



**STAR-ORION SOUTH DIAMOND PROJECT
ENVIRONMENTAL IMPACT ASSESSMENT**

**APPENDIX 1-D
Project-Specific Guidelines**

FINAL PROJECT-SPECIFIC GUIDELINES
FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT

STAR-ORION SOUTH DIAMOND PROJECT
FORT À LA CORNE PROVINCIAL FOREST, SASKATCHEWAN

SHORE GOLD INC.

These guidelines have been prepared by the Saskatchewan Ministry of Environment to assist Shore Gold with the environmental impact assessment of their proposed diamond mine and associated ancillary facilities.

Province of Saskatchewan
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1.0 Introduction

The proposed Star-Orion South Diamond Project includes the excavation of an open pit at the Star Kimberlite and potentially, a second open pit at the Orion South Kimberlite, construction of processing facilities and construction of associated infrastructure to commercially extract diamonds from these kimberlites. The potential development site is located in the Fort à la Corne Provincial Forest (FalC) approximately 65 kilometres east of Prince Albert. The project footprint in the FalC is estimated to be 3,000 to 4,000 hectares (2.3 to 3.0% of the forest) in close proximity to the Saskatchewan River.

The Star Kimberlite portion is mainly owned by Shore Gold Inc. (Shore Gold); the Orion South Kimberlite and a small part of the Star Kimberlite known as “Star West” is owned by the Fort à la Corne Joint Venture (Shore Gold's wholly owned subsidiary Kensington Resources Inc. 60%, Newmont Mining Corporation of Canada Limited 40%). Shore Gold is the operator of both parts of the proposed project.

Shore Gold has been informed that the project will require an environmental assessment under The Environmental Assessment Act (Saskatchewan)(the EA Act). Shore Gold is required, pursuant to section 9 of the EA Act, to conduct an environmental impact assessment (EIA) and prepare and submit to the Minister of Environment an environmental impact statement (EIS) for technical and public review. These project-specific guidelines have been prepared to assist Shore Gold with the conduct of the environmental impact assessment and preparation of the environmental impact statement.

It should be noted that other kimberlites have been identified in the FalC. The mining of these kimberlites are not included in the Star-Orion South project as described in the November 2008 proposal. The mining of additional kimberlites outside the proposed pit boundaries for the Star-Orion South project would require future, and separate, applications for environmental assessment approval.

1.1 Requirement for Environmental Impact Assessment in Saskatchewan

In Saskatchewan, the proponent of a project that is considered to be a “development” pursuant to Section 2(d) of the EA Act is required to conduct an environmental impact assessment of the proposed project and prepare and submit an environmental impact statement to the Minister of Environment.

The Environmental Assessment Branch (EA Branch) of the Saskatchewan Ministry of Environment (“ministry”) conducted a technical review of Shore Gold’s project proposal including seeking comments on the proposal from provincial and federal ministries and agencies and First Nations and Métis communities. Based on the results of the technical review, the project met the definition of a “development”. As a consequence, Shore Gold is required to conduct an EIA of the project and submit an EIS to the Minister of Environment.

When the EIS is prepared and submitted, technical reviewers representing provincial and federal ministries and agencies, and First Nations and Métis communities will review the EIS. When satisfied that the EIS adequately describes the potential impacts of the development on the environment, the ministry prepares Technical Review Comments. These comments assist in the review of the EIS and evaluating the environmental acceptability of the project. The EIS and comments will be made available for inspection and comment prior to the Minister's decision on the project. Notification of review period, locations, and contact information will occur through newspaper advertisement as well as direct correspondence (upon request).

Should the proposal to develop the diamond mine and associated ancillary facilities in the FalC be found to be environmentally acceptable by the Minister, Shore Gold would be required to apply to Saskatchewan regulatory agencies for the necessary approvals, permits and licenses that regulate construction and operation of the proposed development and to comply with all applicable provincial laws.

1.2 Intergovernmental Cooperation on the Environmental Assessment

Government of Canada

In accordance with the Canada-Saskatchewan Agreement on Environmental Assessment Cooperation (2005) Shore Gold's proposal to develop the diamond mine or mines and associated ancillary facilities was provided to the Government of Canada for review. Under the Agreement, federal and provincial environmental assessment processes, directed respectively by the Canadian Environmental Assessment Act and The Environmental Assessment Act (Saskatchewan), are coordinated for projects with joint federal and provincial jurisdiction. The Saskatchewan Ministry of Environment Environmental Assessment Branch is the lead agency and contact for the project.

The diamond project qualifies as a Major Resource Project, as defined under the federal government's Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects. The Major Projects Management Office (MPMO) will work closely with the Canadian Environmental Assessment Agency (CEAA) and federal regulators to monitor and track the project as it moves through the federal regulatory process.

CEAA and MPMO completed a survey of federal departments with respect to determining interest in the FalC diamond project. Based on the responses to this survey, Fisheries and Oceans Canada (DFO), Natural Resources Canada (NRCan), Transport Canada (TC) and Indian and Northern Affairs Canada (INAC) have determined that they may be triggered as Responsible Authorities under the Canadian Environmental Assessment Act (CEA Act). The determination on the type (screening, comprehensive study or panel review) of federal environmental assessment will be made upon receipt of additional information requested from the proponent.

