achieved. The monitoring will facilitate the adaptive management of socio-economic effects, many of which are inherently unpredictable. Indicators of the achievement of objectives will be identified and these

will become the parameters to be monitored. In practice, the monitoring will be based both on ongoing data collection and consultations, and will also use secondary data sources where t available.

8.3 Monitoring Plan

An Environmental and Social Monitoring Plan will be developed as part of the EA to address specific monitoring requirements. Follow-up monitoring is an important element of an EA to confirm that significant adverse effects do not occur and effects are as predicted. A preliminary follow-up program will be included in the EA Report. Following approval of the EA, the follow-up program will be finalized, mitigation measures will be implemented and the follow-up program initiated.

Monitoring will be focused on those components where there is potential for effects from Project activities. The Monitoring Plans will include compliance and effects monitoring, and will be used to verify the accuracy of the environmental assessment of the Project, and determine the effectiveness of measures taken to mitigate the adverse environmental effects of the Project and where required, for the development of adaptive management strategies to address unforeseen effects.

The Monitoring Plan will include:

1. A description of the potential negative environmental effect for each criterion.
2. Mitigation and protection measures planned for each criterion and performance measures.
3. How the Project will be monitored to ensure that mitigation strategies are meeting performance objectives.
4. A contingency plan to be implemented should monitoring reveal that mitigation measures have failed.
5. A description of frequency and duration of monitoring for each negative impact, for each phase of the project.
6. A non-compliance strategy that will identify a plan of action for out of compliance situations.

The Environmental Effects Monitoring Plan in the EA will be prepared and approved by all applicable agencies.

8.3.1 Construction and Operations Monitoring

Monitoring for physical and chemical stability of the site, including the open pits, will be required throughout construction to ensure the Project is in compliance with regulatory requirements and commitments. Monitoring results will be consolidated to produce a report on an annual basis that will be made available for government and stakeholder review.

The operations phase includes progressive reclamation, compliance and effects monitoring. Monitoring for physical and chemical stability of the site, including the open pits, will be required throughout operations to ensure the Project is in compliance with regulatory requirements and commitments. Runoff and seepage will be monitored, managed and treated if necessary. Explosives will be kept in accordance to all regulations and that all runoff from the pit walls and waste rock will be monitored for increased concentrations of nitrate and ammonia from blasting residues. Monitoring results will be consolidated to produce a report on an annual basis that will be made available for government and stakeholder review.

8.3.2 Closure and Post-Closure Monitoring

Closure and effects monitoring will be conducted according to the Mining Act. Monitoring for physical and chemical stability of the site, including the open pits, will be required after closure and will continue on a regular basis until water quality monitoring indicates that runoff from disturbed areas of the site can be released directly to the receiving environment. Monitoring results will be consolidated to produce a report with an interpretation of conditions and changes.

9.0 CONSULTATION

Consultation during the preparation of the ToR is the first formal step in the provincial EA process. OHRG also continually updated the public, government and Aboriginal communities as the Project Description was developed, and continues to keep Project stakeholders involved in the planning process as the EA moves forward. As part of ongoing consultation, OHRG will provide a draft EA Report to key government departments and Aboriginal communities prior to formal submission and widespread publication.

The following section is a summary of significant ToR related consultation activities completed to date (9.1) and the plan for ongoing consultation throughout the EA (9.2). A complete record of ToR related consultation activities with Project stakeholders and Aboriginal communities is provided in the stand-alone Hammond Reef Gold Project Record of Consultation report (January 2012).

9.1 Summary of Completed Public Consultation Activities

Initial consultations focussed on sharing information about OHRG's Project plans through Project Overview presentations to municipal government. OHRG also had several discussions with government agencies regarding EA coordination, Project schedule, initial baseline study findings, and plans for ongoing field programs.

Finally, OHRG hosted a community Open House to share the details of the federal Project Description report which was accepted by the CEA Agency as being complete. The Project Description report was made available for review on the Project website, at the Town office, the municipal library and mailed directly to regulators.

A series of workshops were held with targeted groups of Project stakeholders to provide further opportunities for brainstorming, problem solving, questions and answers.

Consultation activities have aided in initial issue scoping for the EA and have informed the finalization of the ToR. The stand alone Record of Consultation report contains primary records and information regarding the specific methods, comments and feedback OHRG has received about the Project to date.

Consultation activities with the public have included notices, written information sharing, videos, face-to-face meetings, community events and website updates. A bi-weekly "Community News" column has been published online and in local newspapers (Atikokan Progress, Thunder Bay Chronicle Journal, Ignace Driftwood and Fort Frances Times) on an ongoing basis since November 2010.

A complete record of consultation is provided in the stand alone Record of Consultation Report, including copies of Community News Briefs and other information materials provided to the public.

9.1.1 Identification of Stakeholders

An initial stakeholder list was developed based on experience, background research and local knowledge. The following table provides the initial contact list by stakeholder group and category. A detailed stakeholder list, including names and addresses are provided in Appendix B, Public Consultation Plan.

Table 5: Initial Stakeholder List

Stakeholder Category	Stakeholder Group	Method of Contact	Rationale
Public	Residents of Atikokan Residents of Fort Frances Residents of Ignace Residents of Thunder Bay	P0T 1C0 postal code Atikokan Progress Fort Frances Times Ingnace Driftwood Thunder Bay Chronicle Public libraries	Consultation to date has shown the most effective form of communication to be community newspapers.
Municipal Government	Town of Atikokan Town of Fort Frances City of Thunder Bay	Mayor and Council, Town Clerk Town Clerk Town Clerk	The Atikokan Mayor and Council have shown great interest in the Project. The municipal governments of Fort Frances and Thunder Bay have indicated less interest, but will continue to be sent updates.
Provincial	Ministry of Northern Development Mines Ministry of Environment Environmental Assessment and Approvals Branch Ministry of Natural Resources Ministry of Labour Ministry of Transportation Ontario Parks Ministry of Tourism, Culture and Sport	Email and direct mail Direct contact with technical leads where warranted.	Organizations were emailed and phoned to determine if they would like to receive notices and if they prefer hard copies or electronic copies of reports.

Stakeholder Category	Stakeholder Group	Method of Contact	Rationale
Federal Government	Canadian Environmental Assessment Agency Major Projects Management Office Fisheries and Oceans Canada Environment Canada Transport Canada Natural Resources Canada	Through the CEA Agency Direct contact with technical leads where warranted.	The CEA Agency has agreed to coordinate all communications with federal departments.
Non-Governmental Organizations	Atikokan Bass Classic Atikokan Sportsmen's Conservation Club Canadian Boreal Initiative Friends of Quetico Park Mining Watch North Watch Ontario Federation of Hunters and Anglers Rainy Lake Conservancy Sierra Club of Canada World Wildlife Fund	Email and direct mail Meetings and phone calls	Organizations were emailed and phoned to determine the level of involvement they wanted to have in the EA process.

9.1.2 Open House 1

Open House 1 took place on June 18, 2011 from 8 am to 5 pm at OHRG's Main Street office in Atikokan. Two hundred and twenty-one (221) people signed in to the event and seventy-one (71) people filled in a comment form. The objective of the Open House was to share the details of the Project Description accepted by the CEA Agency on April 28, 2011 and solicit feedback to facilitate issue scoping. A formal Notice of Consultation Event was posted on Osisko's website, emailed to key stakeholders, placed as an advertisement in local newspapers and mailed to residences and businesses in Atikokan through an unaddressed postal code mail drop. Less formal posters and radio advertisements also summarized the notice.

Open House 1 included the following 6 information stations:

1) Exploration and Geology
2) Project Components
3) Tailings and Closure
4) Water Management
5) Aquatic and Terrestrial Biology
6) Human Resources

Each information station was staffed with a Project team member and included several posters with information about the topic as well as fact sheets for attendees to take away. A copy of the Project Description was also available at the Open House. A video with three dimensional modelling depicting how the landscape may look once the Project is developed was played continually during the Open House. Copies of the notices and information materials are provided in the Record of Consultation report.

9.1.3 Atikokan Trade Show

OHRG was an exhibitor at the local trade show "Atikokan Showcase". The event took place on September 10, 2011 in the Atikokan downtown core and ran from 10 am to 4 pm. Eighty-five (85) people signed in to the event and twelve (12) people filled in a comment form. The OHRG exhibit was located in the Atikokan Economic Development Office (AEDO) on Main Street.

The overall objective of the AEDO in hosting the Atikokan Showcase was to promote local business and economic activity. The purpose of OHRG's participation was to support the work of the Atikokan Economic Development Corporation, have an ongoing community presence, and to solicit further community participation in the Environmental Assessment, specifically the ToR. The OHRG exhibit included information panels on the following topics:

1) Project Overview
2) Project Location Map
3) Tailings Management
4) Water Management
5) Aquatic and Terrestrial Biology
6) Human Resources
7) Valued Ecosystem Components

8) Federal Environmental Assessment Process

9) Provincial Environmental Assessment Process

Copies of the information materials are provided in the Record of Consultation report.

9.1.4 Focussed Workshops

Workshops were organized with small groups of Project stakeholders throughout October and November, 2011. The purpose of the workshops was to share the details of the Draft Terms of Reference, solicit ideas for potential alternative methods of carrying out the Project and receive feedback about the key concerns related to potential environmental and socio-economic effects.

Feedback received from the workshops enable OHRG to gain a better understanding of how the Project could affect local resource users, service providers and the local economy. The workshop included a presentation provided by OHRG, with numerous breaks throughout to allow time for group discussions, small group brainstorming and individual reflection. Detailed notes and attendance lists for each workshop are provided in the Record of Consultation Report.

Each workshop attendee was provided a binder with information materials including:

- Work book and presentation summary
- Fact Sheets prepared for Open House 1 and Open House 2
- Project Overview Booklet with Feedback Form
- CD with Project Description Report, Draft Terms of Reference Report, Draft EIS Guidelines and 3-D Video

Feedback was provided by attendees through group brainstorming, small group breakout sessions, individual reflection, and question and answer periods. The following questions were used by OHRG to structure discussions:

- What are your expectations for today?
- Do you have any remaining questions about the Project?
- Do you have any ideas that should be considered as part of the Project design?
- How do you think you might be affected by the Project?
- What important things do you think should be considered as part of the Project?

9.1.5 Open House 2

Open House 2 took place on October 19, 2011 from 3 pm to 8 pm at OHRG's Main Street office in Atikokan. Approximately fifty (50) people signed in to the event. The objective of the Open House was to share the details of the Draft Terms of Reference published on September 21, 2011. This Open House is the second of four public Open Houses planned to take place in the Town of Atikokan over the course of the EA.

A formal Notice of Consultation Event was posted on Osisko's website, emailed to key stakeholders, placed as an advertisement in local newspapers and mailed to residences and businesses in Atikokan through an unaddressed postal code mail drop. Less formal posters also summarized the notice.

Open House 2 included the following 5 information stations:

1) Welcome and Sign-in
2) Project Overview
3) Potential Effects
4) Environmental Impact Analysis
5) Environmental Assessment Process

Each information station was staffed with a Project team member and included several posters with information about the topic as well as fact sheets for attendees to take away. A copy of the Project Description, Draft Terms of Reference and Draft EIS Guidelines were also available at the Open House. A video with three dimensional modelling depicting how the landscape may look once the Project is developed was played continually during the Open House. Copies of the notices and information materials are provided in the Record of Consultation report.

9.1.6 Open House 3

Open House 3 took place on March 9, 2012 from 3 pm to 6 pm at OHRG's Main Street office in Atikokan. Approximately fifty (50) people signed in to the event. The objective of the Open House was to provide responses to key questions heard to date, and to share the details of the Terms of Reference submitted for review on January 23, 2012.

A formal Notice of Consultation Event was posted on Osisko's website, emailed to key stakeholders and placed as an advertisement in local newspapers.

Open House 3 included the following 5 information stations:

1) Welcome and Sign-in
2) What We've Heard
3) Potential Effects
4) Project Alternatives
5) Valued Ecosystem Components

Each information station was staffed with a Project team member and included several posters with information about the topic as well as fact sheets for attendees to take away A Project overview video was played continually during the Open House. Copies of the notices and information materials are provided in the Record of Consultation report.

9.1.7 Open House 4

Open House 4 took place on March 10, 2012 from 1 pm to 6 pm at the Fort Frances High School. Approximately twenty (20) people signed in to the event. The objective of the Open House was to share the details of the Project and the Terms of Reference submitted for review on January 23, 2012. This Open House was also held to gauge public interest in the Project in the Town of Fort Frances.

A formal Notice of Consultation Event was posted on Osisko's website, emailed to key stakeholders and placed as an advertisement in local newspapers.

Open House 4 included the following 5 information stations:

1) Welcome and Sign-in
2) Project Overview
3) Potential Effects
4) Project Alternatives
5) Valued Ecosystem Components

Each information station was staffed with a Project team member and included several posters with information about the topic as well as fact sheets for attendees to take away. A Project overview video was played continually during the Open House. Copies of the notices and information materials are provided in the Record of Consultation report.

9.1.8 Municipal Government

Several Project Description information sharing meetings, including question and answer periods, have taken place with the Atikokan Mayor and Council. In February 2011, the Town of Atikokan passed a Resolution enthusiastically supporting the Project and encouraging regulators to move forward as quickly as possible. Copies of the Project Description Report and the Draft Terms of Reference were provided to the Mayor and the Town Clerk for public access at the Town office.

9.1.8.1 Terms of Reference Workshop

On March 9, 2012 OHRG hosted a workshop for elected officials and staff from the Town of Atikokan regarding the Terms of Reference. The objective of the workshop was to clarify existing questions about the Project and receive feedback about potential socio-economic effects. A total of eleven individuals attended the workshop, including the Mayor, four councillors, administrative and public works staff.

Feedback was provided by attendees through group brainstorming and small group breakout sessions. Verbatim comments are provided as part of the meeting notes in Appendix E. The key topics of discussion raised during the workshop were:

- Suggestions for improved consultation
    - ex. Provide specific examples, include formal presentations during Open House events
- Potential socio-economic effects
    - ex. Strain on municipal services, increased population, impacts to tourism and recreation
- Current community needs
    - ex. Sewage treatment challenges, EA expertise, wellness centre
- Hopes for the future
    - ex. Tourism opportunities, new recreational facility

A complete record of consultation, including detailed notes from the completed ToR workshop, is provided in the stand alone Record of Consultation Report.

9.1.9 Provincial and Federal Governments

A series of meetings and presentations have taken place with Provincial and Federal government agencies, and Project reports and memos have been distributed for review and comment. Discussions with government agencies have focussed on the EA process and schedule, tailings management, and baseline studies. Government agencies were also provided copies of the Project Description report.

A bi-weekly meeting was scheduled with provincial and federal regulators, beginning in 2012 and will continue throughout the EA planning process. A complete record of consultation is provided in the stand alone Record of Consultation Report.

9.2 Summary of Completed Aboriginal Engagement Activities

Aboriginal Engagement at Hammond Reef has a long history, dating back to 2007 and the previous owner of the Project (Brett Resources). When OHRG acquired the Project in May 2010, they were able to build on existing relationships, actively sharing information and seeking feedback from Aboriginal communities. Completed activities related to issues scoping, potential alternatives assessment and the ToR include a series of presentations providing an overview of the Project, discussions with trap line holders in the Project area, sponsorship of third-party mining education seminars and ToR workshops. A complete schedule of completed Aboriginal engagement activities is provided in the Record of Consultation Report.

The Project Description report was made available for review on the Project website, and First Nations band offices, as well as mailed directly to the Métis Nation of Ontario for distribution to Métis community councils and to regulators.

A series of workshops were held to provide further opportunities for brainstorming, problem solving, questions and answers.

Consultation activities have aided in initial issue scoping for the EA and have informed the finalization of the ToR. The stand alone Record of Consultation report contains primary records and information regarding the specific methods, comments and feedback OHRG has received about the Project to date.

9.2.1 Identification of Aboriginal Communities

Aboriginal communities with a potential interest in the Project were identified using the following four methods:

- Initial Identification by Brett Resources
- Preliminary Screening by OHRG
- Verification with Aboriginal governance groups
- Provision and verification of a list by federal and provincial Government Agencies

In Haida v. British Columbia (2004), the Supreme Court of Canada determined that the Crown's duty to consult is proportionate to the strength of an Aboriginal peoples' claim and the degree of potential adverse effects of the proposed activity on that claim. OHRG's approach is to be inclusive with information sharing and listen to concerns from all communities. Ongoing work and engagement will allow OHRG to further determine how the Project may impact specific Aboriginal rights. As the EA progresses, it is anticipated that Aboriginal engagement will be focussed on those communities whose rights will be affected by the Project.

A preliminary list of Aboriginal contacts is provided in the table below.

TERMS OF REFERENCE

Table 6: Preliminary List of Aboriginal Contacts

Aboriginal Groups					
Melanie Paradis	Director of Lands, Resources & Consultations	Métis Nation of Ontario	75 Sherbourne Street Suite 311	Toronto	M5A 2P9
Clint Calder	President	Sunset Country Métis Council	PO Box 403 426 Victoria Avenue	Fort Frances	P9A 2C3
Marlene Davidson	President	Atikokan Métis Council	Box 1630, 33 Birch Road	Atikokan	P0T 1C0
Alvina Cimon	President	Northwest Métis Nation of Ontario Council	34A King Street	Dryden	P8N 1B4
Joel Henley	President	Kenora Métis Council	70 Park Street	Kenora	P9N 1Y6
Tammy Ryll	Executive Director	Fort Frances Chiefs Secretariat	Sute 206-39 RR #2	Fort Frances	P9A 3M3
Judy White Cloud	Chief	Lac des Mille Lacs First Nation	3-116 S. Syndicate Ave.	Thunder Bay	P7E 1C6
Norman Jordan	Chief	Lac La Croix First Nation	Box 640	Fort Frances	P9A 3M9
Janice Henderson	Chief	Mitaanjigaamiing First Nation	Box 609	Fort Frances	P9A 3M9
Wayne Smith	Chief	Naicatchewenin First Nation	Box 15 RR #1	Devlin	P0W 1C0
Will Windego	Chief	Nigigoonsiminikaaning First Nation	Box 68	Fort Frances	P9A 3M5
Chuck McPherson	Chief	Couchiching First Nation	RMB 2027 RR #2	Fort Frances	P9A 3M3
Jim Leonard	Chief	Rainy River First Nation	Box 450	Emo	P0W 1E0
Earl Klyne	Chief	Seine River First Nation	Box 124	Mine Centre	P0W 1H0
Ruben Cantin	Chief	Wabigoon Lake Ojibway Nation	Site 115 Box 300 RR #1	Dryden	P8N 2Y4

9.2.2 First Nations Engagement

The approach to consultation with First Nations is to acknowledge that OHRG is a guest in their traditional territories. Consultation is the Duty of the Crown; however OHRG is taking a large role in the procedural aspects of this duty. Federal and provincial government representatives will be invited to attend meetings with First Nations as witnesses that the duty is being fulfilled. OHRG's approach is to share information, findings and reports with First Nations first, before they are released to the general public.

9.2.2.1 Resource Sharing Agreement

A Resource Sharing Agreement (RRSA) was signed with eight of the nine First Nations in December 2010. The agreement has now been ratified through Band Council Resolutions and implementation is expected to begin by the first quarter of 2012. Implementation of the agreement will include the formation of committees to facilitate the consultation process and the exchange of information such as traditional ecological knowledge applicable to the EA for the Project.

9.2.2.2 Project Overview Presentations

A power point presentation was developed which provided an overview of the Project. The presentation included maps of the Project plans and preliminary layout and plain language information summarizing Project components and baseline studies completed to date. First Nations communities were also mailed a copy of the Project Description Report and Draft Terms of Reference. Copies of information materials provided to the public were also provided to First Nations representatives.

9.2.2.3 Mining Education Seminars

Initial Project presentations were felt to be too technical, therefore OHRG arranged for a third party to facility mining education seminars with the goal of increasing basic knowledge about mining in First Nations communities. The seminar was offered to each of the communities, and a facilitator was available to travel to site. Six education seminars have been completed to date.

9.2.2.4 Terms of Reference Workshops

Invitations were extended to each of the identified First Nations communities to take part in ToR workshops. The workshop has been delivered to Lac des Mille Lacs First Nation, the Fort Frances Chiefs Secretariat, Wabigoon Lake Ojibway Nation and through community meetings at each of the seven member nations of the Fort Frances Chiefs Secretariat.

The purpose of the workshops was to share the details of the Draft Terms of Reference, solicit ideas for potential alternative methods of carrying out the Project and receive feedback about the key concerns related to potential environmental and socio-economic effects.

Feedback received from the workshops enable OHRG to gain a better understanding of how the Project could affect Aboriginal and treaty rights. The workshop included a presentation provided by OHRG, with numerous breaks throughout to allow time for group discussions, small group brainstorming and individual

reflection. Detailed notes and attendance lists for each workshop are provided in the Record of Consultation Report.

Each workshop attendee was provided a binder with information materials including:

- Work book and presentation summary
- Fact Sheets prepared for Open House 1 and Open House 2
- Project Overview Booklet with Feedback Form
- CD with Project Description Report, Draft Terms of Reference Report, Draft EIS Guidelines and 3-D Video

The following questions were used by OHRG to structure discussions:

- What are your expectations for today?
- Do you have any remaining questions about the Project?
- Do you have any ideas that should be considered as part of the Project design?
- How do you think you might be affected by the Project?
- What important things do you think should be considered as part of the Project?

9.2.3 Métis Engagement

The Project has been assigned a consultation committee including representatives from the MNO Lands, Resources and Consultation department and four community councils: Northwest, Sunset Country, Kenora, and Atikokan.

OHRG acknowledges Métis as Aboriginal people with rights under Section 35 of the Canadian Constitution. To date, four formal meetings have occurred between OHRG and Métis representatives. We plan and expect that at least six additional formal meetings between OHRG and Métis representatives will take place in 2012.

The approach to consultation with the Métis that OHRG has adopted is that which is outlined by the Métis Nation of Ontario (MNO) in the consultation protocol published on their website. The Métis are organized into community councils administered by the provincial umbrella organization, the MNO.

9.2.3.1 Memorandum of Understanding

The MNO initially contacted OHRG in June 2010 to express their interest in developing an MOU with OHRG because of their asserted Aboriginal rights to lands, water and natural resources with the area of the Project.

In March 2012 Osisko signed a Memorandum of Understanding (MoU) with the Métis Nation of Ontario, including four identified Métis community councils (Kenora, Sunset Country, Northwest, and Atikokan). The MOU provides capacity for community meetings, engagement activities, review of the EA Report and a traditional knowledge study. Aboriginal engagement activities with the Metis Nation of Ontario and identified communities will follow the Consultation Protocol for Treaty #3 (the Protocol). As per the Protocol a five person Consultation Committee will be established who will develop a work plan that guides the process and coordinates communications with MNO citizens, the Crown and OHRG.

9.2.3.2 Project Overview Presentation

A power point presentation was developed which provided an overview of the Project. The presentation included maps of the Project plans and preliminary layout and plain language information summarizing Project components and baseline studies completed to date. The MNO and Métis community council representatives were also mailed a copy of the Project Description Report and Draft Terms of Reference. Copies of Fact Sheets provided to the public were also shared with the Métis.

9.2.3.3 Terms of Reference Workshops

The Métis consultation committee took part in a ToR workshop. The purpose of the workshop was to share the details of the Draft Terms of Reference, solicit ideas for potential alternative methods of carrying out the Project and receive feedback about the key concerns related to potential environmental and socio-economic effects.

Feedback received from the workshops enable OHRG to gain a better understanding of how the Project could affect Aboriginal and treaty rights. The workshop included a presentation provided by OHRG, with numerous breaks throughout to allow time for group discussions, small group brainstorming and individual reflection. Detailed notes and attendance lists for each workshop are provided in the Record of Consultation Report.

Each workshop attendee was provided a binder with information materials including:

- Work book and presentation summary
- Fact Sheets prepared for Open House 1 and Open House 2
- Project Overview Booklet with Feedback Form
- CD with Project Description Report, Draft Terms of Reference Report, Draft EIS Guidelines and 3-D Video

Feedback was provided by attendees through group brainstorming, small group breakout sessions, individual reflection, and question and answer periods. The following questions were used by OHRG to structure discussions:

- What are your expectations for today?
- Do you have any remaining questions about the Project?
- Do you have any ideas that should be considered as part of the Project design?
- How do you think you might be affected by the Project?
- What important things do you think should be considered as part of the Project?

9.2.4 Addressing Issues and Considering Comments

Remaining concerns identified by Aboriginal communities will be addressed as detailed in Section 11 of the stand alone Record of Consultation Report. The overall approach for addressing concerns is to continue actively sharing information about the Project through written information, face to face meetings and regular Project updates.

Open communication with Aboriginal communities is a high priority for OHRG. It is anticipated that a First Nations environmental committee will be set up in 2012 to facilitate communication on this topic. In March 2012 OHRG signed a Memorandum of Understanding with the Métis Nation of Ontario to ensure ongoing communications and consultation with Métis communities.

9.3 Public Consultation Plan for the Environmental Assessment

Consultation is a central objective of the provincial EA process. OHRG has reviewed the MOE's Codes of Practice on *Preparing and Reviewing the Terms of Reference for Environmental Assessments in Ontario* (2009) and *Consultation in Ontario's Environmental Assessment Process* (2007) while developing the OHRG Consultation Plan. A detailed Consultation Plan is provided in Appendix B.

The following elements of a successful Consultation Plan, as suggested by the MOE, have been included in the Consultation Plan:

- Clear Objectives
- Stakeholder Identification
- Consultation Methods
- Issue Identification
- Integration of Input
- Proponent Evaluation of Consultation

9.3.1 Objectives

The key objectives of OHRG's Consultation Plan, as per the MOE Codes of Practice are to:

- Identify stakeholders with an interest in the Project;
- Share information with stakeholders;
- Keep government agencies informed and ensure Project approach meets requirements;
- Identify issues of concern and topics of interest to stakeholders;
- Respond to comments and questions from stakeholders;
- Focus on and address real stakeholder concerns;
- Incorporate information received from stakeholders into the Project; and
- Facilitate government decision-making.

9.3.2 Stakeholder Identification

An initial stakeholder list was developed based on experience, background research, advice from regulators and local knowledge. A preliminary stakeholder list is provided in Appendix B, it is anticipated that the stakeholder list will be refined and expanded as consultation on the Project moves forward.

9.3.3 Consultation Methods

Planned consultation activities correspond with milestones in the EA process and include:

- Formal Notification
- Open House Events

- Workshops
- Plain Language Information Packages
- Community News Publications
- Maintenance of a Project Website
- Draft and Final Report Publications
- Publication of contact information for ongoing feedback

9.3.4 Issue Identification

Comments and concerns identified by Project stakeholders are documented using a web-based stakeholder data management software program. A preliminary issues list has been developed to help categorize communications with stakeholders and better understand which topics are most important to stakeholders. The table below provides the issues category and subject list used in the stakeholder database.

Table 7: Preliminary Issues List

Issue Category	Issue Subject
Project Phases	Project Construction
	Project Operations
	Project Closure
	Project Post-Closure
Project Details	Tailings Management
	Siting / Location
	Waste Management
Project / EA Management	Project Schedule
	Regulatory / EA Process
	Project Description
	Proponent
	Project Support
	Public Participation
	Aboriginal Consultation
Water	Surface Water Quality
	Surface Water Quantity
	Groundwater Quality
	Groundwater Quantity
Atmospheric Environment	Air Quality
	Noise
Biology	Aquatic Habitat
	Aquatic Biota
	Terrestrial Habitat
	Terrestrial Biota
Geology	Site Geology
	Geochemistry
Socio-Economic	Employment

Issue Category	Issue Subject
	Hunting and Fishing
	Community Infrastructure
	Traffic and Transportation
	Population Demographics
	Education and Training
	Human Health and Safety
	Public Health
Aboriginal Interests	Traditional Land Use
	Traditional Knowledge

9.3.5 Integration of Input

Comments and concerns will be integrated into the EA report and will be used to inform the Project planning on an ongoing basis. The key consultation milestones listed above provide a helpful framework for incorporation of comments by soliciting comments on draft documents before the final document can be issued. Where comments cannot be incorporated, an explanation will be provided to the stakeholder and added in the stakeholder database for inclusion in the final Consultation Report.OHRG will work towards the goal of responding to stakeholder comments and concerns within three weeks of receiving them. Comments will be addressed on an individual basis; however they will also be grouped into categories for efficiency and to allow the OHRG team to identify trends. Addressing and responding to comments will depend on the nature of the comments and the manner in which they were received.

A comment-response table will be included in the final Consultation Report and will be shared at workshops and community events throughout the Project planning process. The final comment-response table will reference specific sections in the EA report where the stakeholder comment was addressed, or where the answer to their questions can be found. The comment-response table will group comments by issue category for efficiency; however comments and questions will be responded to and considered on an individual basis. Where comments cannot be incorporated, an explanation will be provided to the stakeholder and added in the stakeholder database for including in the final Consultation Report.

9.3.6 Continual Improvement - Proponent Evaluation of Consultation

The Public Consultation Plan (Appendix B) is a living document that will be revised as the Project planning process progresses. The Project is currently in its beginning stages and it is expected that plans will be modified, issues lists will be refined and stakeholder lists will be further developed. OHRG is committed to continual improvement and will take stakeholder comments into consideration throughout the EA process and beyond. OHRG believes that stakeholder input will improve the EA process and the Project on the whole and is committed to meeting all consultation regulatory requirements for both the provincial and federal EA processes.

9.4 Aboriginal Engagement Plan for the Environmental Assessment

OHRG is committed to supporting capacity building to ensure that local First Nations and Métis communities can meaningfully participate in the Project. The result of engagement with Aboriginal communities thus far includes the signing of a Resource Sharing Agreement (RRSA) with the Fort Frances Chiefs Secretariat First Nations (seven member communities) and the Lac Des Mille Lacs First Nation in December 2010. In March 2012, OHRG signed a Memorandum of Understanding (MoU) with the Métis Nation of Ontario, including four identified Métis community councils (Kenora, Sunset Country, Northwest, and Atikokan). The MoU provides capacity for community meetings, engagement activities, a review of the EA Report and a traditional use study in the Project area. In addition, OHRG has employed First Nations and Métis community members to work on the exploration stage of the Project and First Nations field monitors participated in the environmental baseline field programs in a youth summer student capacity.

9.4.1 Objectives

The following is a summary of the objectives for Aboriginal Engagement throughout the Project:

- Seek traditional land use information from potentially affected Aboriginal communities;
- Incorporate information about traditional use, Aboriginal and treaty rights into the EA Report;
- Provide identified Aboriginal communities a sufficient opportunity to understand the Project and express any concerns;
- Where a duty to consult is owed to Aboriginal communities, identify any potential adverse effects to their Aboriginal or treaty rights arising from the Project and consider appropriate measures to mitigate such effects.

The EA Report will meet these objectives by clearly:

- Documenting how the Project has been modified as a result of input from potentially affected Aboriginal communities;
- If necessary, explaining why the Project cannot be modified to reduce or avoid any identified impacts; and
- Explaining how the communities have been appropriately accommodated, where required, for any impacts on Aboriginal or treaty rights that cannot be avoided.

9.4.2 Duty to Consult

OHRG understands that Aboriginal people may have constitutionally protected rights, and can offer a unique understanding of the environment based on their special relationship with the land. The duty to consult with Aboriginal people, where engaged, lies with the Crown and, although procedural aspects of the consultation process can be delegated to project proponents, OHRG understands that ultimate responsibility for meeting any duty to consult rests with the Crown.

The Crown's duty to consult arises where: i) the Crown has actual or constructive knowledge of an asserted or established Aboriginal or treaty right; ii) the Crown contemplates conduct; and, iii) there is potential that the contemplated conduct may adversely affect the asserted or established Aboriginal or treaty right. The degree of required consultation by the Crown will vary depending on the nature of the asserted or established

Aboriginal or treaty right and the seriousness of any potential adverse effects on the right, flowing from the proposed activity.

9.4.2.1 Crown Assessment and Oversight

In order to ensure its consultation obligations are being met, where required, the Crown will provide ongoing assessment and oversight of the Aboriginal engagement activities carried out by OHRG, through:

- Confirmation of identified communities
- Update meetings
- Review and validation of meeting notes

9.4.3 Engagement Methods

Aboriginal engagement methods planned to meet the stated objectives include:

- Métis Nation of Ontario Consultation Protocol
- Bi-Weekly Newspaper Publications
- Presentations to Chiefs and Community Council Presidents
- Community Meetings
- First Nations and Métis Field Monitors
- Avoidance and Mitigation Discussions
- Elder Forums
- Site Tours and Field Visits
- Verification of Meeting Notes

Further detail about each method is provided in Appendix C, Aboriginal Engagement Plan. The nature of this Aboriginal Engagement Plan is dynamic, and it is anticipated that methods may change or need to adapt in accordance with requirements of the Aboriginal communities.

9.4.4 Report Publication

Draft reports and preliminary results, including the EA Report will be provided to potentially affected Aboriginal communities for review prior to public distribution or formal submission. Meetings and discussions will be scheduled to discuss publications as they are made available.

9.4.5 Traditional Use Studies

Information about traditional land use is required for the socio-economic and cultural resources studies and to compliment the hydrology, aquatic and terrestrial biology studies. The EA Report will include a description of the lands, waters and resources of specific value to Aboriginal people on which adverse environmental effects could occur, or at a minimum, include a plan to gather that information.

OHRG will lead the First Nations traditional use study, with guidance from the Chiefs and Elders from the potentially affected communities. Information gathering will focus on a review of existing published

information, formal information requests to the nine identified First Nations communities, and interviews with individual resource users or groups of Elders.

The Métis Nation of Ontario has indicated their desire to lead a traditional use study in the area of the Project. OHRG has signed an MoU which provides capacity to carry out this study. The traditional use study shall identify (a) customs and traditions that were historically important features of Métis communities in the Project area prior to the time of effective European control, and that persist in the present day and (b) potential effects of the Project on such customs and traditions. Ongoing discussions will take place to coordinate OHRG's role in the study and allow for information sharing.

9.4.6 Incorporation into Environmental Assessment

The EA Report will include a Record of Consultation that summarizes Aboriginal engagement activities and public consultation in separate sections. Information received throughout Aboriginal engagement activities will be incorporated into the EA Report through contribution of information about the existing environment, resource distribution and abundance, long and short term trends, and the use of lands and water resources. Traditional use information may also contribute to Project siting and design, evaluation of potential effects and their significance, effectiveness of proposed mitigation, and consideration of follow-up monitoring.

The primary goal will be to provide information to the EA technical disciplines (i.e. terrestrial biologists) as part of their component-specific literature review. A concordance table will be developed which will detail how the information has been incorporated and considered for each component of the EA.

10.0 FLEXIBILITY AND CONTINGENCY PLANS

10.1 Flexibility to Accommodate New Circumstances

It is recognized that circumstances may arise that could prevent the commitments made in this Terms of Reference from being met. The Project is in the early planning stage and certain components may change or be adjusted to accommodate new circumstances. It is understood that certain aspects of the ToR may be adjusted without the need to re-start the provincial EA process.

The EA Report will be prepared to meet the requirements of the ToR, in accordance with the *Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario* (MOE 2009). Subsection 6.1(1) of the EAA states that an EA must be prepared in accordance with the approved ToR for the Project. As the ToR cannot be amended after it has been approved by the Minister, it is necessary for a proponent to include a certain level of flexibility in the ToR to accommodate new unforeseen circumstances that may arise during the EA. Minor adjustments to the approaches or methodologies described in this ToR may be necessary or appropriate during the conduct of the EA. Minor adjustments could include:

- Provision and/or identification of additional information requirements;

- Additional studies or consultation methods/events to address issues that may arise as the study progresses; and
- Adjustments to the sequence or timing of study events which may be required depending on study results or circumstances.

Minor adjustments will be undertaken by the Project team in consultation with the Environmental Assessment Services Project Officer with the Ministry and if required, the CEA Agency.

10.2 Contingency Plans

As part of the EA, OHRG shall develop short-term contingency plans as appropriate. Such plans shall outline a course of action to be followed if unforeseen situations arise that would prevent the proponent from implementing or operating a component of the Project on a temporary basis.

11.0 ADDITIONAL ENVIRONMENTAL APPROVALS

Table 8 represents a preliminary list of anticipated permits and approvals required to implement the Project and additional details regarding each anticipated permit/approval, including: the agency with jurisdiction, the applicable Act or Regulation, the Project activity that will likely trigger the requirement for a permit/approval, and information required for the permit/approval application. The list of permits/approvals presented is not to be considered all-inclusive. OHRG will consult with federal, provincial, and municipal agencies to refine this list as the Project design evolves and as additional studies for the EA are completed.