1.3 Duty to Consult

The Crown has a constitutional obligation to consult with affected First Nations and Métis communities when making decisions that may adversely impact the exercise of Treaty or Aboriginal rights. The courts have confirmed that the Crown may consider opportunities for Aboriginal consultation that are available within the existing processes for regulatory or environmental review. Therefore, consultations undertaken in accordance with legislative requirements or regulatory processes, such as environmental assessment, may satisfy, in whole or in part, the duty to consult.

The Crown will utilize the EIS to inform itself of the impacts of the development on traditional uses, and therefore on Treaty and Aboriginal rights. To the extent possible, mitigation proposed within the EIS may provide accommodation for rights impacted by the proposed project. Consultation with First Nations and Métis communities will continue as required/needed throughout the regulatory phase of the project, should the development be approved.

1.4 Project-Specific Guidelines for the Environmental Impact Statement

These project-specific guidelines (the “guidelines”) have been prepared by the Ministry of Environment to assist Shore Gold with the conduct of the EIA for the development of a diamond mine or mines and associated ancillary facilities and the preparation of the EIS.

The draft project-specific guidelines were made available for public comment for 30 days from July 11 to August 17, 2009. Upon request, the Ministry of Environment extended the review deadline to September 17, 2009.

These final project specific guidelines reflect concerns and issues that have been identified by provincial and federal officials, First Nations and Métis communities regarding the proposed development and outline the information that should be included in the EIS.

The guidelines should not be considered as either exhaustive or restrictive, as concerns other than those already identified could arise during the investigations associated with the EIA. The Ministry of Environment is prepared to provide advice and assistance throughout the EIA with regard to the identification of environmental concerns and appropriate assessment methodologies.

2.0 EIS Content

2.1 General Requirements

The EIS is a statement of the proponent’s environmental conclusions and commitments regarding the development and, as such, must be explicitly endorsed by the proponent.

The EIS will be made available for review and should be written so that non-specialists can understand it. In particular, the executive summary must be easily understood and printed in black and white so that reproductions can be easily made. A glossary of technical terms is also useful.

The topics to be addressed in the EIS are described below under each section heading. Sufficient information needs to be provided for each so that informed conclusions can be reached regarding the potential for impacts on the various components of the environment. However, the greatest time and effort should be applied to data collection and interpretation related to the most significant impacts as identified by the proponent and through these project-specific guidelines. The proponent of the project must provide the rationale as to why any issues identified in the guidelines were not adequately addressed in the EIS and highlight key impacts that were identified for more intensive investigation.

Where external sources of information or data are used a brief reference for the source at the point at which the information is presented and a complete reference at the end of the EIS should be provided. Where conclusions that are critical to the assessment of environmental impacts are cited from other reports, the proponent should provide sufficient detail of the originating data and analysis so as to enable a critical review of that material. Such detailed reference material could be submitted as an appendix to the EIS. The EIS should be a stand-alone document upon which critical review can be undertaken. Any engineering work as described in The Engineering and Geoscience Professions Act, included or appended to the EIS, must be stamped by a qualified professional engineer in the appropriate discipline.

When submitting the EIS, three digital copies (Word and/or PDF) and approximately 25 paper copies are required (confirm number with the EA Project Development Administrator). The proponent may wish to print and bind the EIS in a way that is amenable to revision should changes to the EIS be required following technical review.

2.2 EIS Executive Summary

An executive summary of the EIS is required. It should **briefly** summarize the EIS under the following topic areas:

- purpose of carrying out the development;
- description of the preferred option and alternative means for development;
- the benefits and costs of the preferred option and the alternatives;
- potential for short and/or long-term environmental effects of the development, including the potential for spills/malfunctions/accidents;
- potential cumulative environmental effects that are likely to result from the development in combination with other local/adjacent projects (past, present and future) and activities in the short and long term;
- significance of the identified potential environmental impacts;
- mitigation measures including their environmental outcome and technical and economical feasibility;

- decommissioning and reclamation;
- monitoring programs for the development at all phases; and
- involvement activities and comments received along with Shore Gold's responses.

To enhance public involvement, the executive summary should be written in clear language and avoid the use of technical terms and jargon and be available under separate cover.

2.3 Project Description

2.3.1 General Requirements

The EIS needs to provide detailed descriptions of all project phases: planning; construction; operation and maintenance. A conceptual decommissioning and reclamation plan is addressed in section 2.8 of this document. Information and technical data, particularly about the preferred option, must be sufficient in detail and scope to enable an accurate assessment of the potential environmental impacts of the proposed development and any related cumulative impacts. Drawings and maps are to be employed wherever relevant. Information should be included on:

- project ownership;
- project location, including map(s) showing exact location of proposed development and alternative sites/routes mapped at scales appropriate to effects and with identifiable geographic and environmental features, surface and ground water resources, current land use and nearby communities, residences, and industries;
- status and map of current and proposed surface lease(s) and active mineral disposition relative to the project (use NAD 1983 CSRS 98 datum, Zone 13N for maps);
- the purpose and need for the project;
- description of proposed project (including project life, dimensions, plans) up to and including closure;
- alternative means of accomplishing the project;
- types and quantities of materials, energy, power and water required;
- construction materials and power supply requirements;
- sourcing of construction/operation supplies and servicing;
- explosives to be manufactured or stored and the maximum quantity of explosives at each facility;
- anticipated schedule for all phases;
- estimated personnel, skill requirements and ongoing employment opportunities for local communities, First Nations and Métis people;
- occupational health and safety considerations;
- security considerations;
- assessments of risk of failure at all phases and contingency plans, emergency measures and procedures in place. The proposed development

- area has been ranked as being at very high risk from wildfire and requires a plan for managing wildfire risks at the mine and ancillary developments;
- technical issues and new technologies specific to the project;
 - a description of traditional land use, traditional knowledge, and current use of the study area by First Nations and Métis people;
 - a description of the potentially affected environment;
 - proposed water diversions and channel re-alignments: identification (shown on drainage area map) and description of all water diversions and channel re-alignments including the rationale for proposing the diversion;
 - contaminant releases and their impact on the environment; and
 - proposed monitoring and mitigation measures.