Table 8: Summary of Permitting Requirements

Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Electrical Safety Authority	Site Approval pursuant to Electricity Safety Code	The Electrical Safety Authority (ESA) enforces the Ontario Electrical Safety Code, and is responsible for ensuring that the requirements of the Code including all electrical installations are met.	To be determined	Approval
Independent Electricity System Operator	Connection Assessment and Approval under *Electricity Act*	Proponents planning to establish or modify a connection to the IESO-controlled grid must obtain IESO approval through the Connection Assessment and Approval (CAA) process.	Applicants consult with the applicable transmitter or distributor to seek advice regarding the preferred point of connection.	Approval
Local Municipality	Building Code Act Section 8, Bylaws of relevant Municipality	Building construction at Mine Site.	To be determined	Building Permit
Municipal Northwest Health Unit		Acquiring permit for septic tank at camp location	To be determined	Permit for Septic Tank

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Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Ontario Energy Board	Leave to Construct a Power Transmission Line under Section 92(1) of the *Ontario Energy Board Act*	Section 92 of the Act requires leave of the Board for the construction, expansion, or reinforcement of an electricity transmission line or an electricity distribution line, as well as for the making of a connection to the power system.	Site plan, engineering drawings, grounding details, and nameplate data for all electrical equipment and high voltage cable	Order pursuant to Energy Board Act.
Provincial Ministry of Labour	Occupational Health and Safety Act	Safety and procedures review of project prior to development	Safety procedures	Pre-development Review
Provincial Ministry of Natural Resources	Public Lands Act	Use of Crown land under authority of appropriate tenure	Location, Reason, Site Size, Length of time, Site Development proposed, Consultation is required (dispositions of Crown Land).	License of Occupation
Provincial Ministry of Natural Resources	Public Lands Act	Upgrading of existing roads or building of new roads or trails on Crown land Construction of Buildings on Public Land	MNR Class EA (Location, description of work, timing, etc.)	Work Permit
Provincial Ministry of Natural Resources	Public Lands Act	Construction of dams (including tailings dams), channelizations, diversions, in-stream ponds and by-pass ponds. Potential for harmful alteration, disturbance or destruction of fish habitat.	MNR Class EA (description of site, proposed activity, project rationale, equipment, timeframe, potential impacts, mitigating measures)	Work Permit

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Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Provincial Ministry of Natural Resources	Public Lands Act	Radio Communications Tower	To be determined	Work Permit
Provincial Ministry of Natural Resources	Ontario Aggregate Resources Act	Removal of aggregate from a pit or quarry	Quantities of aggregate, consultation with stakeholders and aboriginal communities, Location, Site Plan, Area to be affected, and Fee for each site where aggregate is removed from its original location and placed elsewhere.	Permit
Provincial Ministry of Natural Resources	Fish and Wildlife Conservation Act	Collection of fish for testing (e.g., for environmental baseline studies)	Location, description of work, timing, etc.	Authorization
Provincial Ministry of Natural Resources	Fish and Wildlife Conservation Act	Beaver dam removal	Compliance with DFO's operational statement "Beaver Dam Removal".	Authorization under FWCA
Provincial Ministry of Natural Resources	Lakes & Rivers Improvement Act	Water crossings (e.g., culvert installation, construction of a bridge, causeway or seasonal ice bridge). Potential for harmful alteration, disturbance or destruction of fish habitat.	Review of dam designs and “structural approval” of tailings and other dams by MNR engineers.	Approval

TERMS OF REFERENCE

Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Provincial Ministry of Natural Resources	Crown Forest Sustainability Act	For clearing timber on Crown Land in the name of the contractor	To be determined	Forest Resource License
Provincial Ministry of Natural Resources	Endangered Species Act	Construction or operational activities that kills, harms, harasses, threatened /species listed under the Act or damages / destroys their habitat	Background screening to short-list species, targeted surveys, avoidance/mitigation design and permitting	Authorization, as required.
Provincial Ministry of Northern Development and Mines	Mining Act	Submission of Closure Plan	Current project site conditions (land use, surface waters, ground waters, terrestrial and aquatic biology; Site history/potential mine hazards or contamination); Planned rehabilitation measures; Monitoring; Site conditions after close out; Financial assurance	Not applicable

TERMS OF REFERENCE

Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Provincial Ministry of Northern Development and Mines	Mining Act	Bulk sampling of a mineral-bearing substance for the purpose of testing mineral content (above 10 t)	Claim data; Permission of surface rights holder; Map; Type/amount of material to be excavated; Testing purpose; Approach and timing of activities; Disposal methods; Safety and rehabilitation measures; Financial assurance	Not applicable
Provincial Ministry of the Environment	Environmental Protection Act	Discharge of a contaminant, including noise, into the natural environment other than water	Location, description of work, description of industrial process, including inputs, operations, controls, testing, etc.	Environmental Compliance Approval
Provincial Ministry of the Environment	Environmental Protection Act	Construction of a waste disposal site or certain onsite treatment of wastes	Description of quantity and quality of waste to be generated, handling and disposal details	Environmental Compliance Approval
Provincial Ministry of the Environment	Environmental Protection Act	Storage and transportation of hazardous wastes	Type of waste, quantities, location, etc.	Generator Registration Report
Provincial Ministry of the Environment	Ontario Water Resources Act	Water intake (pumping, draining, dewatering) >50,000 L/day	Quantities, hydrology /hydrogeology assessment	Permit to Take Water

TERMS OF REFERENCE

Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Provincial Ministry of the Environment	Environmental Protection Act	Construction of a tailings and/or sludge management facility	Description of quantity and quality of waste to be generated, handling, treatment and disposal details, facility design effluent characterization, level of public consultation/ notification,	Environmental Compliance Approval
Provincial Ministry of the Environment	Ontario Water and Resources Act Section 53 "Industrial Waste Water"	Construction of a tailings and/or sludge management facility	Description of quantity and quality of waste to be generated, handling, treatment and disposal details, facility design effluent characterization, level of public consultation/ notification,	Environmental Compliance Approval
Provincial Ministry of the Environment	Ontario Water and Resources Act	Storm water management	Storm water management plan	Environmental Compliance Approval
Provincial Ministry of the Environment	Ontario Water and Resources Act	Septic exceeding 10,000 L/day	Waste water treatment plan	Environmental Compliance Approval
Provincial Ministry of the Environment	Clean Water Act	Draining Mitta Lake	Description of quantities	Permit to take water
Provincial Ministry of Transportation	Public Transportation and Highway Improvement Act Sections 21, 34 and 38	An encroachment may be required if any works are required to upgrade the entrance from Highway 622.	To be determined.	Encroachment Permit

TERMS OF REFERENCE

Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Provincial Ministry of Transportation	Public Transportation and Highway Improvement Act Sections 21, 34 and 38	Not anticipated to be required	To be determined.	Entrance Permit
Provincial Ministry of Transportation	Public Transportation and Highway Improvement Act	May be required if a commercial sign is to be placed within 400 m of Highway 622.	To be determined.	Sign Permit
Federal Environment Canada	Species at Risk Act	Construction or operational activities that kills, harms, harasses, threatened / endangered species or damages / destroys their habitat	Background screening to short-list species, targeted surveys, avoidance/mitigation design and permitting	Permit under Section 73
Federal Environment Canada	Migratory Birds Convention Act	Clearing of timber on Crown land - the disturbance, destruction or taking of a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird	Timing to avoid clearing during breeding bird season. Results of a nest survey prior to clearing timber.	Permit under Section 26.1(1)
Federal Environment Canada	Environmental Effects Monitoring	Ongoing compliance and effects monitoring	Environmental Management Plan	check
Federal Fisheries and Oceans Canada	Fisheries Act	Beaver dam removal	Compliance with DFO's operational statement "Beaver Dam Removal".	Notification
Federal Fisheries and Oceans Canada	Fisheries Act	Work on water crossings or work near water that is fish habitat where impacts can be avoided	Comprehensive Study environmental assessment (detailed description of work, location, timing, diagrams, purpose, etc.). DFO's Risk Management Framework	Letter of Advice

TERMS OF REFERENCE

Jurisdiction - Department	Applicable Act or Regulation	Activities	Information Required	Permit/Approval Required
Federal Fisheries and Oceans Canada	Fisheries Act	Work on water crossings or work near water that is fish habitat where impact is unavoidable, including the draining of Mitta Lake	Compensation Plan, DFO's Risk Management Framework	Authorization to allow for the destruction of fish habitat (HADD)
Federal Fisheries and Oceans Canada, Environment Canada	Fisheries Act, Metal Mining Effluent Regulations	Effluent discharge and deposition of tailings (Schedule 2)	Effluent characteristics and water treatment needs; compensation plan for tailings deposition	Authorization under the regulation.
Federal Natural Resources Canada	Explosives Act	Transportation and storage of explosives	To be determined	Magazine Licence and Transportation Permit
Federal Transport Canada	Navigable Waters Protection Act	Interference of public use of navigable waters	To be determined	Governor-in-Council approval

APPENDIX A

Preliminary Tailings Facility Assessment

Hammond Reef
Gold Project

APPENDIX A – PRELIMINARY TAILINGS ASSESSMENT
TERMS OF REFERENCE

January 2012

Appendix A - Preliminary Tailings Assessment

To support the selection of the tailings management facility (TMF) alternative to be considered in the Project Description, 5 on-site locations (i.e., located within the Osisko mining claims) as well as one off-site location were considered as possible locations for the TMF. The initial locations were based on an assessment that considered the presence of suitable terrain that would provide some natural containment to serve as the base upon which to construct the necessary containment berms, and the distance of the site from the processing plant.

In the assessment considered in this Appendix, the baseline work conducted to date, in conjunction with discussions with regulatory agencies to identify permitting constraints was used to further refine the list of suitable Alternatives. The additional assessment considered both constructability, operability, environmental impacts and social concerns. The final selection of alternatives that were carried forward into the Project Description was based on minimizing environmental concerns, particularly fisheries issues that could result in significant adverse impacts that would present serious permitting constraints, and social issues.

Osisko wishes to acknowledge the helpful assistance being provided by the Regulators in reviewing the environmental concerns associated with the 6 alternative at the meeting on March 9, 2011, and the provision of their valued input with regard to permit time and permitting requirements for each of the options presented below.

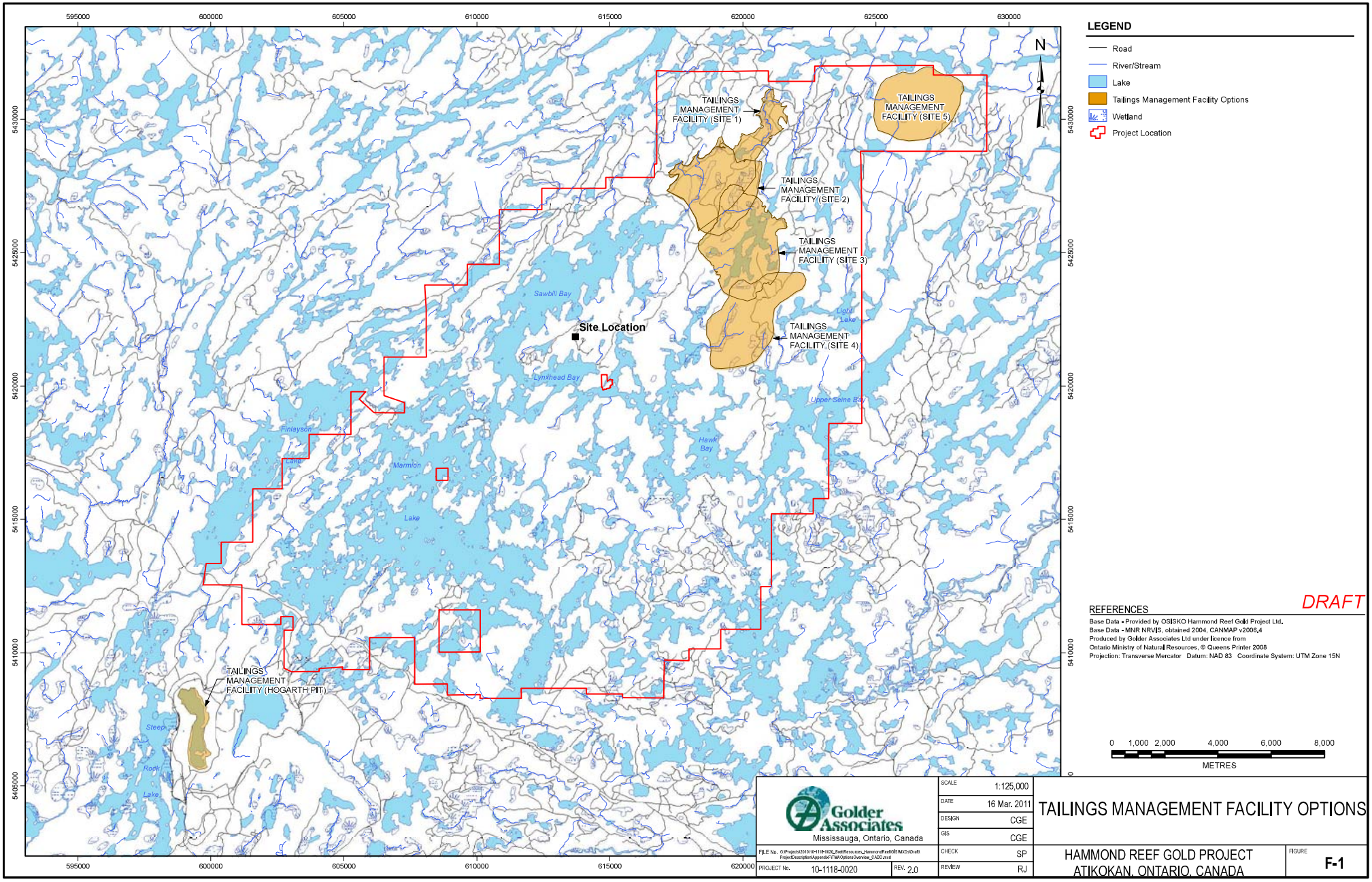
Five (5) on- site and one (1) off-site TMF options are reviewed in the summary table (Table F-1) in this Appendix. Figure F-1 of this technical memorandum provides a plan view which locates the five (5) on-site TMF being considered in this review as well as the one (1) off-site Hogarth Pit Tailings Option. Figures F-2 to F-6 provide additional detail on each of the onsite proposed TMFs. Figure F-7 identifies the off-site Hogarth Pit Tailings Option with potential pipeline routeing considerations. Descriptions regarding each TMF including potential hydrological and hydrogeological effects, the potential terrestrial and aquatic environment affects and social and/or economic effects are provided in Table F-1.

Based on a comparison of the identified permitting requirements along with other determining factors, Osisko has carried forward three TMF options into the revised Project Description for this proposed development. The selected TMF alternatives were TMF-2 as the Base Case and TMF-1 as Alternate #1 and TMF-4 as Alternate #2.

Table A-1: Preliminary Tailings Assessment

Tailings Alternative	Description	Potential Hydrological/ Hydrogeological Effects	Potential Terrestrial Environments Affected	Potential Aquatic Environments Affected	Potential Social and/or Economic Effects	Summary
On-Site Alternative TMF-1 (Figure F-2)	• Located northeast of the mine site against a natural ridge that forms the northern containment for the TMF extending to the east. TMF footprint of approximately 8.6 M m^2. • Requires berm raised around ~60% of perimeter. • Footprint would be cleared of vegetation. Some excavation of dam foundations with dams constructed in stages as mining progresses. Dam material to be sourced from local quarries and waste rock (pending geochemical assessment). • Tailings would be pumped to TMF via pipeline, possibly as thickened tailings, with water reclamation and toe seepage collection at low points. • Excess water would be treated as required and discharged from a central WTF near the processing plant site. • Site fresh water needs of up to approximately 20,000 m^3/day. The tailings pipeline length is approximately 9 km. Pipeline routing shown on Figure F-2. • TMF extends to the east and includes a small lake in the central portion and streams draining to the Lizard Lake watershed in the east. • Avoids small lake along eastern perimeter. • Tailings and pipeline are contained within the Osisko lease area.	• Loss of small streams (<0.5 m width) at west end that drain to the north end of Sawbill Bay. • Loss of wetlands in central area with no obvious drainage to nearby lakes. • Loss of small tributaries to Lizard Lake at east end of TMF. • Loss of small lake/large pond in central portion of the TMF. • Minimal watershed area affected. • Daily fresh water makeup needs of up to 20,000 m^3/day to be sourced from Marmion Lake. • Potential effects of seepage to groundwater to be confirmed.	• Vegetation and terrestrial habitat loss in TMF footprint and along pipeline route. • Area comprised of mixed boreal forest and open wetlands. • Common tree species are: Black Spruce, Jack Pine, Trembling Aspen, White Birch, White Cedar, White Pine, Tamarack, Balsam Fir, Speckled Alder, Mountain Maple, American Mountain Ash, Showy Mountain Ash, Green Alder and Willow.. • Wildlife species observed and/or known do not include rare, threatened or endangered species.	• Fish species observed in small lake and small streams draining from local ponds include: Finescale Dace, Pearl Dace, Fathead Minnow, Pumpkinseed, Yellow Perch, Northern Pike, White Sucker, Northern Red Belly Dace, Burbot, Cisco and Smallmouth Bass	• No human uses identified in the area.	• Second lowest construction costs of the on-site alternatives. • Potential permitting issues with loss of aquatic habitats. • Pipeline route follows existing road facilitating servicing and maintenance, and facilitating cleanup in the event of any spills. • Mineralization may extend across southern portion of the footprint, resulting in sterilization of potential economic ore.
On-Site Alternative TMF-2 (Figure F-3)	• Located northeast of the mine site against a natural ridge that forms the northern containment for the TMF. Tailings dams constructed only along east, south and west sides. Footprint area approximately 10.8 M m^2. • Requires berm raised around ~80% of perimeter. • Footprint would be cleared of vegetation. Some excavation of dam foundations with dams constructed in stages as mining progresses. Dam material to be sourced from local quarries and waste rock (pending geochemical assessment). • Tailings would be pumped to TMF via pipeline, possibly as thickened tailings, with water reclamation and toe seepage collection at low points at low points. • Excess water would be treated as required and discharged from a central WTF near the processing plant site. • Site fresh water needs of up to approximately 20,000 m^3/day with reclamation. • Tailings pipeline from mine follows mine access road. The Tailings pipeline length is approximately 9 km. Pipeline routing is shown on Figure F-3. • Avoids 2 small lakes along eastern perimeter. • Tailings and pipeline are contained within the Osisko lease area.	• Loss of small streams (<0.5 m width) at west end draining to the north end of Sawbill Bay. • Loss of wetlands in central area with no obvious drainage to adjacent lakes. • Minimal watershed area affected. • Small streams (<0.5m width) drain from wetlands and beaver ponds. • Small tributary to northwest end of Lizard Lake is affected. • Tailings pipeline will not affect small local streams. • Daily fresh water makeup needs of up to 20,000 m^3/day to be sourced from Marmion Lake. • Potential effects of seepage to groundwater to be confirmed.	• Vegetation and terrestrial habitat loss in TMF footprint and along pipeline route. • Area comprised of mixed boreal forest and open wetlands. • Common tree species are: Black Spruce, Jack Pine, Trembling Aspen, White Birch, White Cedar, White Pine, Tamarack, Balsam Fir, Speckled Alder, Mountain Maple, American Mountain Ash, Showy Mountain Ash, Green Alder and Willow. • Wildlife species observed and/or known do not include rare, threatened or endangered species.	• A pond and small stream are located in the central portion of the area. Fish species observed include: Finescale Dace, Pearl Dace, Fathead Minnow, Northern Red Belly Dace, and White Sucker.	• No human uses identified in the area. • Local residents indicate streams are not suitable/used for recreational fishing.	• Moderate on-site construction cost alternative. • Alternative with fewest potential aquatic impacts. • Pipeline route follows existing road facilitating servicing and maintenance, and facilitating cleanup in the event of any spills. • Mineralization may extend across southern portion of the footprint, resulting in sterilization of potential economic ore.
On-Site Alternative TMF-3 (Figure F-4).	• Located northeast of mine site in Lizard Lake basin. Requires construction of dams around almost the entire TMF, but takes advantage of natural depression to reduce dam heights. TMF footprint is approximately14.1 M m^2. • Requires berm raised around ~85% of perimeter. • Footprint would be cleared of vegetation. Some excavation of dam foundations with dams constructed in stages as mining progresses. Dam material to be sourced from local quarries and waste rock (pending geochemical assessment). • Tailings would be pumped to TMF via pipeline, with water reclamation and toe seepage collection at the low points. • Excess water would be treated as required and discharged from a central WTF near the processing plant site. • Site fresh water needs of up to approximately 20,000 m^3/day with reclamation.. • Tailings pipeline will require construction of a service road. The tailings pipeline length is approximately 7 km. Pipeline routing is shown on Figure 4. • Requires major diversion of main inflow to the lake from the north, and damming of former outflow to the south. • Tailings and pipeline are contained within the Osisko lease area.	• Upstream end of Lizard Lake will require flow diversion, increasing flow to Vista & Light Lakes. • Lizard Lake will be drained, with resultant loss of flow to Trap Bay (Marmion Lake). Potential reduced circulation in northern arm of Turtle Bay. • Daily fresh water makeup needs of up to 20,000 m^3/day to be sourced from Marmion Lake. • Potential effects of seepage to groundwater to be confirmed.	• Vegetation and terrestrial habitat loss in TMF footprint and along pipeline route. • Area comprised of mixed boreal forest, open wetlands and lake margins. • Common tree species anticipated are: Black Spruce, Jack Pine, Trembling Aspen, White Birch, White Cedar, White Pine, Tamarack, Balsam Fir, Speckled Alder, Mountain Maple, American Mountain Ash, Showy Mountain Ash, Green Alder and Willow. • Wildlife species observed and/or known do not include rare, threatened or endangered species.	• A small lake and stream that drain into Lizard Lake, and Lizard Lake will be eliminated through draining of the lake, and fish habitat lost. Fish species observed include: Smallmouth Bass, Yellow Perch, Northern Pike, Blacknose Shiner and Pumpkinseed. MNR (1975) indicate additional species in Lizard Lake include: Lake Herring, Burbot, White Sucker, Walleye, Spottail Shiner, Longnose Dace, Pearl Dace and Iowa Darter. • Fish habitat in Trap Bay may also be affected through loss of flow from outlet of Lizard Lake. • Habitat effects in Vista Lake due to flow diversion.	• Would require relocation of a local resident, and compensation for loss of trap line. • Lizard Lake is used by local residents for recreational fishing.	• Lowest cost alternative. • Adverse effects on aquatic habitats due to loss of Lizard Lake and other small lakes. • Pipeline route follows existing road facilitating servicing and maintenance, and facilitating cleanup in the event of any spills. • Significant permitting constraints under Fisheries Act and MMER.

Tailings Alternative	Description	Potential Hydrological/ Hydrogeological Effects	Potential Terrestrial Environments Affected	Potential Aquatic Environments Affected	Potential Social and/or Economic Effects	Summary
On-Site Alternative TMF-4 (Figure F-5)	• Located east of mine site, southeast of Lizard Lake in an upland area. Requires dams constructed around entire TMF, but takes advantage of locally higher topography to reduce dam height. TMF footprint is approximately 9 M m^2. • Requires berm raised around ~100% of perimeter. • Footprint would be cleared of vegetation. Some excavation of dam foundations with dams constructed in stages as mining progresses. Dam material to be sourced from local quarries and waste rock (pending geochemical assessment). • Minimizes affected aquatic habitats. • Tailings would be pumped to TMF via pipeline, with water reclamation and seepage collection around dam. • Excess water would be treated as required and discharged from a central WTF near the processing plant site. • Site freshwater needs of up to approximately 20,000 m^3/day with reclamation. • Tailings pipeline will require construction of a service road. The tailings pipeline length is approximately 7.2 km. Pipeline routing is shown on Figure 5. • Tailings and pipeline are contained within the Osisko lease area.	• Loss of small intermittent tributaries to Lizard Lake and Light Lake (west arm) • Loss of small tributary to Turtle Bay. • Daily fresh water makeup needs of 20,000 m^3/day to be sourced from Marmion Lake. • Potential effects of seepage to groundwater to be confirmed.	• Vegetation and terrestrial habitat loss in TMF footprint and along pipeline route. • Area comprised of mixed boreal forest, open wetlands and lake margins. • Common tree species are: Black Spruce, Jack Pine, Trembling Aspen, White Birch, White Cedar, White Pine, Tamarack, Balsam Fir, Speckled Alder, Mountain Maple, American Mountain Ash, Showy Mountain Ash, Green Alder and Willow. • Wildlife species observed and/or known do not include rare, threatened or endangered species.	• Small intermittent streams may not be fish bearing and may be ephemeral in nature. • Small tributary to Turtle Bay represents a loss of marginal fish habitat. • Fish communities to be assessed in 2011.	• No human uses identified in the area. • Local residents indicate small streams are not suitable/used for recreational fishing.	• Second most expensive on-site alternative. • Only small streams affected in footprint. • Pipeline follows existing road for >50% of length, facilitating construction, servicing and maintenance of pipeline.
On-Site Alternative TMF-5 (Figure F-6)	• TMF located northeast of mine site, east of Premier Lake Road in an upland area. Requires dams constructed around entire TMF. TMF footprint is approximately 8.3 M m^2. • Requires berm raised around ~100% of perimeter. • Footprint would be cleared of vegetation. Some excavation of dam foundations with dams constructed in stages as mining progresses. Dam material to be sourced from local quarries and waste rock (pending geochemical assessment). • Tailings would be pumped to TMF via pipeline as thickened tailings, with water reclamation, and seepage collection around dam. • Excess water would be treated as required and discharged from a central WTF near the processing plant site. • Site freshwater needs of up to approximately 20,000 m^3/day with reclamation. • The tailings pipeline length is approximately 19.7 km. The pipeline routing is shown on Figure 6. • Tailings and pipeline are contained within the Osisko lease area.	• Loss of small, intermittent stream to Franklin Lake. • Loss of small ponds and wetlands with no apparent connection to adjacent lakes. • Daily fresh water makeup needs of 20,000 m^3/day to be sourced from Marmion Lake. • Potential effects of seepage to groundwater to be confirmed.	• Vegetation and terrestrial habitat loss in TMF footprint and along pipeline route. • Area comprised of mixed boreal forest, open wetlands and lake margins. • Common tree species are: Black Spruce, Jack Pine, Trembling Aspen, White Birch, White Cedar, White Pine, Tamarack, Balsam Fir, Speckled Alder, Mountain Maple, American Mountain Ash, Showy Mountain Ash, Green Alder and Willow. • Wildlife species observed and/or known do not include rare, threatened or endangered species.	• Streams and a small pond are present which may be fish bearing. • Fish species to be assessed in 2011 if alternative is carried forward.	• No human uses identified in the area.	• Most expensive on-site alternative. • Longest pipeline, <50% follows existing roads, and crosses public road. • Potential effects on fisheries, and permitting requirements due to small lakes/large pond within TMF area.
Off-Site Alternative TMF-6 (Hogarth Pit) (Figure F-7)	• Tailings would be pumped via pipeline to Hogarth Pit in the former Steep Rock Iron Mines site, see Figure 7. • Site requires minimal clearing and grubbing, but will require some local filling/dam construction to isolate the Pit from Caland/Errington Pits and Steep Rock Lake. • May include discharge channel to Seine River, bypassing Steep Rock Lake. • Alternative includes pipeline (27 to 32 km long, depending on route). Three alternative routes have been identified. • Tailing disposal site and part of pipeline route are outside of lease area and ownership. Liability concerns regarding spills and accidents along pipeline and at the Pit. • Site would need to be secured (fencing, etc.). • Areas of existing contamination would need to be identified and remediated where required. • Hogarth Pit would be isolated from Caland Pit to eliminate water exchange through sealing of Mosher Point tunnel. • Connections to local waterbodies would need to be investigated and sealed where required. • Site fresh water makeup needs are approximately 20,000 m^3/day with reclaim pipeline. • Water treatment will likely be required, starting at the time of pit overflow (approximately 14 years).	• Pit will fill faster and overflow to Seine River system sooner than currently predicted (in roughly 14 years rather than 20 years). • With reclaim, higher discharge due to displacement of volume by tailings (16,000 m^3/day). • Flow could result in re-suspension of sediments in West Arm of Steep Rock Lake and may need to be diverted south to Seine River. • With reclaim, daily fresh water makeup needs of 20,000 m^3/day to be sourced from Marmion Lake. • Effects of raising Pit water level on local groundwater flow unknown. • Effects and extent of historic subsurface excavations unknown.	• Limited effects on terrestrial habitat due to limited revegetation of surrounding areas of the former Steep Rock Iron Mines site. • Additional vegetation removal along pipeline route. • Vegetation communities mainly boreal forest and open wetlands. • Wildlife species observed and/or known do not include rare, threatened or endangered species. • Potential impacts from spills/accidents along pipeline.	• Poor quality of water in Pit limits habitat suitability for most biota. • Anecdotal evidence suggests some fish may be present. • Pipeline crosses a number of small streams. • Discharge of poor quality water from Pit. Water treatment will be required to mitigate downstream effects. • Routing of pipeline across dams on Marmion Lake may require widening of dam crests, with minor loss of adjacent aquatic habitat. • Potential impacts from spills/accidents along pipeline	• Site is classified as industrial land use and is currently vacant. • Option viewed favourably by local communities since it partly addresses some of the on-going environmental liabilities that could ultimately affect downstream users. • Potential for pipeline accidents could raise public opposition.	• Significant risks/potential liabilities due to length of pipeline over public lands. • Long term water treatment commitments. • Unknown environmental liabilities on-site. • Site security concerns. • Significant on-site construction and/or remediation may be required.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TAILINGS MANAGEMENT FACILITY (SITE 1)
TAILINGS MANAGEMENT FACILITY (SITE 2)
TAILINGS MANAGEMENT FACILITY (SITE 3)
TAILINGS MANAGEMENT FACILITY (SITE 4)
TAILINGS MANAGEMENT FACILITY (SITE 5)
TAILINGS MANAGEMENT FACILITY (HOGARTH PIT)
Site Location
Sawbill Bay
Lynxhead Bay
Light Lake
Upper Seine Bay
Hawk Bay
Finlayson Lake
Marmion Lake
Steep Rock Lake
LEGEND
Road
River/Stream
Lake
Tailings Management Facility Options
Wetland
Project Location
DRAFT
REFERENCES
Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd.
Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4
Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N
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Golder Associates
Mississauga, Ontario, Canada
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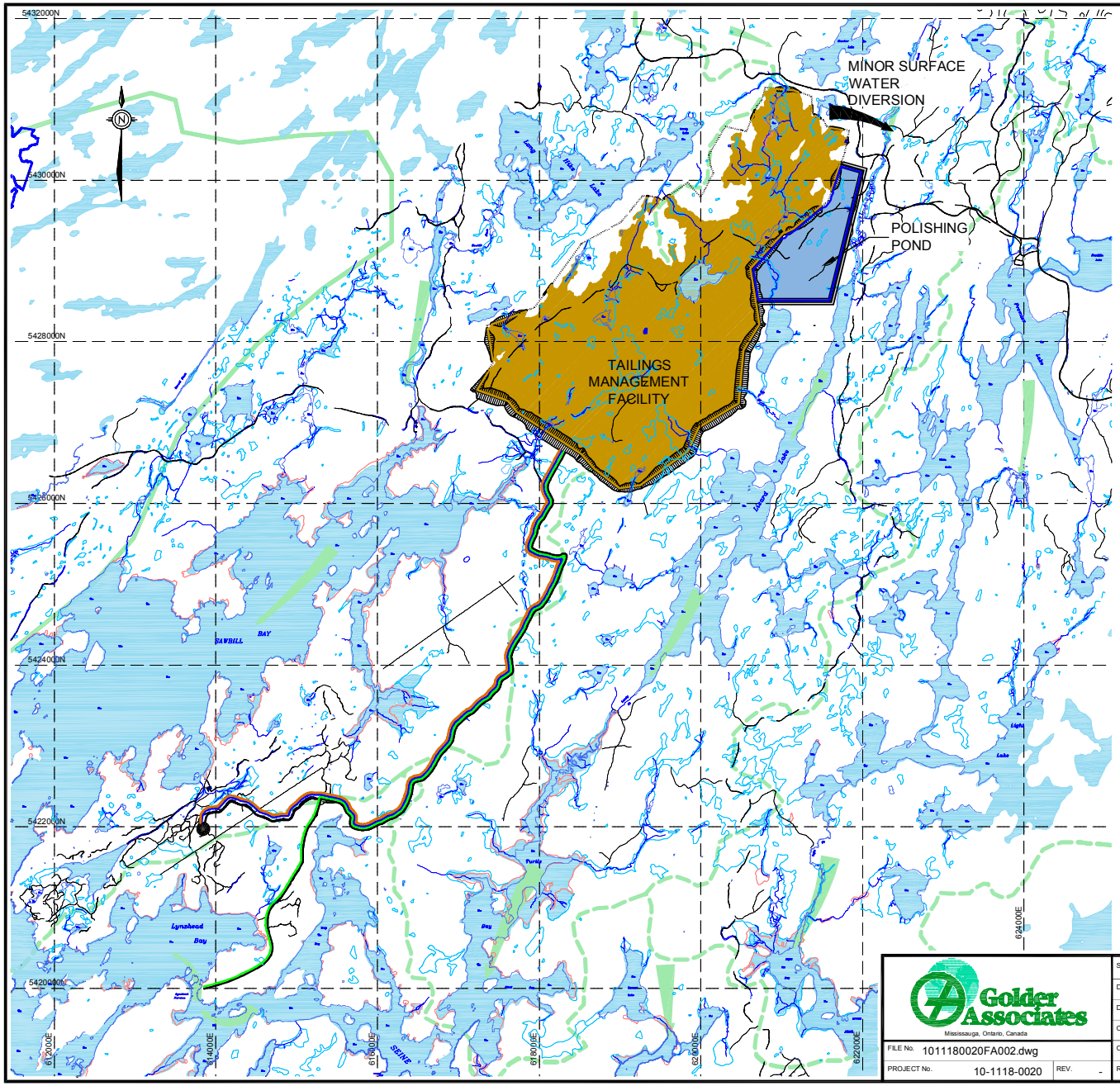
REVIEW RJ
PROJECT No. 10-1118-0020
REV. 2.0
TAILINGS MANAGEMENT FACILITY OPTIONS
HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA
FIGURE F-1



LEGEND:

- MINE / PROCESSING PLANT
- TAILINGS MANAGEMENT FACILITY
- TAILINGS PIPELINE (FROM MILL TO TMF - 8.8 Km)
- EFFLUENT DISCHARGE LINE (FROM TMF TO LYNXHEAD NARROWS (10.1Km)
- WATER RECLAIM LINE (FROM TMF TO PROCESS PLANT - 8.8 Km)
- CONTAINMENT DAM LOCATION
- REGIONAL SUB.WATERSHED
- LOCAL SUBWATERSHED
- SURFACE WATER DRAINAGE DIRECTION

NOTE:

1. THIS WAS CHOSEN AS ALTERNATIVE #1.

REFERENCE:
LIDAR CONTOURS - PROVIDED BY AEROGEOMATICS LTD AND OSISKO HAMMOND REEF PROJECT LTD. (1m RESOLUTION, JULY 2010)

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Golder Associates
Mississauga, Ontario, Canada

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REVIEW	KAB

TITLE
CONCEPTUAL TAILINGS MANAGEMENT FACILITY LAYOUT SITE 1

OSISKO HAMMOND REEF PROJECT

FIGURE F-2

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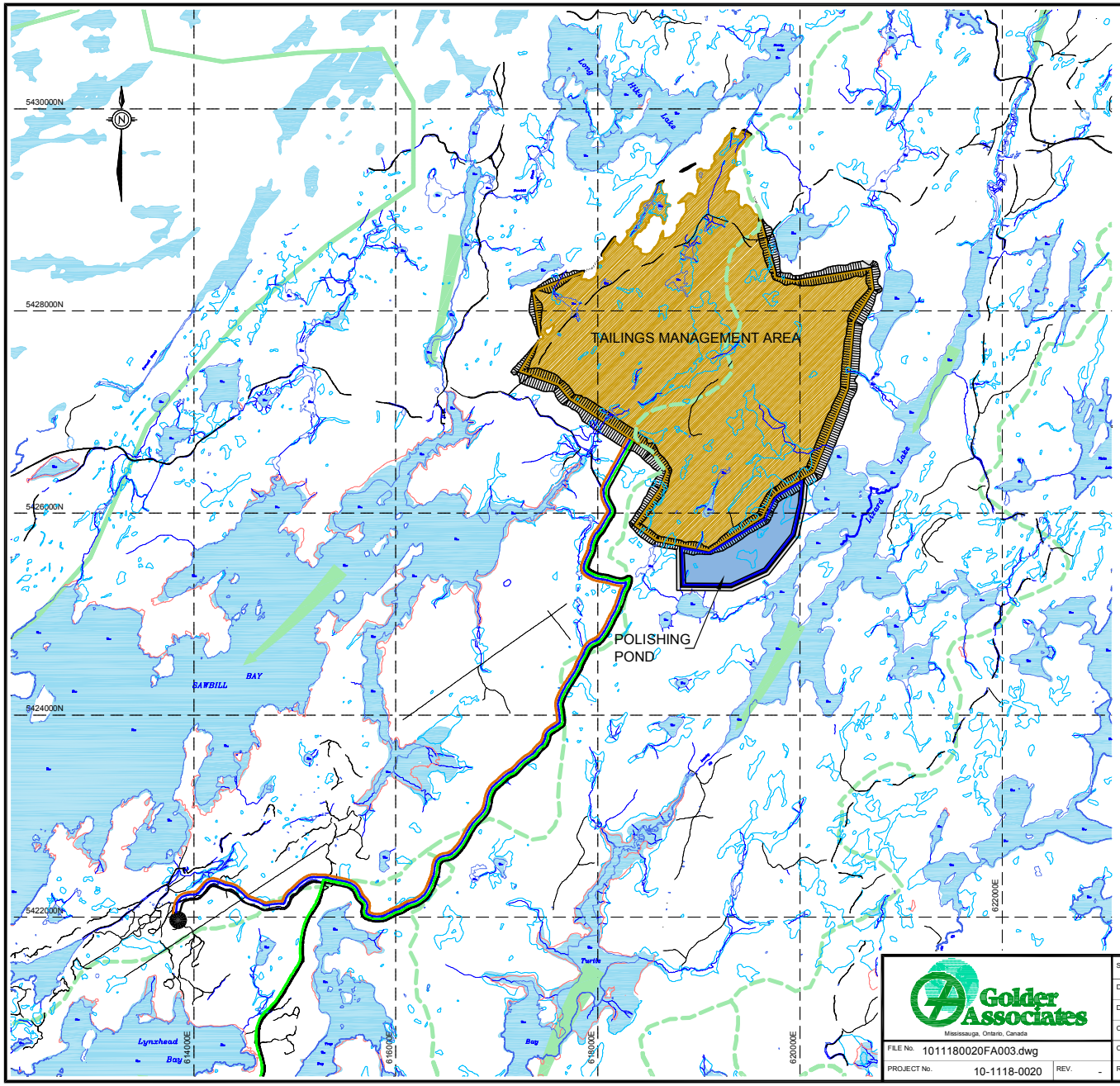