Diamond exploration activities in the FalC have been ongoing since 1988. A description of currently existing facilities and procedures should be included to provide a context for discussion of the potential project-specific and cumulative impacts of the proposed expansion on environmental conditions. This description should contain an assessment of the performance of the current facilities/operations and include relevant data and related components of the environmental management system.

2.3.2 Site Plan and Operations

In the project proposal, the proponent indicated that the project “includes the excavation of an open pit at the Star Kimberlite and potentially, a second open pit at the Orion South Kimberlite”. Similar to describing project alternatives, proponents are encouraged to describe potential future activities in the EIS. However, the extent of the proposed development for which approval is being sought must be clearly defined in the EIS. That is, it must be apparent to the reader that estimates and impacts are appropriate for the development proposed.

A conceptual mine plan must be included in the EIS which describes:

- proposed production and mine life;
- mining scenarios;
- mine infrastructure and locations at each kimberlite, including waste management facilities;
- operational procedures for all aspects of the project with the potential to impact the environment;
- operational procedures for all aspects of the project with the potential to impact on traditional uses;
- characterization and management of kimberlites and overburden components, size and location, identification of potential contaminants;
- water management issues at each kimberlite:
 - description and quantification of surface/waste/potable water handling systems;
 - mine dewatering procedures and anticipated quantity and quality of produced mine waters;

- zones of ground water, surface water, air (e.g. volatilization of contaminants) or soil (e.g. salinization) with potential to be impacted directly or indirectly;
- description of type and concentration of potential contaminants that will be in the process and pit water and discharge;
- potential for and proposed points for control and monitoring of discharge to the environment;
- list the potential contaminants in the waste water (e.g., suspended solids, major and minor ions, total dissolved solids).
- an estimate of the anticipated air emissions;
- present and potential long-term effect of leaching and any other environmental effects as a result of storing tailings (unprocessed ores, processed ores and associated wastes and overburden);
- on site works at each kimberlite, storage/treatment of any dewatering waters, sedimentation ponds, effluent and discharge treatment systems;
- residual explosives and potential environmental effects;
- detailed descriptions and plans of all physical works including requirements such as new access roads, road upgrades (identify if municipal or provincial highways will be used), water crossings, borrow pits, waste disposal sites, electrical, gas line and telecommunications options, etc.
- for ancillary features owned by third parties (e.g., transmission lines, gas pipe lines, water pipe lines) a minimum of high level screening information to identify potential impacts is required; and
- anticipated type, size and frequency of traffic and loads that public road and rail infrastructure will be subjected to and including proposed mitigation for access and safety concerns.

2.3.3 Objectives/Costs and Benefits

The EIS should clearly outline the need for the project and describe the associated benefits in contrast to any potential environmental, social or economic costs as they may impact overall operations, the industry, community, First Nations, Métis people or the public.

2.3.4 Project Options/Alternatives

Alternative means are defined as the various technically and economically feasible ways that the project can be implemented. The EIS should discuss, in detail, the criteria (environmental, engineering, economic) used by Shore Gold to evaluate alternative means, locations and/or designs for the project and justify the preferred option on environmental considerations.

The criteria used to evaluate alternative means should reflect the potential concern for both the short-term (during operations) and long-term (after decommissioning)

physico-chemical stability and environmental impacts of the project. Comparison to a base case scenario (no mitigation) is helpful where possible.

Three water management options for the project were proposed. For each option the EIS must describe how any proposed releases to the environment (surface or ground water) will be managed to avoid causing adverse effects. The EIS must describe the anticipated quality and quantity of wastewater from the proposed operations, alternate methods for treatment /handling the wastewater and the recommended option that most adequately protects the environment;

The project proposal presents numerous options for transportation and power access to the mine. As with other design options, the EIS should describe the various corridor alternatives including land uses and critical environmental values along each potential corridor. The routing analysis should include consideration of access, existing corridors, disturbed land and cumulative effects of additional linear disturbance on the wildlife. Reviewers favour minimizing the number and length of linear corridors within the island forest and presenting options for reducing human / wildlife interactions.

It is the proponent's intention, as stated in the project proposal, to continue exploration activities concurrently with construction and operation of the proposed mine. To the extent possible, given that the nature of exploration is results driven, the EIS should indicate estimated work schedules for proposed short and long term exploration activities in the FalC.

2.4 Description of Existing Environment

The information contained in the EIS must provide project-specific data at a level of detail that allows for the evaluation and prediction of potential environmental effects of the proposed development, including ancillary developments such as pipelines, utility corridors and rail and road access. Existing data may be used; however it will need to be supplemented with field data to predict site-specific impacts. Such data must be collected by qualified personnel using known and accepted methodologies which are also described in the EIS.

The EIS should, where appropriate, contain information on already-impacted sites in the area and, if known, their pre-impact baseline conditions. This information allows for the evaluation of potential cumulative effects of the current development in the context of other pre-existing or proposed projects in the region.

The data in the EIS should satisfy the following criteria:

- the baseline data accurately describes the environment affected by the project as proposed such that both project-specific and cumulative impacts can be predicted (where relevant and to the extent possible, existing data should be used to evaluate how historic industrial activities have influenced the current status of the environment at the site);

- data must provide a sound basis for comparative monitoring and the development of sound decommissioning, reclamation and closure procedures;
- the EIS must be complete, in terms of data availability and presentation, especially with respect to those aspects of the environment likely to be impacted (see Section 2(e) of the EA Act for the definition of “environment”);
- data is to be stored in an acceptable electronic format and be available to Ministry of Environment upon request.

Procedures used in predicting impacts to the environment are presented in Section 2.9. The following sections may also refer to potential impacts and mitigation requirements that are associated with various environmental and baseline conditions.

2.4.1 Climate

Climate and meteorologic information must be provided in the EIS. Precipitation patterns, temperature and evaporation are examples of climate variables that may influence the management of water, especially in the context of local hydrology and proposed discharges to the Saskatchewan River. Any use of off-site data must be thoroughly discussed and qualified with an understanding of local and regional variability and the geographic locations of on-site and off site meteorological stations.

2.4.2 Geology, Hydrogeology and Soils

The EIS must contain a description of the soils, geology and hydrogeology within the proposed development area, alternative sites and any adjacent areas that may be influenced. This information should include relevant information on surficial geological parameters that may have impacts on the project (e.g., ground stability, porosity, slumping and material weathering), aquifer systems, aquatards, and soil characteristics.

The geology of kimberlites is complicated and there are numerous kimberlite bodies involved comprised of multiple eruptive units or phases, each of which is texturally, mineralogically, physically and chemically distinct. Mineralogy for all rocks and for each major phase of kimberlite is required, including hydrocarbon content and trace elements whole rock geochemistry to see if there are any unusual elements present that would not normally be expected. If surrogates are used (tests are run on representative samples rather than bulk samples) then the EIS must contain sufficient mineralogical research to verify the surrogate is typical of the kimberlite or wall rock.

The EIS should describe the ground water flow paths that may connect to surface waterbodies potentially affected by contaminated ground water. The EIS should provide data as to flow directions and rates, water quality and quantity, results and interpretation of aquifer draw down tests, for all aquifers and specific hydrogeologic conditions that potentially could affect ground water flows or the

movement and/or dispersal of contaminants in ground water flows (e.g., permeability, hydraulic conductivity, porosity, fractures, artesian conditions, pH, fluid density, geochemistry and flow path attenuation or adsorption mechanisms).

A characterization of hydraulic parameters and ground water chemistries of all hydrostratigraphic units, including evaporite units (if present in the study area) should be included in the EIS. The EIS should also characterize the natural hydrocarbon concentration of any formation water likely to be discharged in the course of pit dewatering, and of any waste rock that will be excavated.

The EIS should identify the water bodies/watercourses that would be potentially affected by changes to ground water quantity and quality. Describe and quantify, on a seasonal and long-term basis, the significance and influence of ground water withdrawals on discharges, water quality, and fish habitat type and quantity in these water bodies/watercourses. To achieve this, the EIS should include the development of a three-dimensional numerical model of the ground water flow regime, calibrated to observed heads, river stages and flows, in order to determine baseline flow directions and discharge rates to all potentially affected water bodies (e.g., the Saskatchewan River and tributaries).

All ground water wells used for domestic purposes located within the radius of influence of the proposed project should be identified in the EIS and potential for impacts on water quality and quantity discussed.

2.4.3 Surface Hydrology and Water Quality

The EIS should present and discuss watershed characteristics, local drainage patterns, water uses/users and current and historical water quality data for significant water bodies. The EIS should also describe and discuss the hydrology of the area. This should include the following:

- drainage area: delineation of the upstream and downstream watersheds affected by the proposed construction including road/rail/power corridors;
- detailed hydrology for stream crossings including an explanation of the role this hydrology played in the design of road/rail/power corridors; and

Describe the existing and anticipated water quality of water bodies. Discuss the following:

- selection criteria used to determine the study area, including information sources and assessment methods;
- baseline water quality data, its seasonal variation and relationship to flow and other controlling factors. Comprehensive temporal and spatial sampling of the study area, with sufficient replication, should be provided. Demonstrate the adequacy of the baseline, including replication and coverage, for future statistical comparison. Provide appropriate water quality parameters; e.g., temperature, pH, conductivity, cations and

anions, metals, dissolved oxygen, suspended sediment, dissolved solids, nutrients and specific diamond mining water contaminants.

- describe the baseline sediment quality including but not limited to particle size, carbon content, organics, metals, sediment toxicity, and diamond mining sediment contaminants;

2.4.4 Navigable waterways

Proposed works associated with the project that involve building in, on, over, through or across any navigable waterway could result in interference with the public right to navigate.

The EIS should describe known waterway users, including known vessel use, on potentially affected waterways.

The EIS should include the following:

- appropriately scaled maps depicting where the existing waterways and in-water works are located (latitude and longitude);
- physical characteristics of the waterway (such as length, width, depth, seasonal flow, fluctuations);
- photographs of the proposed work locations (crossings, upstream and downstream views); and
- conceptual drawings (plan and profile views) and proposed construction schedules and methods of the proposed in-water works, both permanent and temporary.

2.4.5 Air Quality

The EIS should present a characterization of background air quality conditions for the local study area and current emissions (where applicable).