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- EFFLUENT DISCHARGE LINE (FROM TMF TO LYNXHEAD NARROWS (10.1Km)
- WATER RECLAIM LINE (FROM TMF TO PROCESS PLANT - 8.8 Km)
- CONTAINMENT DAM LOCATION
- REGIONAL SUB.WATERSHED
- LOCAL SUBWATERSHED
- SURFACE WATER DRAINAGE DIRECTION

NOTE:

1. THIS WAS CHOSEN AS BASE CASE.

REFERENCE:
LIDAR CONTOURS - PROVIDED BY AEROGEOMATICS LTD AND OSISKO HAMMOND REEF PROJECT LTD. (1m RESOLUTION, JULY 2010)

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Golder Associates
Mississauga, Ontario, Canada

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CAD	TDR
CHECK	DCJ
REVIEW	KAB

TITLE
CONCEPTUAL TAILINGS MANAGEMENT FACILITY LAYOUT SITE 2

OSISKO HAMMOND REEF PROJECT

FIGURE F-3

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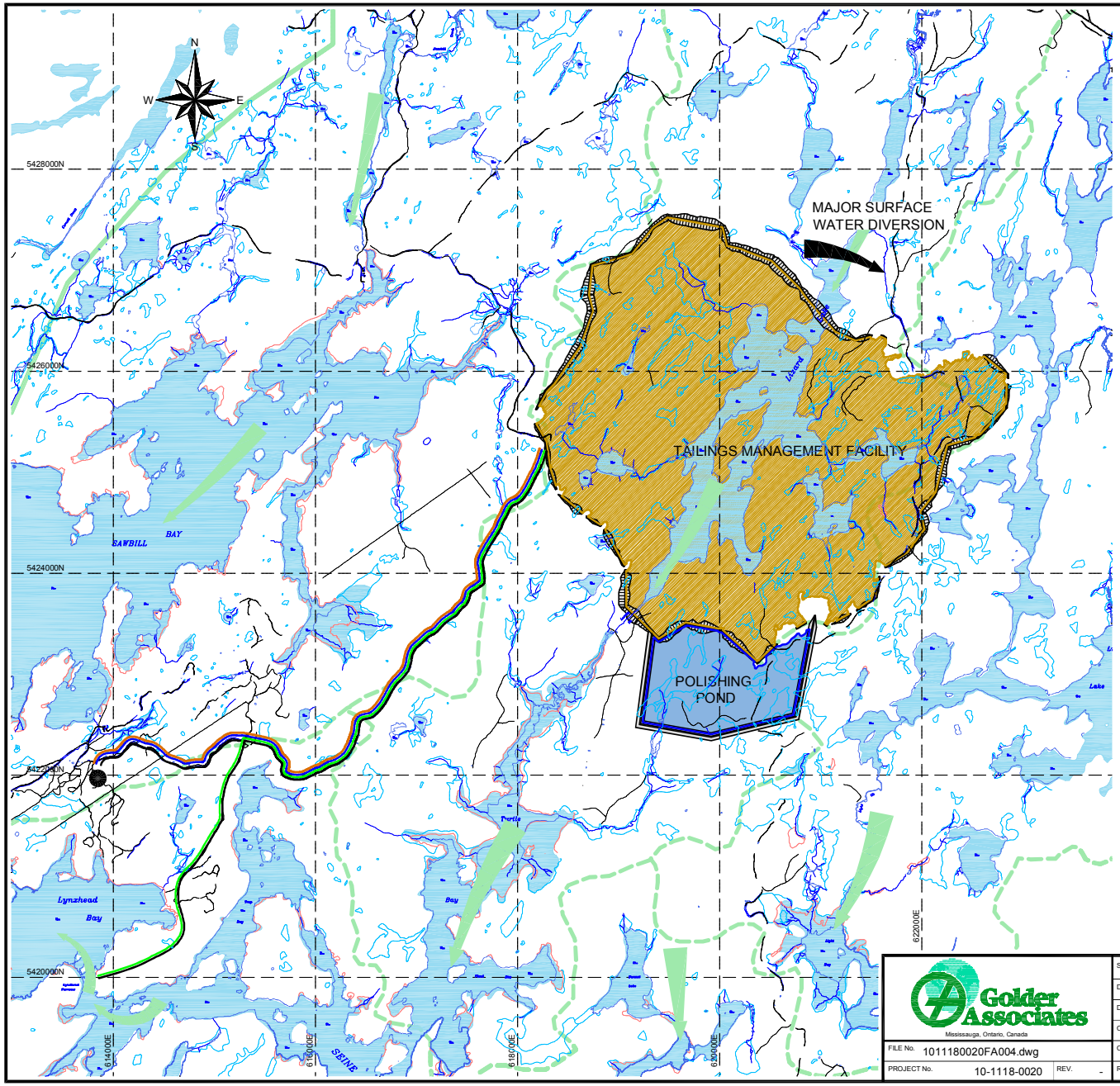

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- TAILINGS MANAGEMENT FACILITY
- TAILINGS PIPELINE (FROM MILL TO TMF - 6.8 Km)
- EFFLUENT DISCHARGE LINE (FROM TMF TO LYNXHEAD NARROWS -8.1 Km)
- WATER RECLAIM LINE (FROM TMF TO PROCESS PLANT - 6.8 Km)
- CONTAINMENT DAM LOCATION
- REGIONAL SUB.WATERSHED
- LOCAL SUBWATERSHED
- SURFACE WATER DRAINAGE DIRECTION

REFERENCE:
LIDAR CONTOURS - PROVIDED BY AEROGEOMATICS LTD AND OSISKO HAMMOND REEF PROJECT LTD. (1m RESOLUTION, JULY 2010)

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Golder Associates
Mississauga, Ontario, Canada

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PROJECT No.	10-1118-0020
REV.	-

TITLE
CONCEPTUAL TAILINGS MANAGEMENT FACILITY LAYOUT SITE 3

OSISKO HAMMOND REEF PROJECT

FIGURE F-4

PLOT DATE: March 16, 2011
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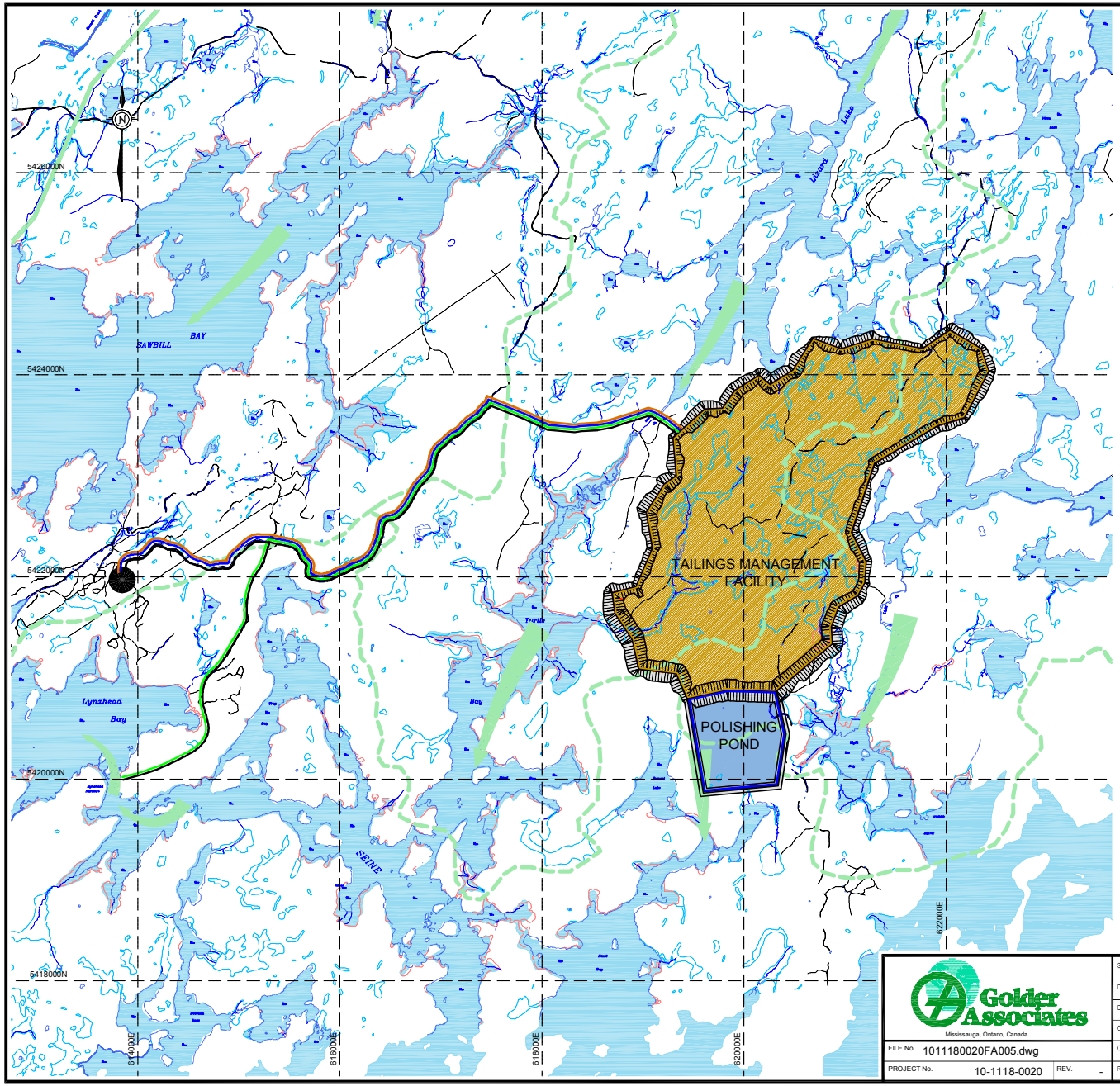

LEGEND:

- MINE / PROCESSING PLANT
- TAILINGS MANAGEMENT FACILITY
- TAILINGS PIPELINE (FROM MILL TO TMF - 7.2 Km)
- EFFLUENT DISCHARGE LINE (FROM TMF TO LYNXHEAD NARROWS (8.4 Km)
- WATER RECLAIM LINE (FROM TMF TO PROCESS PLANT - 7.2 Km)
- CONTAINMENT DAM LOCATION
- REGIONAL SUB.WATERSHED
- LOCAL SUBWATERSHED
- SURFACE WATER DRAINAGE DIRECTION

NOTE:

1. THIS WAS CHOSEN AS ALTERNATIVE #2.

REFERENCE:
LIDAR CONTOURS - PROVIDED BY AEROGEOMATICS LTD AND OSISKO HAMMOND REEF PROJECT LTD. (1m RESOLUTION, JULY 2010)

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Golder Associates
Mississauga, Ontario, Canada

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CAD	TDR
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TITLE
CONCEPTUAL TAILINGS MANAGEMENT FACILITY LAYOUT SITE 4

OSISKO HAMMOND REEF PROJECT

FIGURE F-5

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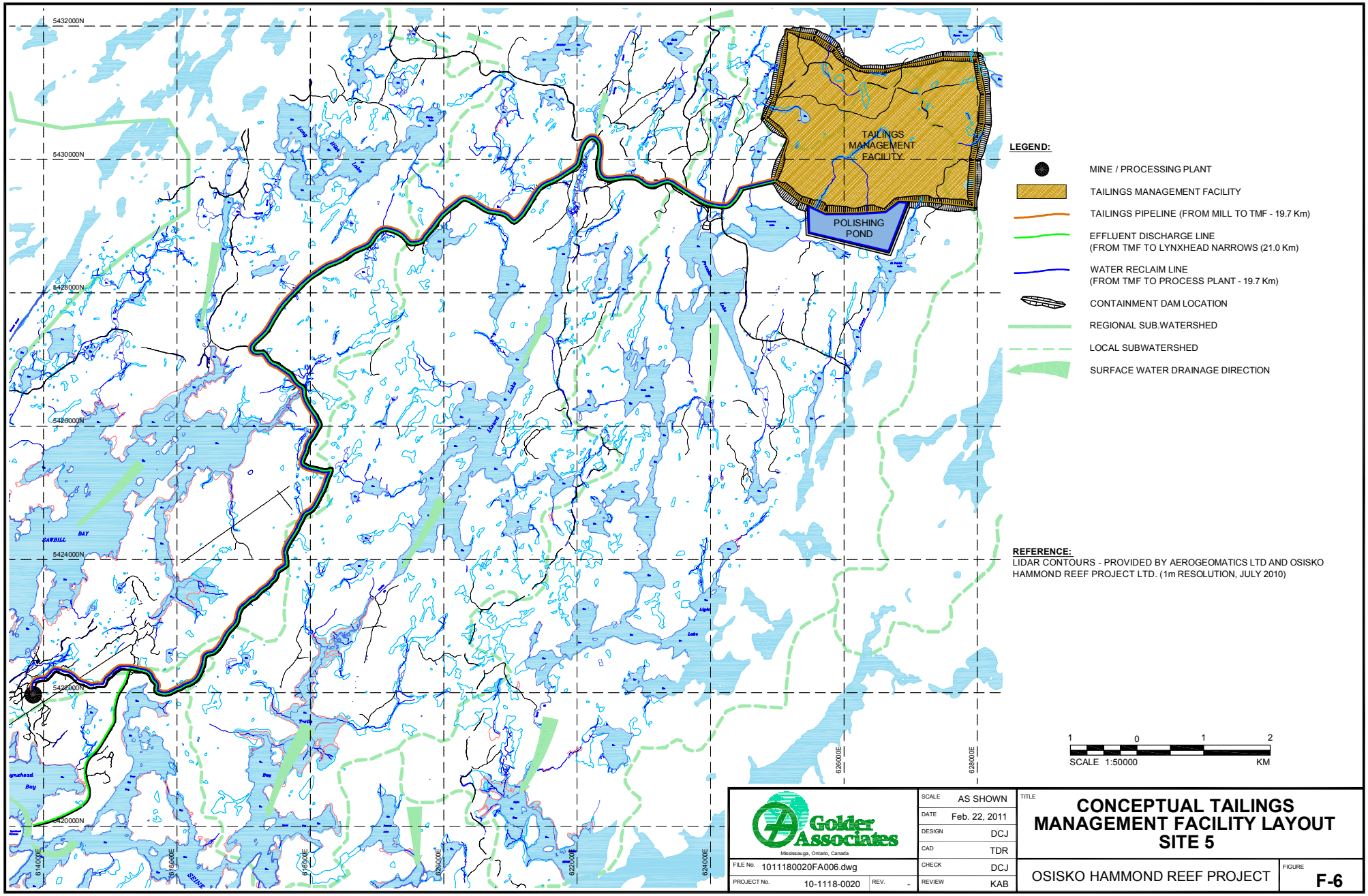

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Golder Associates
Mississauga, Ontario, Canada

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CAD	TDR
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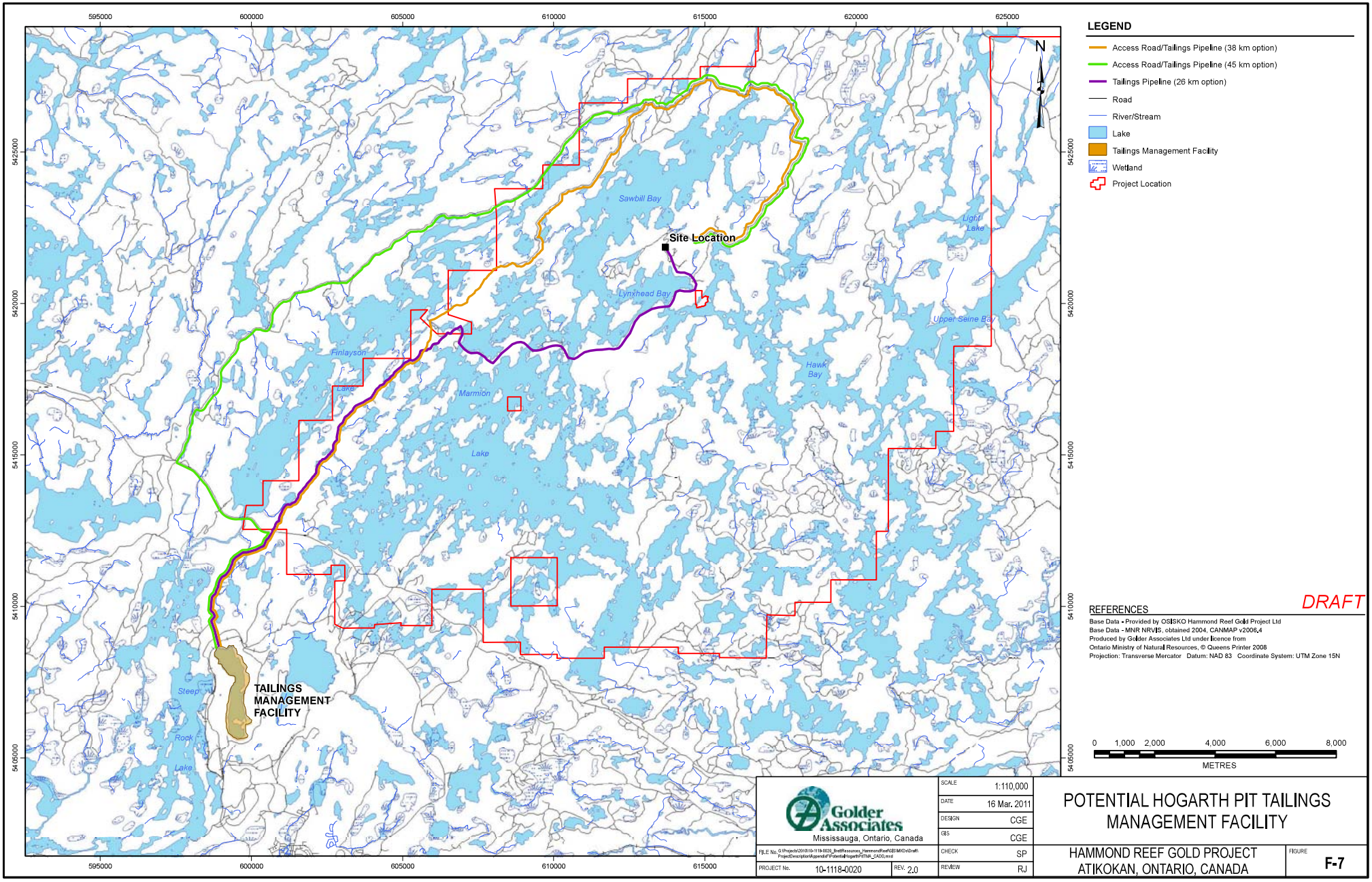
OSISKO HAMMOND REEF PROJECT

FIGURE **F-6**



Golder Associates
Mississauga, Ontario, Canada

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REVIEW	RJ
PROJECT No.	10-1118-0020
REV.	2.0

POTENTIAL HOGARTH PIT TAILINGS MANAGEMENT FACILITY

HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

FIGURE F-7

OSISKO

March 22, 2011

Ms. Linda Jeffrey
Minister of Natural Resources
Ministry of Natural Resources
Office of the Minister
Room 6630, Whitney Block
99 Wellesley Street West
Toronto ON M7A 1W3

Dear Ms. Jeffrey:

I am writing this letter in follow up to a letter I sent you September 3rd 2010 regarding Osisko Mining Corporation's proposed Hammond Reef project on a portion of the former Steep Rock mine site.

Osisko has completed a comprehensive evaluation of six options for tailings impoundment sites; five are on-site Greenfield options and the sixth option is a Brownfield option that involves pumping slurry to the Steep Rock mine site's Hogarth Pit through a pipeline. The evaluation focused on environmental impacts, operability, constructability, permitting requirements, long-term liabilities, stakeholder preference, and economics.

After a thorough review, we have decided to exclude use of the Steep Rock mine site for tailings management. The off-site brownfield option that uses the Steep Rock mine's Hogarth Pit for tailings deposition has several operational challenges associated with a 30 km pipeline, in addition to permitting challenges, extensive baseline data collection requirements (that will not be needed for the other five options), and numerous other liabilities associated with it. Therefore, the final submission of our Project Description to the CEAA will not include the off-site Hogarth Pit option.

Again, on behalf of our entire Corporation, I wish to proffer our gratitude. I look forward to continuing working with your Ministry on the Hammond Reef Gold project.

Sincerely,

OSISKO MINING CORPORATION
<Original signed by>

Jean-Sebastian David
Vice President, Sustainable Development

cc: Mr. Luc Lessard, Senior Vice President & COO
Ms. Alexandra Drapack, Manager, Sustainable Development

1100, avenue des Canadiens-de-Montréal, bureau 300, Montréal, Québec, Canada H3B 2S2
Téléphone (514) 735-7131 – Télécopieur (514) 933-3290
www.osisko.com

APPENDIX B

Public Consultation Plan

Hammond Reef
Gold Project

APPENDIX B – PUBLIC CONSULTATION PLAN
TERMS OF REFERENCE - AMENDED

April 2012

APPENDIX B – PUBLIC CONSULTATION PLAN

Table of Contents

APPENDIX B – PUBLIC CONSULTATION PLAN

APPENDIX B – PUBLIC CONSULTATION PLAN

1.0 INTRODUCTION

Osisko Hammond Reef Gold Project Ltd. (OHRG) is in the process of developing a gold mine (the Project) at the Hammond Reef site, north of Atikokan, Ontario. Exploration and preliminary activities have been underway for several years and the Project is now moving to the Environmental Assessment (EA) stage. Consultation with stakeholders and Aboriginal communities has been integral to the Hammond Reef Project since before the EA process began. An Aboriginal Engagement Plan is provided in Appendix C.

OHRG's approach to consultation will follow the guidelines outlined in the Ministry of Environment's Code of Practice for Consultation in Ontario's Environmental Assessment Process (June 2007). Where possible, consultation on the federal (CEAA) process and the provincial (EAB) process will be linked and coordinated. OHRG will endeavour to meet the requirements of both agencies by combining consultation events so as to minimize stakeholder fatigue.

This Public Consultation Plan outlines how OHRG will consult and engage with stakeholders and meets the following MOE requirements:

- Consultation methods proposed (Section 5)
- How input will be obtained (Section 5)
- Key decision-making milestones (Sections 7)
- Issues resolution strategy (Section 9.1)

OHRG will take an adaptive management approach, allowing for continual improvement and changes to the Public Consultation Plan through ongoing communications with Project stakeholders.

2.0 BACKGROUND

The community of Atikokan has responded enthusiastically to the Project. A Council Resolution was passed on February 28, 2011 supporting the Project and encouraging regulators, consultants and OHRG to move the permitting process forward as quickly as possible for the benefit of the community. A copy of the Council Resolution is provided in the Record of Consultation report. Frequent references have been made in the media about the benefits of the Project on local infrastructure development (e.g. improvements to roads), and the potential for local employment opportunities and economic growth. Since 1979 the economic health of the community has largely depended on the forestry industry. With the recent closure of the two major pulp and paper mills, the employment and business opportunities arising from the Project would have positive impacts on the local economy. The potential for employment could, however, lead to issues surrounding the allocation of job opportunities. By building on practices already initiated by Brett Resources of using local businesses, and locating their headquarters locally; as well as by promoting training and education opportunities, these concerns may effectively be mitigated.

Many of the issues which may arise during public consultation for the Project relate to Atikokan's strong ties to the local natural landscapes and the community's history with large-scale mining projects. In recent years, ongoing efforts have been made to diversify Atikokan's economy by promoting the community's cultural and tourism resources. There may be apprehension related to becoming reliant on a single natural resource once

again. Given the community's strong ties to its mining history, it is possible that any concern could be mitigated by partnering with and/or building on the cultural tourism efforts of the Atikokan Museum and Atikokan Mining Attraction Association.

The Fort Frances community is located further from the Project site, so it is not as likely to be directly affected by development; however because many of the stakeholder groups interested in promoting the environmental and economic sustainability of the Rainy River District are located in Fort Frances, concerns may be raised surrounding the environmental impacts of the mine development, as well as the potential effects on local and regional tourism.

3.0 OBJECTIVES

Consultation is a central objective of the provincial EA process. OHRG has reviewed the MOE's Codes of Practice on *Preparing and Reviewing the Terms of Reference for Environmental Assessments in Ontario* (2009) and *Consultation in Ontario's Environmental Assessment Process* (2007) while developing the following Consultation Plan. The following elements of a successful Consultation Plan as suggested by MOE have been included in the Hammond Reef Consultation Plan:

- Clear Objectives (Section 3)
- Stakeholder Identification (Section 4)
- Consultation Methods (Section 5)
- Issue Identification (Section 8)
- Integration of Input (Section 9)
- Proponent Evaluation of Consultation (Section 10)

Meaningful consultation requires that OHRG address concerns of all identified stakeholders regarding the anticipated or potential environmental effects of the Project. In carrying out the EA, OHRG will consult residents and organizations in affected communities, other interested organizations, and relevant government agencies. All notices and reports will also be posted on the Project website for public access.

OHRG will provide in the EA report the highlights of this consultation, 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 by stakeholders, how issues have already been addressed and a summary of the outstanding issues and concerns.

The key objectives of OHRG's Public Consultation Plan, as per the MOE Code of Practice are to:

- Identify stakeholders with an interest in the Project;
- Share information with stakeholders;
- Keep government agencies informed and ensure Project approach meets requirements;
- Identify issues of concern and topics of interest to stakeholders and Aboriginal communities;
- Respond to comments and questions from stakeholders;
- Focus on and address real stakeholder concerns;
- Incorporate information received from stakeholders into the Project; and
- Facilitate government decision-making.

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Government agencies will be consulted early to confirm that the project studies planned meet the regulatory agencies' needs. Government agencies will be informed in a timely manner of emerging issues/concerns raised by the public and Aboriginal communities.

4.0 STAKEHOLDER IDENTIFICATION

An initial stakeholder list was developed based on experience, background research, advice from regulators and local knowledge. Preliminary government review team and stakeholder distribution lists are provided in the tables below, it is anticipated that the stakeholder list will be refined and expanded as consultation on the Project moves forward, this list includes those who declared an interest during the ToR stage..

Table 1: Preliminary Government Review Team

Name, Position, Agency and Address	Preferred Contact	Phone and e-mail
PROVINCIAL AGENCIES & MINISTRIES		
Ministry of Environment		
Michelle Whitmore Special Project Officer 2 St. Clair Avenue West 14th Floor Toronto, ON M4V 1L5 Sam Shippam Senior Enviromental Officer 3rd Floor, Suite 331B 435 James Street South Thunder Bay, ON P7E 6S7 Paula Spencer Surface Water Specialist 808 Robertson Street Kenora, ON P9N 3X9 Shannon Heggie Regional Hydrogeologist 435 James Street South Suite 331 Thunder Bay, ON P7E 6S7 Joseph Tyance Senior Advisor, Outreach & Program Support Thunder Bay (address as above)	1 paper copy each to Michelle, Sam, Paula and Shannon 1 paper copy to MNR 1 paper copy to MTO Email all five MOE contacts	416-314-7225 Michelle.Whitmore@ ontario.ca 807-475-1724 Sam.shippam@ontario.ca 807-475-1713 joseph.tyance@ontario.ca
Ontario Power Generation		
Mr. Steve Hounsell, Senior Advisor,	Email key contact	T: (416) 592-2766

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Name, Position, Agency and Address	Preferred Contact	Phone and e-mail
Sustainable Development Ontario Power Generation 700 University Ave. Toronto ON M5G 1X6		F: (416) 592-7097 steve.hounsell@opg.com
Hydro One Networks Inc.		
Mr. Walter Kloostra, Transmission Lines Sustainment Manager Lines Information Systems and Programs Hydro One Networks Inc. 483 Bay Street, TCT15-A11, North Tower, Toronto ON M5G 2P5	Email key contact	T: (416) 345-5114 Walter.Kloostra@hydroOne.com
Ministry of Aboriginal Affairs		
Ms. Heather Levecque, Manager Consultation Unit, Aboriginal Relations and Partnerships Division Ministry of Aboriginal Affairs 9th Floor, 160 Bloor Street East Toronto ON M7A 2E61	Email key contact	T: (416) 325-4044 F: (416) 326-1066 Heather.Levecque@ontario.ca
Ministry of Tourism, Culture and Sport		
Penny Young Heritage Planner	Email key contact	416-212-4019 penny.young@ontario.ca
Jim Antler Policy Advisor	Email key contact	705-494-4159 james.antler@ontario.ca
Ontario Provincial Police		
Ms. Paula Brown Operational Policy and Strategic Planning Bureau Ontario Provincial Police 777 Memorial Avenue, 3rd Floor Orillia ON L3V 7V3	Email key contact	T: (705) 329-6903 F: (705) 329-7596 Paula.brown@ontario.ca
Ministry of Energy		
Mr. Alan Jenkins, Sr. Policy Specialist Energy Markets	Email key contact	T: (416) 325-6926 F : (416)-325-6972

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Name, Position, Agency and Address	Preferred Contact	Phone and e-mail
Energy Supply and Competition Branch Ministry of Energy 880 Bay Street, 3rd Floor Toronto ON M7A 2C1		allan.jenkins@ontario.ca
Ministry of Infrastructure		
Jamie Austin, Manager Growth Policy Ontario Growth Secretariat Ministry of Infrastructure 777 Bay Street, 4th Floor, Suite 425 Toronto ON M5G 2E5	Email key contact	T: (416) 325-5794 F: (416) 325-7403 Jamie.austin@ontario.ca
Ministry of Municipal Affairs and Housing		
Northwestern Municipal Services Office Ministry of Municipal Affairs & Housing Audrey Anderson, Team Lead Community Planning and Development 435 James Street South, Suite 223 Thunder Bay ON P7E 6S7	Email key contact	T: (807) 473-3025 audrey.e.anderson@mah.gov.on.ca
Ministry of Natural Resources		
Ralph Horn, Supervisor Atikokan Area Fort Frances District Ministry of Natural Resources 108 Saturn Avenue Atikokan, ON P0T 1C0 Twila Smitsnuk, IRM Technical Specialist 108 Saturn Avenue Atikokan, ON P0T 1C0 Rachel Hill , District Planner 922 Scott Street Fort Frances, ON P9A 1J4	1 hard copy to Ralph Email three contacts	807-597-5014 ralph.horn@ontario.ca 807-597-5025 Twila.smitsnuk@ontario.ca 807-274-8605 Rachel.hill@ontario.ca
Ministry of Northern Development and Mines		

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Name, Position, Agency and Address	Preferred Contact	Phone and e-mail
Patrick Barnes Mineral Exploration & Development Consultant Ontario Government Building Suite B002 435 James Street South Thunder Bay, ON P7E 6S7 Mark O'Brien Mineral Development Consultant Thunder Bay (address as above)	2 hard copies to Patrick Email both contacts	807-475-1583 Patrick.barnes@ontario.ca 807-475-1106 Mark.o'brien@ontario.ca
Grace Lo Policy Advisor Whitney Block Rm 5630 99 Wellesley St W Toronto ON M7A1W3	Email key contact	416-325-3447 Grace.lo@ontario.ca
Ministry of Transportation		
Jim McKever Development Review Co-ordinator Northwestern Region Ministry of Transportation 615 South James Street, P.O. Box 1177 Thunder Bay ON P7E 6P6	Email key contact	T: (807) 473-2117 James.mckever@ontario.ca
Ontario Parks		
Jeff Bonnema Quetico Park Superintendent 108 Saturn Ave Atikokan ON P0T1C0 Scott Ellery Superintendent - AARON PO Box 730 Dryden ON P8N2Z4	Email key contact	807-597-6971 ext 246 jeff.bonnema@ontario.ca 807-223-7535 scott.ellery@ontario.ca
FEDERAL AGENCIES		
Canadian Environmental Assessment Agency		

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Name, Position, Agency and Address	Preferred Contact	Phone and e-mail
Amy Lui Canadian Environmental Assessment Agency 55 St. Clair Avenue East, 9th Floor Toronto ON M4T 1M2	1 hard copy 1 electronic copy	416-952-1585 amy.liu@ceaa-acee.gc.ca
Aboriginal Affairs and Northern Development Canada		
Daniel Johnson Environmental Unit Aboriginal Affairs and Northern Development Canada 25 St. Clair Avenue East, 8th Floor Toronto ON M4T 1M2	Coordinated through CEAA.	416- 973-5899 daniel.johnson@inac-ainc.gc.ca
Environment Canada		
Sheelagh Hysenaj Environmental Assessment Office Environmental Assessment Section 4905 Dufferin Street Toronto, Ontario M3H 5T4	Coordinated through CEAA	416-739-5910 Sheelagh.hysenaj@ec.gc.ca
Fisheries and Oceans Canada		
Lisa Fowler Regional Environmental Assessment Analyst Environmental Assessment and Major Projects Branch, Central and Arctic Region, Ontario, Great Lakes Area, DFO, 3027 Harvester Road, Suite 304, P.O. Box 85060, Burlington, ON, L7R 4K3	Coordinated through CEAA	905-639-4022 lisa.fowler@dfo-mpo.gc.ca
Health Canada		
Ms. Melanie Lalani Regional Environmental Assessment Coordinators Safe Environments Program Ontario Region – Health Canada 180 Queen Street West, 10th Floor Toronto, ON M5V 3L7	Coordinated through CEAA	T :416-954-5013 F : 416-952-4444 Melanie_lalani@hc-sc.gc.ca
Major Projects Management Office		

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Name, Position, Agency and Address	Preferred Contact	Phone and e-mail
Regent Dickey Senior Operational Officer, Easter Operations 155 Queen Street, 2nd Floor Ottawa, ON K1A 0E4	Coordinated through CEAA	613-996-1133 RegentDickey@NRCan-
Natural Resources Canada		
Kathleen Cavallero, Senior Environmental Assessment Officer 580 Booth Street, 3rd Floor, Room A8-1 Ottawa, ON K1A 0E4	Coordinated through CEAA	613-996-0055 Kathleen.cavallaro@nrcan-mcan.gc.ca
Transport Canada		
David Zeit, Sr. Environmental Officer 4900 Yonge Street, 4th Floor, Toronto, ON M2N 6A5	Coordinated through CEAA	416-952-0507 david.zeit@tc.gc.ca
MUNICIPAL AGENCIES		
Town of Atikokan Angela Sharbot, Clerk Box 1330 Atikokan, ON P0T 1C0	1 hard copy	597-1234 x 233 angela.sharbot@atikokan.ca
City of Thunder Bay John Hannam, Clerk 550 Donald Street East PO Box 800 Thunder Bay, ON P7C 5K4	Email	807-625-2238 jhannam@thunderbay.ca
Town of Fort Frances Glenn Treftlin, Clerk 320 Portage Avenue Fort Frances, ON P9A 3P9	Email	807-274-5323 xt 236 gtreftlin@fort-frances.com
Rainy River District Social Services Administration Board Dan McCormick, Interim CAO 450 Scott Street Fort Frances, ON P9A 1H2	Email	(807-274-5349 dmccorm@rrdssab.on.ca

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Rainy River District School Board Heather Campbell, Director of Education 522 2nd Street East Fort Frances, ON P9A 1N4	Email	(807) 274-9855 hcampbell@amil.rrdsb.com
Northwest Catholic District School Board Mary-Catherine Kelly, Director of Education 555 Flinders Avenue Fort Frances P9A 3L2	Email	(807) 274-2931, Ext 1222
Atikokan Hospital Robert Wilson, Chief of Staff	Email	807-597-4215 ext 284 robert.wilson@aghospital.on.ca
Atikokan Economic Development Corporation Gary McKinnon, Executive Director P.O. Box 218, 214 Main Street West Atikokan, ON P0T 1C0	Email	807 597-2757 garry.mckinnon@atikokaninfo.com
Atikokan Chamber of Commerce Jolene Wood, Office Manager 214 Main Street West Atikokan, ON P0T 1C0	Email	807 597-1599 info@atikokanchamber.com

Table 2: Preliminary Stakeholder List

Name	Position	Organization	Address	Town	Postal Code
Local Libraries					
Jonathan Lewis	CEO	Atikokan Library	Box 1330	Atikokan	P0T 1C0
Barb Philp	CEO	Thunder Bay Library	285 Red River Road	Thunder Bay	P7B 1A9
Joyce Cunningham	Library Board Chair	Fort Frances Library	301 Reid Avenue	Fort Frances	P9A 0A2
Local Clubs					
Jeff Palmai	President	Sno Ho Club	District 17 PO Box 55	Atikokan	P0T 1C0
Katrina Anderson Cathy Barnard	Committee Members	Atikokan Motorcross Mudslingers 4x4 Club Steep Rock Mountain Bikers Club	20 Charleson Pit Road PO Box 1330	Atikokan	P0T 1C0

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Name	Position	Organization	Address	Town	Postal Code
Environmental Organizations					
Ramsey Hart	Canada Program Coordinator	Mining Watch	250 City Centre A Suite 508	Ottawa	K1R 6K7
TBD	TBD	Ontario Federation of Anglers and Hunters	4601 Guthrie Drive PO Box 2800	Peterborough	K9J 8L5
Dan McDermott	Director	Sierra Club of Canada	24 Mercer Street Suite 101	Toronto	M5V 1H3
Larry Innes	Executive Director	Canadian Boreal Initiative	30 Metcalfe Street Suite 402	Ottawa	K1P 5L4
Local Industry					
Jolene Wood	Office Manager	Atikokan Chamber of Commerce	214 Main Street West PO Box 997	Atikokan	P0T 1C0
Gary McKinnon	Executive Director	Atikokan Economic Development Corporation	214 Main Street West PO Box 218	Atikokan	P0T 1C0
Marc Mantha	Operating Manager	Abitibi Bowater	560 King Street West Unit 2	Oshawa	L1J 7J1
Bruce Welbourne	Operating Manager	Brookfield Renewable Power	PO Box 320	Wawa	P0S 1K0
Jamie Lim	President and CEO	Ontario Forest Industries Association	10 King Street East Suite 300	Toronto	M5C 1C3
Chris Hodgson	President	Ontario Mining Association	5775 Yonge Street Suite 520	North York	M2M 4J1

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4.1 Public

Residents of the Town of Atikokan have been identified as the primary public stakeholders. Residents have been contacted by newspapers and postal code mailings. The stakeholder list will be further built and refined as individuals attend public meetings and provide their individual contact information. Some community and local non-governmental organizations with a potential interest in the Project are also included on the public stakeholder list.