2.4.6 Noise

The EIS should present a characterization of background sound levels (measured or valid estimates) for both daytime (Ld) and night time (Ln). All potential noise-sensitive receptors (e.g., residences, daycares/schools, First Nation reserves, Métis communities, wildlife, etc.) and their locations relative to the project area should be identified. Indicate the distance of the project to nearby sensitive receptors, preferably including a map.

2.4.7 Aquatic and Terrestrial Resources

Relevant information on aquatic and terrestrial ecology that potentially may be affected by the proposed development should be included in the EIS. Baseline data should be collected or compiled and mapped to address:

- plant or animal species considered rare, endangered or threatened either federally or provincially [refer to Species at Risk Act (Canada), Wild Species at Risk Regulations under the Wildlife Act, 1998 (Saskatchewan) and the Saskatchewan Activity Restriction Guidelines for Sensitive Species in Natural Habitats (September 2003)]. To address this issue, a rare species survey will be required;
- protected areas and designated wildlife habitat;
- presence and nature of wetlands (e.g., permanent, ephemeral);
- vegetation on and adjacent to the site, especially any areas of native vegetation; and
- aquatic resources including species at risk (e.g., leopard frogs), fisheries and fish habitat that may occur at the site or in adjacent areas and access corridors that could be impacted as a result of development.

Lake sturgeon present in the Saskatchewan River has been specifically identified by reviewers as a species of interest. Lake sturgeon is a potential federal Species At Risk Act listed endangered species as well as a species of traditional importance to local First Nations and Métis communities. Baseline information should include spawning and/or rearing, vegetation, and macroinvertebrates.

Design and methodology of wildlife and vegetation studies/surveys should be developed in consultation with Fish and Wildlife Branch, Ecological Assessment Unit, Saskatchewan Ministry of Environment prior to commencing field work. Information collected on Species at Risk and their habitat must be submitted to the Saskatchewan Conservation Data Centre, Saskatchewan Ministry of Environment.

2.4.8 Heritage Resources

A Heritage Resource Impact Assessment (HRIA) was submitted to the Heritage Resources Branch of the Ministry of Tourism, Parks, Culture and Sport during the exploration phase. In 2008, the proponent supplied and had approved by Heritage Resources Branch, a plan for mitigation of impacts of the development of the mine and mine infrastructure on the archaeological sites. Approved mitigation activities are ongoing. The HRIA along with the approved mitigation plan must be included in the EIS.

2.5 Socio-Economic and Land Use Issues

The EIS needs to include a description of the existing land uses, community characteristics (residents, communities, First Nations or Métis people) and infrastructure within the socio-economic study area.

An integrated forest land use plan is being developed to provide a framework for resource management decisions about the Fort à la Corne island forest. The proponent should contact the Saskatchewan Ministry of Environment for more information on the plan and contacts.

2.5.1 Traditional Land Use

The EIS should identify the current and historical use of lands and resources within the study area for traditional purposes by First Nations and Métis peoples (i.e. non-commercial uses including hunting, trapping, fishing and other traditional use activities).

2.6 Occupational Health and Safety

The EIS should provide a brief description of existing occupational health and safety programs in place and identify whether the development (e.g., influx of workers during construction phase) would require changes to these programs.

The EIS should document the type(s) of equipment and construction and operational activities involved with the project and the measures employed to ensure compliance with the provisions of the Occupational Health and Safety Act, 1993 and The Occupational Health and Safety Regulations, 1996.

The EIS should demonstrate that safety distances required by the Explosive Regulatory Division of NRCan and requirements of Saskatchewan's Occupational Health and Safety Act and Regulations thereunder have been considered and met. This includes specifying the location of facilities (i.e. detailed site plan), with distances to vulnerable features such as dwellings, roads, camps, railways, and bodies of water. Infrastructures should be identified and include: explosives and detonator magazines, fuel storage, ammonium nitrate storage, maintenance/wash area, process trucks and their parking area, any offices, warehouses, buildings, etc. Details on any temporary explosive facilities to be used for starting the project must be provided, giving the same information requirements as above.

2.7 Involvement Activities

Regional residents, organizations, First Nations and Métis people should be fully informed of the proposal to develop the Star – Orion South Diamond Project.

The EIS should include a concise description of the scale and extent of Shore Gold's consultation activities and describe the program for involvement with residents regarding

the Star – Orion South diamond project, particularly the residents from First Nations, Métis, and nearby communities potentially affected by the project.

Any issues or concerns raised during the involvement programs should be documented in the EIS and their significance evaluated.

The involvement program should promote a broader understanding of both the potential impacts of the project, environmental mitigation measures, monitoring programs and results and decommissioning and reclamation procedures. Efforts should be made to involve the public, First Nations and Métis people in issue identification and problem resolution e.g., contribution of traditional knowledge to the determination of Valued Ecosystem Components (VECs), current use of the area to hunt, fish, gather or for seasonal residence, trapping block zones and traplines.

All involvement activities (residents, community, First Nations, Métis communities, etc.) and any concerns raised should be documented in the EIS along with methods that will be used to address them. As interest in the development may extend beyond the project area the proponent should be prepared to provide project information to and address issues identified by persons residing outside of the project area.

2.8 Conceptual Decommissioning and Reclamation Plan

There are currently detailed Decommissioning and Reclamation Plans in place for the Star and Orion South exploration phases. A detailed plan for decommissioning, reclamation, long-term maintenance of the site(s) and establishing the assurance fund(s) will be required and developed in consultation with regulatory agencies during licensing and, will be subject to periodic review during operations. The EIS should, however, include a revised conceptual plan for the proposed development. The EIS should discuss the decommissioning options in sufficient detail to allow a comparative evaluation of the potential performances of the options.