4.2 Municipal Government

The Mayor and Council of the Town of Atikokan have been identified as the primary municipal contacts. Mayor and Council for the Town of Fort Frances, and the City of Thunder Bay are also included on the municipal stakeholder list.

4.3 Provincial and Federal Government

To date, provincial and federal government agencies have been working together to provide a streamlined consultation process where possible. Key contacts for the environmental assessment from provincial and federal governments have been identified as:

- Ministry of Northern Development Mines
- Ministry of Environment - Environmental Assessment and Approvals Branch
- Canadian Environmental Assessment Agency

Other ministries and government offices that have been involved in consultation, including review of preliminary baseline studies and OHRG's environmental assessment approach, include:

- Major Projects Management Office
- Ministry of Natural Resources
- Ministry of Labour
- Ministry of Transportation
- Ministry of Tourism and Culture
- Department of Fisheries and Oceans
- Environment Canada
- Transport Canada
- Natural Resources Canada
- Aboriginal Affairs and Northern Development Canada

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5.0 CONSULTATION METHODS

A variety of methods will be employed to gather information from stakeholders and disseminate information about the Project. Consultation, participation and negotiation techniques will also be part of consultation activities as the planning process progresses.

Plain language information sharing is the top priority in all communications with the public. Technical terms will be avoided wherever possible and a glossary of terms will be developed for circulation at a community event.

Planned methods for consultation with the public are summarized below. Further details regarding the specific planned events and communications are detailed in Section 7 Key Milestones for Consultation.

5.1 Project Website

A Hammond Reef Gold Project website is running and updated regularly with information about the Project including:

- Location and Infrastructure
- Resources
- Metallurgy
- Presentations
- Press Releases from Osisko
- Drilling Results

An online feedback form is also provided for stakeholders to provide socio-economic information.

The Project website includes a page specifically dedicated to the Environmental Assessment which would include reports and publications as well as interactive features such as videos and feedback forms.

5.2 Bi-weekly Newspaper Column

A newspaper column will continue to be published online and in local newspapers (the Atikokan Progress, the Thunder Bay Chronicle Journal and the Fort Frances Times) for the duration of the Environmental Assessment. The Community News publication began in November 2010 and occurs bi-weekly. The objective of the Community News publication is to keep the public interested in the Project through regular updates. Should serious concerns or issues arise from the community; the publication will be used to provide a consistent message on the topics of concern. Information provided to date has included updates on recent Project developments and events, background information about Osisko and baseline studies, and general topics of interest to the public, for example:

- Introduction to Osisko
- Project Description
- Baseline Studies
- Environmental Initiatives
- Tailings Alternatives
- Terrestrial Biology
- Employment
- Environmental Assessment

- Public Consultation
- Summer Students
- Financial Assurance
- Mitta Lake
- Inferred Resource Update

The Community News Brief has shown to be a popular publication. It will serve as a tool to answer questions and provide further information about concerns raised during consultation. A copy of each Community News publication is provided in the stand-alone Record of Consultation document.

5.3 Notifications

OHRG will issue mandatory notifications on the Project website and in local newspapers (Fort Frances Times, Thunder Bay Chronicle and Atikokan Progress) as detailed in the Consultation Code of Practice. Notifications will follow templates provided in the Code of Practice. Notifications will also be issued for all Open House events a minimum of 30 days before the event is scheduled to occur.

5.4 Open House Events

At least one Open House event is planned for each of the key consultation milestones (detailed in Section 7). Open House events will be held in Atikokan and target a wide audience and will include sign-in sheets, comment forms, information panels and fact sheets. Open House events will serve to build the stakeholder mailing list, provide information and identify key issues of concern.

5.5 Workshops

At least two workshops are planned for each of the key consultation milestones (detailed in Section 7). In contrast to Open House events, workshops will be by invitation, allowing for targeted stakeholder groups with specific information about workshop topics. Initial topics and attendees are suggested in Section 7.4.1. The subject matter and attendees will be further refined as the Project progresses, knowledge holders are identified, and issues of importance to the community are identified. Input will be gathered through group brainstorming, small group breakout sessions, individual reflection, and question and answer periods. OHRG will provide specific questions to allow for structured discussions:

5.6 Participation in Community Events

OHRG will participate in community events as the opportunity arises and invitations are extended. A standard information kit is under development to allow for repeated participation in a variety of community fairs and events. The information kit will include standard posters and an information booklet which provides an overview of the Project. Feedback forms will be included for ongoing comment collection.

5.7 Information Mailings

OHRG plans to determine the appetite for information mailings through comment forms and informal stakeholder feedback. Mailings will be developed based on feedback from community members on their desire to receive specific types of information and what format would be the most effective for information distribution.

5.8 Multi-media

OHRG plans to further explore the use of multi-media information sharing and stakeholder appetite for technological information. For example, OHRG has developed a 3-D visualization video showing a representation of how the Project could look on the landscape once it is built. The video was shown at Open House 1 with positive feedback. OHRG will explore the possibility of housing some digital mapping information and electronic comment forms at the municipal library or Town office

5.9 One-on-one Meetings and Information Packages

One-on-one meetings will be scheduled with individuals who will be directly affected by the Project, as required. Meetings have been scheduled with individuals who express specific concerns and require additional explanation about a specific topic. Information packages will be sent to interested parties when requested.

6.0 GOVERNMENT REVIEW

In order to ensure meaningful government review:

- Baseline studies/evaluation methodology will be confirmed with the appropriate regulatory authority;
- Meeting notes and regular updates on concerns/issues raised will be provided to MOE EAB; and
- The Government Review Team (listed in Table 1) will be given a draft EA to review.

Methods for consultation with government representatives will include ongoing dialogue through emails, letters and phone calls. Regular information exchange through draft report publications, meetings and presentations is also planned. Open communication is planned with government agencies and locally elected representatives to ensure a clear understanding of the Project plans and to receive input throughout the EA process.

6.1.1 Municipal

The Atikokan Mayor and Council will be included on all information mailings and notices, and invited to Open House events. Regular information meetings will be held with Council and staff will be consulted specifically on potential effects to municipal services and infrastructure through interviews and workshops conducted by the Project's socio-economic team.

6.1.2 Provincial and Federal

Provincial and federal agencies will be included on all information mailings and notices, and invited to Open House events. Draft reports, including the EA Report will be provided to the government for review prior to formal submission.

Agency representatives will be consulted to seek information on their mandate, and incorporate their technical knowledge as well as address their concerns. For example, consultations are currently underway with the Department of Fisheries and Oceans (DFO) and the Ministry of Natural Resources (MNR) with regard to the baseline fish sampling plan. The environmental assessment will benefit from the depth of baseline knowledge and values determinations that have been developed through substantive local and regional planning

processes such as the Forest Management Plans, Water Management Plans and Parks Plans. These plans are examples of processes with latent knowledge holders and subject matter experts from which to draw.

7.0 KEY MILESTONES FOR PUBLIC CONSULTATION

The key consultation milestones in the provincial EA process are:

Commencement of the EA report: Official commencement of the Environmental Assessment report will occur once the TOR document has been accepted as complete by the Ministry of Environment. Activities and discussions throughout this milesone will include:

- Reviewing the results of baseline studies or other investigations;
- Confirming the range of alternatives and evaluation methodology;
- Consulting on the final selection of the criteria/indicators (which is a commitment found in the ToR);
- Reviewing the results of the evaluation and the selection of a preferred undertaking; and,
- Identifying potential impacts and proposed mitigation measures.

Review of Decommissioning Plans: A mine decommissiong plan is an important step in the EA process as it provides a plan for the legacy which will be left behind once the Project is complete. Atikokan community members and local Aboriginal communities are familiar with environmental problems that have been left behind by mining companies in the past by other mining companies prior to the current regulations requiring mine abandonment planning and financial assurances. It is anticipated that the Decommissioning Plan will be an aspect of the Project planning process in Aboriginal communities will have strong involvement. OHRG will combine required Closure Plan consultation with decommissioning discussions where possible.

Submission of the EA Report: Once substantial consultation has taken place and scientific studies have been completed, the EA Report will be submitted to the Ministry of Environment for review.

Each of these milestones requires formal notification and substantial consultation. In addition to regular ongoing consultation activities, OHRG plans to have a least one major consultation event (i.e. Open House) after each milestone. The following sections outline OHRG's planned consultation activities with Project stakeholders.

7.1 Notices

Each of the key milestones will require formal Notification. Notices will be developed by OHRG, and placed on the Project website and as an advertisement in local newspapers including the Atikokan Progress, the Thunder Bay Chronicle Journal and the Fort Frances Times. Where possible, Notices will include an invitation to attend a community event where further information can be obtained and comments can be provided to OHRG team members in written or oral form. Contact information, including a street address and email address will be provided to enable stakeholder communication with OHRG.

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7.2 Report Publication

Draft and Final Reports will be available online at: www.osisko.com and in hard copy at the following locations:

Atikokan Municipal Office
120 Marks Street
Atikokan, ON P0T 1C0
807-597-1234

Atikokan Public Library
214 Sykes Street
Atikokan, ON P0T 1C0
807-597-4406

Fort Frances Library
301 Reid Avenue
Fort Frances
P9A 0A2

Thunder Bay Library
285 Red River Road
Thunder Bay
P7B 1A9

Ministry of the Environment
Environmental Approvals Branch
2 St. Clair Avenue West, Floor 12 A
Toronto, ON M4V 1L5
416-314-8001 / 1-800-461-6290

Ministry of Natural Resources
Atikokan Area - Fort Frances District
108 Saturn Avenue
Atikokan, ON P0T 1C0
807-597-6971

Ministry of Northern Development and Mines
Suite B002 - 435 James Street South
Thunder Bay, ON P7E 6S7
807-475-1331

Fort Frances Chief Secretariat
Site 206-39, R.R. #2
Fort Frances, ON P9A 3M3
807-274-5899

Métis Nation of Ontario
75 Sherbourne Street, Suite 311
Toronto, ON M5A 2P9

Osisko Mining Corp.
155 University Avenue
Suite 1440
Toronto, ON M5H3B7
416-363-8653

The Draft and Final Reports will also be available at First Nations band offices and Metis Community Councils as detailed in the Aboriginal Engagement Plan.

The notices will indicate that all comments and any questions about the Project should be directed to:

Alexandra Drapack, Manager Sustainable Development
Osisko Mining Corporation
155 University Avenue, Suite 1440
Toronto, ON M5H3B7
Tel: (416) 363-8653 ext. 110
Fax: (416) 363-7579
email: adrapack@osisko.com
website: www.osisko.com

Michelle Whitmore, Special Project Officer
Ministry of the Environment
Environmental Approvals Branch
2 St. Clair Avenue West, Floor 12 A
Toronto, ON M4V 1L5
416-314-7225

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7.3 Community Open House Events

A community Open House will be held for each of the key milestones outlined above. Open House events provide community members with a face to face opportunity to comment on Draft reports and ask questions of the Project team. Where Final reports have been published, the Open House will allow attendees to better understand how their comments were considered and incorporated. Information about the concurrent federal CEAA process, for example the Environmental Impact Statement Guidelines, will be included in Open House information materials as appropriate to minimize duplicated consultation efforts. Each Open House will have information panels with plain language information, fact sheets for attendees to take home and comment forms to collect feedback.

7.4 Focused Workshops

Workshops provide an opportunity for more focused discussions with targeted groups of stakeholders. Workshops generally include some degree of "work" or cooperative problem solving. For this reason, small groups of individuals who are not likely to have conflicts with each other will be invited to these events.

7.4.1 Commencement of the EA report

OHRG plans to hold at least three workshops while the EA report is being prepared. The invitee list will be developed based on consultation activities completed throughout the EA to date, but will likely include local resource users, community leaders and special interest groups. At least one workshop on each of the following topics is planned:

- Valued Ecosystem and Socio-Economic Components;
- Initial Baseline Study Findings; and
- Mitigation Measures.

The workshops will include some information sharing, but will focus on gathering information and problem solving of outstanding concerns identified by consultation activities completed to date. The workshops will be a combination of presentations, questions and answer periods, brainstorming sessions and individual written feedback. Examples of some of the information and materials that could be presented at the workshops include:

- Presentation of "What's Been Heard to Date";
- Draft list of Valued Ecosystem and Socio-Economic Components;
- Draft EA Report Table of Contents (reference copies); and
- Workbook (soliciting written feedback).

Representatives will be invited by email and a follow-up phone call.

7.4.2 Closure planning

In coordination with decommissioning plans, OHRG plans to hold at least two workshops while the Closure Plan is being prepared. The invitee list will be developed based on consultation activities completed throughout the EA, and based on advice provided by the Ministry of Northern Development and Mining (MNDM). Closure planning workshops will include topics of discussion such as:

- Successful Closure; and
- Visions for a Community Legacy.

The workshops will include some information sharing, but will focus on gathering information about the attendees vision of what the Project site should look like when the Project is complete, and how OHRG can contribute to a meaningful legacy in their community. The workshops will be organized in cooperation with MNDM and will include a combination of presentations, questions and answer periods, brainstorming sessions and individual written feedback.

Representatives will be invited by letter and a follow-up phone call. All information available at the Workshop will be provided to participants prior to the Workshop.

8.0 ISSUE IDENTIFICATION AND TRACKING

Comments and concerns identified by Project stakeholders are documented using a web-based stakeholder data management software program. A preliminary issues list has been developed to help categorize communications with stakeholders and to better understand which topics are most important to stakeholders. The issues list has been organized into the following categories:

- Project Phases;
- Project Details;
- EA Management;
- Atmospheric,
- Water;
- Biology;
- Geology;
- Socio-Economic;
- Human Health and Safety; and
- Aboriginal Interests.

Each stakeholder communication will be added to the stakeholder database and will be linked to the appropriate issue from the existing issues list. The issues list will be modified as needed to reflect comments and feedback received throughout the consultation process.

9.0 CONSIDERATION OF COMMENTS

The EA Report will include a Record of Consultation that summarizes Aboriginal engagement activities and public consultation in separate sections. Comments and concerns will be integrated into the EA report and will be used to inform the Project planning on an ongoing basis. The key consultation milestones listed above provide a helpful framework for incorporation of comments by soliciting comments on draft documents before the final document can be issued. Where comments cannot be incorporated, an explanation will be provided to the stakeholder and added in the stakeholder database for inclusion in the final Consultation Report.

APPENDIX B – PUBLIC CONSULTATION PLAN

OHRG will work towards the goal of responding to stakeholder comments and concerns in a timely manner. Comments will be addressed on an individual basis; however they will also be grouped into categories for efficiency and to allow the OHRG team to identify trends. Addressing and responding to comments will depend on the nature of the comments and the manner in which they were received.

It is anticipated that a variety of responses will be required including *but not limited to*:

- Correcting typographical errors,
- Providing detailed technical responses,
- Creating maps and figures;
- Clarifying technical jargon,
- Providing translation of information materials,
- Modifying field programs,
- Making site visits,
- Running additional modelling scenarios,
- Modifying management plans,
- Consider modifications to studies, criteria, indicators, evaluation methodology, mitigation measures and monitoring;
- Expanding stakeholder lists, and
- Holding additional meetings.

A comment-response table will be included in the final Consultation Report and will be shared at workshops and community events throughout the Project planning process. The final comment-response table will reference specific sections in the EA report where the stakeholder comment was addressed, or where the answer to their questions can be found. The comment-response table will group comments by issue category for efficiency; however comments and questions will be responded to and considered on an individual basis.

9.1 Issue Resolution

Occasionally, comments may not be addressed to a stakeholder's satisfaction. An issue may come up where OHRG and a group or individual cannot come to agreement on how to resolve a particular concern. In this case, OHRG will work with the stakeholder to resolve the issue through a third party if needed. The MOE will be notified of all outstanding issues, and issues will be recorded in the Record of Consultation for the EA.

10.0 CONTINUAL IMPROVEMENT

This Consultation Plan is a living document that will be revised as the Project planning process progresses. The Project is currently in its beginning stages and it is expected that plans will be modified, issues lists will be refined and stakeholder lists will be further developed. OHRG is committed to continual improvement and will take stakeholder comments into consideration throughout the EA process and beyond. OHRG believes that stakeholder input will improve the EA process and the Project on the whole and is committed to meeting all consultation regulatory requirements for both the provincial and federal EA processes.

APPENDIX C

Aboriginal Engagement Plan

Hammond Reef

Gold Project

APPENDIX C – ABORIGINAL ENGAGEMENT PLAN

TERMS OF REFERENCE - AMENDMENT

April 2012

APPENDIX C – ABORIGINAL ENGAGEMENT PLAN

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APPENDIX C – ABORIGINAL ENGAGEMENT PLAN

1.0 INTRODUCTION

Osisko Hammond Reef Gold (OHRG) is planning to develop an open pit mine 23 kilometres north of the Town of Atikokan (the Project). The Project is in the traditional territory of the Anishinaabe people, and the Rainy Lake/Rainy River harvesting territory of the Métis Nation of Ontario. The Crown has identified 13 Aboriginal (First Nations and Métis) communities that will be engaged throughout the Environmental Assessment (EA) process.

The following Aboriginal Engagement Plan is designed to meet provincial requirements, but also takes into consideration the understanding that provincial and federal governments will be working together. This plan is dynamic in nature, in order to allow for flexibility and responsiveness to community needs.

In addition to the engagement plan outlined in the following sections, Aboriginal communities will be provided, at a minimum, the same level of information provided to Project stakeholders, and invited to Open House events. Draft reports and preliminary results, including the EA Report will be provided to Aboriginal communities for review prior to public distribution or formal submission. Meetings and discussions will be scheduled to discuss publications as they are made available.

OHRG understands that Aboriginal people may have constitutionally protected rights, and can offer a unique understanding of the environment based on their special relationship with the land. The Duty to Consult with Aboriginal people, where engaged, lies with the Crown and, although procedural aspects of the consultation process can be delegated to project proponents, OHRG understands that ultimate responsibility for meeting any duty to consult rests with the Crown.

2.0 BACKGROUND

OHRG is committed to supporting capacity building to ensure that local First Nations and Métis communities can meaningfully participate in the Project. The result of engagement with Aboriginal communities thus far includes the signing of a Resource Sharing Agreement (RRSA) with the Fort Frances Chiefs Secretariat First Nations (seven member communities) and the Lac Des Mille Lacs First Nation in December 2010. In March 2012, OHRG signed a Memorandum of Understanding (MoU) with the Métis Nation of Ontario, including four identified Métis community councils (Kenora, Sunset Country, Northwest, and Atikokan). The MoU provides capacity for community meetings, engagement activities, a review of the EA Report and a traditional use study in the Project area. In addition, OHRG has employed First Nations and Métis community members to work on the exploration stage of the Project and First Nations field monitors participated in the environmental baseline field programs in a youth summer student capacity.

3.0 OBJECTIVES

The following is a summary of the objectives for Aboriginal Engagement throughout the Project:

- Seek traditional land use information from potentially affected Aboriginal communities;
- Incorporate information about traditional use, Aboriginal and treaty rights into the EA Report;
- Provide identified Aboriginal communities a sufficient opportunity to understand the Project and express any concerns;
- Where a duty to consult is owed to Aboriginal communities, identify any potential adverse effects to their Aboriginal or treaty rights arising from the Project and consider appropriate measures to mitigate such effects.

The EA Report will meet these objectives by clearly:

- Documenting how the Project has been modified as a result of input from potentially affected Aboriginal communities;
- If necessary, explaining why the Project cannot be modified to reduce or avoid any identified impacts; and
- Explaining how the communities have been appropriately accommodated, where required, for any impacts on Aboriginal or treaty rights that cannot be avoided.

4.0 DUTY TO CONSULT

OHRG understands that Aboriginal people may have constitutionally protected rights, and can offer a unique understanding of the environment based on their special relationship with the land. The Duty to Consult with Aboriginal people, where engaged, lies with the Crown and, although procedural aspects of the consultation process can be delegated to project proponents, OHRG understands that ultimate responsibility for meeting any duty to consult rests with the Crown.

The Crown's duty to consult arises where: i) the Crown has actual or constructive knowledge of an asserted or established Aboriginal or treaty right; ii) the Crown contemplates conduct; and, iii) there is potential that the contemplated conduct may adversely affect the asserted or established Aboriginal or treaty right. The degree of required consultation by the Crown will vary depending on the nature of the asserted or established Aboriginal or treaty right and the seriousness of any potential adverse effects on the right, flowing from the proposed activity.

4.1 Delegation of Procedural Aspects

Although the Duty to Consult with Aboriginal people ultimately rests with the Crown, the provincial and federal governments have delegated some procedural aspects of consultation to Osisko, as follows:

- Providing information about the nature of the proposed project, which includes:
  - Providing information in a format that is accessible (ex. Translation of presentations to Ojibway and the use of interpreters to document the concerns of elders. Information should be sufficient to allow for Aboriginal communities to provide comments on their views of the Project and whether the Project may adversely impact any Aboriginal and treaty rights);
  - Conducting any meetings or information sessions that may be appropriate to ensure the community has a clear understanding of the Project in order to respond; and
  - Following up with Aboriginal communities to ensure that they are aware of the opportunity to express comments and concerns about the Project including any concerns regarding potential adverse impacts on existing or asserted aboriginal or

treaty rights (e.g. hunting, fishing) and any concerns over potential impacts to sites of cultural significance (e.g. burial grounds, archaeological sites).

- Gathering information about the potential of the Project to impact Aboriginal or treaty rights (as opposed to assessing the information gathered which is the Crown's role);
- Proposing/discussing measures to mitigate concerns heard;
- Maintaining an appropriate record of the process steps taken; what was shared (where possible, recognizing that traditional use information may not be made public), what was heard, how it was considered.

The benefits of the delegation approach include:

- OHRG has a vested interest in ensuring a meaningful process;
- OHRG is in the best position to describe the Project and discuss any possible mitigation of concerns heard;
- OHRG can actively build capacity and knowledge transfer; and
- OHRG will establish and build relationships – fostering peaceable co-existence and enhancing opportunities for benefits.

4.2 Crown Assessment and Oversight

In order to ensure its consultation obligations are being met, where required, the Crown will provide ongoing assessment and oversight of the Aboriginal engagement activities carried out by OHRG, through the methods outlined below.

4.2.1 Confirmation of Identified Communities

The provincial Crown has verified the initial list of Aboriginal communities to which a Duty to Consult may be owed. The scope of consultation is determined by the Crown and is assessed on an on-going basis throughout the EA and permitting/approval process. Ongoing work and engagement will allow further determination of how the Project may impact the rights of specific Aboriginal communities. As the EA progresses, it is anticipated that engagement activities will become focussed on those communities whose rights may be affected by the Project.

4.2.2 Update Meetings

Regularly scheduled update meetings between OHRG, the CEA Agency, MOE and MNDM will provide a forum for continual dialogue and updates about completed and planned engagement activities. Meetings will be documented through formal meeting notes that are to be circulated and approved by all attendees. Crown representatives are also welcome to attend meetings between OHRG and Aboriginal communities and may choose to do so for key events or as resources allow.

4.2.3 Review and validation of meeting notes

In addition to approval of meeting notes from engagement update meetings, notes from meetings with Aboriginal communities where the Crown has not been present will be distributed to the participating community representatives and copied to the MOE EAB, MNDM, and the CEA Agency as part of the goal of meeting validation by the Aboriginal communities in attendance.

5.0 COMMUNITY IDENTIFICATION

Aboriginal communities with a potential interest in the Project were identified using the following four methods:

- Initial Identification by Brett Resources
- Preliminary Screening by OHRG
- Verification with Aboriginal governance groups
- Provision and verification of a list by federal and provincial Government Agencies

In *Haida v. British Columbia* (2004), the Supreme Court of Canada determined that the Crown's duty to consult is proportionate to the strength of an Aboriginal peoples' claim and the degree of potential adverse effects of the proposed activity on that claim. OHRG's approach is to be inclusive with information sharing and listen to concerns from all communities. Ongoing work and engagement will allow OHRG to further determine how the Project may impact specific Aboriginal rights. As the EA progresses, it is anticipated that Aboriginal engagement will be focussed on those communities whose rights will be affected by the Project.

A preliminary list of Aboriginal contacts for those communities identified with a potential interest in the Project is provided in the table below.

Table 1: Preliminary List of Aboriginal Contacts

Contact	Title	Organization	Mailing Address	City	Postal Code
Melanie Paradis	Director of Lands, Resources & Consultations	Métis Nation of Ontario	75 Sherbourne Street Suite 311	Toronto	M5A 2P9
Clint Calder	President	Sunset Country Métis Council	PO Box 403 426 Victoria Avenue	Fort Frances	P9A 2C3
Marlene Davidson	President	Atikokan Métis Council	Box 1630, 33 Birch Road	Atikokan	P0T 1C0
Alvina Cimon	President	Northwest Métis Nation of Ontario Council	34A King Street	Dryden	P8N 1B4
Joel Henley	President	Kenora Métis Council	70 Park Street	Kenora	P9N 1Y6
Tammy Ryll	Executive Director	Fort Frances Chiefs Secretariat	Sute 206-39 RR #2	Fort Frances	P9A 3M3
Judy White Cloud	Chief	Lac des Mille Lacs First Nation	3-116 S. Syndicate Ave.	Thunder Bay	P7E 1C6
Norman Jordan	Chief	Lac La Croix First Nation	Box 640	Fort Frances	P9A 3M9
Janice Henderson	Chief	Mitaanjigaamiing First Nation	Box 609	Fort Frances	P9A 3M9

Contact	Title	Organization	Mailing Address	City	Postal Code
Wayne Smith	Chief	Naicatchewenin First Nation	Box 15 RR #1	Devlin	P0W 1C0
Will Windego	Chief	Nigigoonsiminikaaning First Nation	Box 68	Fort Frances	P9A 3M5
Chuck McPherson	Chief	Couchiching First Nation	RMB 2027 RR #2	Fort Frances	P9A 3M3
Jim Leonard	Chief	Rainy River First Nation	Box 450	Emo	P0W 1E0
Earl Klyne	Chief	Seine River First Nation	Box 124	Mine Centre	P0W 1H0
Ruben Cantin	Chief	Wabigoon Lake Ojibway Nation	Site 115 Box 300 RR #1	Dryden	P8N 2Y4

6.0 ENGAGEMENT METHODS

A summary of Aboriginal engagement methods designed to meet the stated objectives is provided below. The nature of this Plan is dynamic, and it is anticipated that methods may change or need to adapt in accordance with requirements of the Aboriginal communities.

OHRG's approach is to be inclusive with information sharing and listen to concerns from all interested communities. Ongoing work and engagement will allow OHRG to identify how the Project may effect asserted or established Aboriginal or treaty rights. As the EA progresses, it is anticipated that Aboriginal engagement will become focussed on those communities whose rights may be affected by the Project.

6.1 Métis Nation of Ontario Consultation Protocol

Aboriginal engagement activities with the identified community councils of the Métis Nation of Ontario (MNO) will occur through follow the Consultation Protocol for Treaty #3 (the Protocol). As per the Protocol a five person Consultation Committee will be established who will develop a work plan that guides the process and coordinates communications with MNO citizens and OHRG.

6.2 Bi-Weekly Newspaper Publications

A newspaper column has been published online and in local newspapers (the Atikokan Progress, the Thunder Bay Chronicle Journal and the Fort Frances Times) since November 2010. In response to feedback from Aboriginal communities, OHRG now plans to expand the news publication to include the following Aboriginal newspapers:

- Wawatay News
- Métis Voyageur

The objective of the Community News publication is to keep the public and Aboriginal communities with an interest in the Project aware through regular updates. Should serious concerns or issues arise from

the communities; the publication will be used to provide a consistent message on the topics of concern. Information provided to date has included updates on recent Project developments and events, background information about Osisko and baseline studies, and general topics of interest.

6.3 Presentations to Chiefs and Community Council Presidents

Regular information sessions will be held for the identified groups in order to ensure that there is a broad understanding of the Project, participation opportunities exist for their members and the group members are aware of what actions, if any, have been taken to address issues that have been raised by the communities. Information sessions will be held in Atikokan, Thunder Bay or a preferred location identified by the Aboriginal group. The Public Consultation Plan (Appendix B) identifies the following milestones:

- Commencement of the EA Report including:
  - Reviewing the results of baseline studies or other investigations;
  - Confirming the range of alternatives and evaluation methodology;
  - Consulting on the final selection of the criteria/indicators (which is a commitment found in the ToR);
  - Reviewing the results of the evaluation and the selection of a preferred undertaking; and,
  - Identifying potential impacts and proposed mitigation measures.
- Review of Decommissioning Plans
  - Including commencement and submission of the Closure Plan
- Submission of the EA Report

Presentations to the First Nations Chiefs and Métis Community Council Presidents will be made for each of the above milestones. Namely, the following groups will be provided with the same information provided to the public stakeholders at each of the milestones listed above:

- Fort Frances Chiefs Secretariat
- Métis Nation of Ontario consultation committee (includes Community Council Presidents)
- Lac des Mille Lacs First Nation
- Wabigoon Lake First Nation

6.4 Community Meetings

OHRG will visit identified Aboriginal communities regularly to ensure that interested individuals understand the details of the Project and that their concerns are heard and documented. To date, information sessions have included Project Overview presentations given by OHRG and Mining 101 sessions facilitated by a third party.

6.5 First Nations and Métis Field Monitors

OHRG retained two full time employees as First Nations field monitors (youth summer student positions) to accompany crews on the summer 2011 baseline field programs. The monitors were individuals selected by the Fort Frances Chiefs Secretariat and Lac des Mille Lacs First Nation. The presence of First Nations field monitors offers a tangible benefit to the communities through employment and training. The monitors participated in the following field programs:

- Aquatic Biology
- Terrestrial Biology
- Bathymetry
- Hydrology

- Open House 1
- Archaeology

The monitors prepared formal presentations about their experience working for OHRG that were given to the Chiefs and Council. These individuals also provided informal information to those in their communities and a level of assurance that the field work was being done in a transparent manner. OHRG plans to continue the use of First Nations throughout the 2012 field program, and will expand the hiring to three positions in order to accommodate the addition of a Métis youth community member.

6.6 Avoidance and Mitigation Discussions

The Crown's duty to consult is proportionate to the strength of an Aboriginal peoples' claim and the degree of potential adverse effects of the proposed activity on that claim. In addition to informing Aboriginal communities about the Project and recording their concerns, OHRG will undertake discussions with individuals or groups who will be directly and significantly adversely affected by the Project, in the case that any such individual or group is identified. Discussions will be focussed on avoidance and mitigation of potential effects to Aboriginal and treaty rights.

6.7 Elder Forums

The Chiefs of the nine First Nations communities have identified the need to include Elders in the EA process. In August 2011 OHRG organized and facilitated an Elder's Forum in cooperation with provincial and federal regulators.

OHRG plans to hold additional Elder's Forums throughout the Project planning process. Elders from all nine First Nations communities, provincial and federal government officials will be invited to attend and share their views.

The format of the Elder's Forums will be dictated by the communities, but will likely include a series of short presentations by OHRG and government officials followed by discussion and speeches by Elders. Professional translators will be present and notes will be taken to document questions and concerns.

6.8 Site Tours and Field Visits

OHRG has provided tours of the Hammond Reef exploration site and Osisko's Malartic mine site in Quebec to several First Nations Chiefs and Elders. These visits have been received well and further site tours are anticipated, as requested. Some First Nations Elders have visited Mitta Lake, the lake that will be drained as part of the Project. The Elders performed a pipe and drum ceremony there, and offered tobacco as an apology for the need to drain the lake. Further site tours and field visits will be provided on a case-by-case basis to allow for a greater understanding of the Project and provide a forum for information sharing.

6.9 Verification of Meeting Notes

Through consultation by CEAA-MNR-MOE-MNDM during the ToR comment period the Crown heard from communities that they would like the opportunity to verify that OHRG has accurately recorded their comments and concerns. OHRG will strive to create and circulate meeting notes to community contacts in a timely manner. Community contacts will be given an opportunity to provide comments on the notes and verify for accuracy before they are finalized. The Crown will be included on this correspondence.

This process will continue throughout the EA process, with a focus on concerns, alternatives and potential mitigation measures.

7.0 REPORT PUBLICATION

Draft reports and preliminary results, including the EA Report, will be provided to the identified Aboriginal communities for review prior to public distribution or formal submission. Meetings and discussions will be scheduled to discuss publications as they are made available.

Draft and Final Reports will be available online at: www.osisko.com. Hard copies will be provided the following First Nations band offices, where agreed by the band administration:

- Lac Des Milles Lacs First Nation
- Couchiching First Nation
- Lac La Croix First Nation
- Mitaanjigamiing First Nation
- Naicatchewenin First Nation
- Nigigoonsiminikaaning First Nation
- Rainy River First Nation
- Seine River First Nation
- Wabigoon Lake Ojibway Nation

The Draft and Final Reports will also be distributed to the four local MNO Community Councils and to the MNO. The notices will indicate that all comments and any questions about the Project should be directed to:

Alexandra Drapack, Manager Sustainable Development
Osisko Mining Corporation
155 University Avenue, Suite 1440
Toronto, ON M5H3B7
Tel: (416) 363-8653 ext. 110
Fax: (416) 363-7579
email: adrapack@osisko.com
website: www.osisko.com

Michelle Whitmore, Special Project Officer
Ministry of the Environment
Environmental Approvals Branch
2 St. Clair Avenue West, Floor 12 A
Toronto, ON M4V 1L5
416-314-7225

8.0 TRADITIONAL USE STUDIES

Information about traditional land use is required for the socio-economic and cultural resources studies and to compliment the hydrology, aquatic and terrestrial biology studies. The EA Report will include a description of the lands, waters and resources of specific value to Aboriginal people on which adverse environmental effects could occur, or at a minimum, include a plan to gather that information. The following information requirements have been identified in the ToR and the federal Environmental Impact Statement (EIS) Guidelines and will be fulfilled through a traditional use study in a defined study area:

- Identification of asserted and established Aboriginal and treaty rights
- Identification of traditional territories
- Identification of traditional activities
    - Camping sites and traditional travel routes
    - Traditional use of waterways and water bodies
    - Dependence on country foods (from hunting, fishing, trapping, planting and harvesting)
    - Fishing locations and fish species of importance
    - Harvesting locations and plants species used for medicinal and ceremonial purposes
    - Spiritual site locations and nature of use
- Evaluation of the ability of future generations of Aboriginal people to pursue traditional activities
- Current and projected value of the hunting, trapping and guiding industries

8.1 First Nations

OHRG will lead the First Nations traditional use study, with guidance from the Chiefs and Elders from the potentially affected communities. Information gathering will focus on a review of existing published information, formal information requests to the nine identified First Nations communities, and interviews with individual resource users or groups of Elders.

The study will seek to describe the general nature and location of traditional activities within a defined study area, but will not seek to quantify harvesting volumes or prioritize specific areas based on productivity or frequency of use. A study area will be identified and defined as the area within which exercised Aboriginal and treaty rights could be impacted by the Project.

8.2 Métis

The Métis Nation of Ontario has indicated their desire to lead a traditional use study in the area of the Project. OHRG has signed an MoU which provides capacity to carry out this study. The traditional use study shall identify (a) customs and traditions that were historically important features of Métis communities in the Project area prior to the time of effective European control, and that persist in the present day and (b) potential effects of the Project on such customs and traditions. Ongoing discussions will take place to coordinate OHRG's role in the study and allow for information sharing.

9.0 INCORPORATION INTO ENVIRONMENTAL ASSESSMENT

The EA Report will include a Record of Consultation that summarizes Aboriginal engagement activities and public consultation in separate sections. Information received throughout Aboriginal engagement activities will be incorporated into the EA Report through contribution of information about the existing environment, resource distribution and abundance, long and short term trends, and the use of lands and water resources. Traditional use information may also contribute to Project siting and design, evaluation of potential effects and their significance, effectiveness of proposed mitigation, and consideration of follow-up monitoring.

The primary goal will be to provide information to the EA technical disciplines (i.e. terrestrial biologists) as part of their component-specific literature review. A concordance table will be developed which will detail how the information has been incorporated and considered for each component of the EA. A second goal will be to identify and validate Valued Ecosystem Components for potential effects to Aboriginal and treaty rights through the collection of traditional use information.