The conceptual plan should reflect project impact assessment, mitigation and monitoring experience. The plan should identify:

- decommissioning objectives including identification of acceptable post-operational land use options for the site, post-operational landforms and drainage systems;
- environmental impacts which can be mitigated by decommissioning, reclamation or post-decommissioning procedures (e.g., salvage, stockpiling and placement of topsoil to retain native plant seed bank);
- impacts which cannot be mitigated - these impacts constituting irretrievable environmental losses accruing to the province and to future generations;
- any potential opportunities for environmental enhancement;
- an approximate time frame for decommissioning and reclamation;
- alternative methods for decommissioning and reclamation. The preferred alternative should take into account the reclamation of all pits, tailings and associated disturbances back to as close to the original physical and biological

- conditions as soon as possible. Alternatives considered during project planning should be described. A discussion of why the proponent's preferred decommissioning and reclamation plan was chosen must be included in the EIS. Refer to the "Guidelines for Northern Mine Decommissioning and Reclamation" EPB 381 available from the Ministry of Environment for further guidance;
- post-decommissioning monitoring and contingency planning;
 - record keeping or archiving that fully describes past operations, decommissioning plans/assessments and final configurations;
 - the need for passive site management;
 - estimated costs for decommissioning, reclaiming and monitoring the site;
 - a proposed estimate for the assurance fund; and
 - land controls.

2.9 Impact Assessment and Mitigation

The information in the following subsections provide general procedures for evaluating impacts and identifying mitigation measures in relation to the baseline information, processes and issues identified throughout sections 2.4, 2.5, 2.6, 2.7 and 2.8.

The environmental impact assessment process must provide the information necessary to determine whether the benefits of the proposed development to the province and its citizens justify the costs (environmental, biophysical, social and economic) of the preferred approach.

The list below is not necessarily complete and any additional potential impacts identified by the proponent, regulators, technical reviewers, the public or First Nations and Métis communities will need to be addressed similarly.

2.9.1 Project-Specific Impacts

Information provided in the EIS that is related to potential impacts should be complete and detailed. Environmental effects of any discharges from the proposed operation including effects and potential effects to the air, land, ground water, surface water, flora and fauna in the surrounding environment and proposed mitigations should be considered. Impact severity is analyzed as the change from baseline conditions, i.e., the difference between environmental conditions expected if the development were not to proceed and those expected as a consequence of it.

Analyses should consider the severity (i.e., probability, magnitude, frequency and duration) of predicted impacts and the significance they will have for society. Impact analysis is done for each project phase, including the potential impacts of any hazards and / or worst-case scenarios associated with the development. Measures that will be implemented to minimize adverse impacts and enhance positive impacts should be described. The EIS must document how the project design, operational procedures or reclamation serve to avoid, minimize or

mitigate potential impacts. The methods and assumptions used to estimate the severity of impacts should be clearly documented.

Any residual impacts which cannot be mitigated during construction, operation and decommissioning should be identified and their significance discussed.

Specific to the proposed development, the following potential impacts or mitigation measures have been identified and must be addressed in the EIS. Also describe any studies planned or underway designed to increase understanding and develop mitigation measures for these issues:

2.9.1.1 Geology, Hydrogeology and Soils

- identify and describe potential impacts of ground water use and disposal;
- describe the potential impact of removal of the estimated volume (in m³/day) of ground water on the local and regional ground water and surface water regimes;
 - The proponent is to use a three-dimensional numerical ground water flow model to assess project impacts on local and regional ground water flow systems;
- quality and quantity of leachate from tailings (unprocessed ores, processed ores and associated wastes and overburden), proposed measures to contain, and treat, if required, leachate to minimize potential effects on local and regional ground water and human and environmental health;

2.9.1.2 Surface Hydrology and Water Quality

- identify project activities that may influence water quality and place them in context with natural forces that affect water quality and how, where, and when they will act to change water quality;
- describe the range and variability of concentrations in any surface water receiving site drainage, discharges, or ground water influenced by proposed activities;
- assess the loading for each contaminant of concern and assess the fate and transport of those contaminants in the surface water including the Saskatchewan River and local and regional ground water regimes;
- any impacts to surface water drainage, including the proposed alterations to water courses, should be described (effect on vegetation, in-stream fish habitat (spawning and rearing)) and mitigation identified;
- contamination of surface water bodies from surface flow or breakthrough from ground water sources and effects on potential water users, aquatic life, recreation, agriculture etc.;

- failures, spills, malfunctions, accidents or inadvertent waste releases including contingency plans addressing the potential worst case scenario at all phases of the development including post reclamation;
- the probability and anticipated effects of major flood events on the roadway including emergency response plans for crossing and embankment failure arising therefrom;
- installation methods of proposed road/rail and power corridors, including road and rail crossing structure design option (e.g., bridges, culverts, etc) for watercourses that contain large bodied migratory fish; and
- possible disturbance to stream crossings of roads/railway/power corridor.

Alterations of water courses and stream crossings associated with the construction of the mine could result in the harmful alteration, disruption or destruction of fish habitat, increased sediment loading in streams from erosion and impediments to fish movement and navigation on navigable waterways.

Outline the potential impacts to fish and fish habitat that may result from water diversions that may increase and/or decrease water discharge into certain existing watercourses, including the Saskatchewan River, as well as identify any potential changes to seasonal and long-term water quantity and quality and channel morphology in those and surrounding watercourses.

2.9.1.3 Navigable Waters

- predicted direct and indirect effects of proposed works on navigation, including alterations on surface water hydrology, water withdrawal, fish habitat compensation measures, and proposed works built in, on, over, through, across or under any waterway. Also include a description of proposed mitigation measures and effectiveness of these measures for ensuring navigability and the protection of navigation safety during construction, operation and completion of the proposed works; and
- all waterways affected by proposed works (new or changes to existing infrastructure) in, on, over, under, through or across any waterway should be discussed in the EIS. This would also include any temporary works that may impede vessel passage and safety.

2.9.1.4 Air

- characteristics of the operation that could affect air quality (e.g., dusting from coarse processed kimberlite, overburden, and blasting) must be described. The descriptions should include information about

the frequency and duration of these elevated emission events. The effect of any expected emissions on environment and human health must be described in enough detail to determine if there will be adverse environmental impacts;

- all emission sources (stationary, mobile, fugitive) with estimated emissions of criteria air contaminants (Total Particulate Matter (TPM), Particulate Matter less than or equal to 10 Microns (PM₁₀), Particulate Matter less than or equal to 2.5 Microns (PM_{2.5}), Sulphur Oxides (SO_x), Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOC), Carbon Monoxide (CO) and Ammonia (NH₃)) should be listed EIS;
- provide air quality modelling to predict how emissions will disperse from the development on a local and regional scale. Modelling should be conducted from three assessment scenarios:
 - baseline (existing environmental conditions and existing projects and facilities);
 - project (Project emissions plus Baseline);
 - if other projects are planned and reasonably foreseeable in the region: a Cumulative Effects Assessment which includes the Baseline Case plus the project, anticipated future environmental conditions, plus other approved and planned projects or activities.
- describe how predicted air quality compares to the appropriate available air quality guidelines (e.g., for PM_{2.5}, provide a comparison to the Canada-wide Standards metric).
- greenhouse gas emissions, namely CO₂, is an environmental issue of increasing importance and interest in the province and globally. Estimates of greenhouse gas emissions associated with each major phase of the mine operation should be provided in the EIS. The estimates should include direct and indirect greenhouse gas emissions and related effects, including impacts on carbon ‘sinks’ or large greenhouse gas emissions, which are the consequence of accidents or malfunctions. The EIS should include a discussion on how emission considerations have been addressed, and how emission reduction offset measures have been incorporated in the proposed development.

2.9.1.5 Noise

The EIS should include an assessment of noise exposure to the human and wildlife receptors located near the project site including:

- identification of all potential noise sources during construction, operation and decommissioning (e.g., blasting, traffic, heavy equipment, transformers); and identification of any tonal (e.g., sirens), impulsive (e.g., mining explosions), and highly impulsive (e.g., hammering, pile driving) types of noise;
- comparison of baseline noise levels with predicted noise levels at sensitive receptor locations during construction, operation and/or

decommissioning (during daytime and night-time, and after mitigation, if warranted);

- the incorporation of noise management and noise monitoring plans, including complaint resolution, as appropriate; and
- the incorporation of the Saskatchewan Conservation Data Centre recommended setback distances and mitigation for use when a sensitive species is present.

2.9.1.6 Aquatic and Terrestrial Resources

- destruction or disturbance of rare, threatened or endangered species or their habitat should be identified as well as proposed mitigation measures;
- damage or destruction of sensitive ecosystems such as wetlands should be identified as well as proposed mitigation measures;
- disturbance to habitat and wildlife including a discussion of potential for affect on incidence of wildlife diseases, and depredation of agricultural crops by displaced wildlife;
- describe the nature and extent of the “no hunting” area proposed for safety reasons and plans to handle wildlife within that area;
- the issue of access to harvesting of wildlife resources should be discussed in the EIS. Information obtained in interviews, studies and surveys should be evaluated in terms of increased access to wintering locations, travel corridors, dens, nests and other sensitive areas to determine the vulnerability of the species as a result of increased access and related hunting opportunities.
- discussion of potential for human / wildlife predator interaction;
- an “Alternatives Analysis” and “Conceptual Fish Habitat Compensation Plan” is required for projects likely to cause a harmful alteration, disruption or destruction (HADD) of fish habitat. DFO will review all information available in order to make a determination on the significance and magnitude of proposed impacts to fish habitat, including the proponent's plan to compensate for any loss in productive capacity of fish habitat resulting from the project. DFO will also request alternatives for all projects likely to cause a HADD of fish habitat, to ensure that all options for minimizing impact to fish and fish habitat are examined;
- predict and describe water and sediment quality conditions and suitability for aquatic biota in constructed water bodies, such as end pit lakes; and
- describe the potential effect and mitigation of the clearing and taking out of production of land for the development and associated infrastructure on the local timber harvesters.

2.9.1.7 Explosives

- the following information will be required related to the assessment of the potential for adverse environmental effects of an explosives factory (including temporary installation):
 - fuel and ammonium nitrate storage plans, in conformance with Natural Resources Canada’s guidelines;
 - liquid effluent disposal plans;
 - spill contingency plans; and
 - evaluation of worst-case scenario (e.g., accidental explosion).

2.9.1.8 Heritage Resources

The approved mitigation plan must be included in the EIS. Potential changes to the approved mitigation must be described in the EIS along with rationale for the proposed changes. Any changes to the mitigation plan must be approved by the Heritage Resources Branch.

2.9.1.9 Socio-Economic and Land Use Issues

Potential negative and positive impacts arising from all phases of the project that may affect the residents, communities, First Nations or Métis people in the local area must be included in the EIS. Details must be provided on:

- impacts on forest vegetation, wildlife, and aquatic resources,
- potential and effects of increased on and off-road traffic in the FalC,
- effects on hunting, trapping, fishing and gathering activities, waterway users (including recreational, commercial and traditional), domestic and livestock water supplies, transportation, business, recreation, employment and contractor opportunities,
- effects of noise or air quality issues on the environment, residents, communities, First Nations and Métis people;
- potential and effects (e.g., school bus safety) of increased traffic on the main transportation routes (e.g., highway 55) including the potential construction and use of a railroad; and
- any other issues identified by potentially affected residents, communities, First Nations or Métis people.

Describe any employment targets and strategies for achieving those targets with respect to women in management and non-traditional occupations, Aboriginal people (Indian, Métis and Inuit), persons with physical/mental disabilities and members of visible minority groups. Discuss any anticipated or planned enhancement of regional business and employment opportunities, including those for First Nations and Métis peoples and contractors. This information highlights potential benefits of the development.

2.9.1.9.1 Traditional Land Use

- the project and cumulative impact of development on these uses;
- possible mitigation strategies to avoid or reduce these impacts; and
- describe the nature and extent of restrictions on use of specific areas for cultural or spiritual activities.

2.9.1.10 Decommissioning, Reclamation and Closure

- one decommissioning option proposed is to allow the pit to fill with ground water after mining has ended:
 - describe potential impacts on local and regional ground water systems and probable quality of the infiltrated water in the pit(s);
 - describe the anticipated long-term water level and quality of the water in the pit and how these will impact the proposed end-use (recreational) including access and fisheries potential;
 - describe any potential effect the proposed in-filled pit will have on the stability of the Saskatchewan River bank;
- upon decommissioning, consideration should be given to the re-establishment of the natural drainages for the benefit of fish;
- water quality conditions in reclaimed water bodies and any other water bodies potentially affected by the project. Include:
 - the impacts on sediments and compare data with the Canadian Interim Sediment Quality Guidelines (or acceptable alternative);
 - the potential effects of project and cumulative acidic deposition on water quality, aquatic biota and habitat conditions of surface water bodies. Identify water bodies that are sensitive to acid deposition;
 - the potential for seasonal variation in acid input to water bodies (spring acid pulse);
 - any other activities in the watersheds affected by the project that, together with the proposed development, have potential to influence water quality (e.g., commercial timber harvesting programs). Discuss the potential changes in water quality anticipated from these other activities during the life cycle of the proposed development. Consider their magnitude, extent, timing, duration, and significance; and
- water quality of the reclaimed site including a comparison of existing and predicted water quality, using water quality guidelines (Canadian Council of Ministers of the Environment or acceptable alternative).

2.9.2 Regional/Cumulative Impacts

The EIS should assess and discuss whether existing environmental conditions, including other developments in the area, might influence the development or its

potential impacts. The discussion should address whether the project-specific effects of the development combined with the impacts from the existing and planned developments in the region (including other exploration and pits for future diamond development) will result in, or contribute to, any cumulative environmental effects or regional effects in the short or long term.

The regional study area should encompass the maximum geographical extent (zone of influence) in which impacts from the project may be incurred for each valued ecosystem component. Efforts should be made to involve the public, First Nations and Métis people in issue identification and problem resolution e.g., contribution of traditional knowledge to the determination of Valued Ecosystem Components, current use of the area to hunt, fish, gather or for seasonal residence, trapping block zones and traplines. The geographical extent may vary depending upon the VEC or issue examined; however, each area should be defined and explained in the EIS.

In particular, the EIS should identify and discuss any potential downstream effects on the Saskatchewan River system (aquatic resources (e.g. lake sturgeon), uses, flow) in the short or long term.

Explain the approach and methods used to identify and assess cumulative impacts, including cooperative opportunities and initiatives undertaken to further the collective understanding of cumulative impacts. Provide a record of assumptions, including statistical or other quantitative confidence in data and analysis to support conclusions. Describe deficiencies or limitations in the existing database on environmental components and propose measures to deal with resultant uncertainties.

2.10 Monitoring

The EIS should describe any current baseline and operational monitoring programs for the development and a description of proposed future monitoring (e.g., parameters, locations, sampling frequency and methodology).

If the proposed development receives environmental assessment approval, detailed monitoring programs to ensure regulatory compliance would be designed in consultation with regulatory agencies during licensing and would be subject to periodic review during operations. Monitoring should allow the systematic audit of the environmental impact assessment process, specifically the accuracy of predictions and the adequacy of proposed mitigation measures. The monitoring programs, in verifying the environmental impact predictions, should confirm the design criteria for reclamation and closure objectives and planning procedures. The proponent must ensure that monitoring data is stored in an acceptable electronic format and be available to the Ministry of Environment on request.

In particular, the EIS should address:

- total loading, fate and transport of water discharge to the Saskatchewan River to the water quality, quantity and potential impact on aquatic and adjacent terrestrial ecosystems (e.g., local fish species, (including lake sturgeon - a potential federal Species At Risk Act listed endangered species as well as a species of traditional importance to local First Nations and Métis communities) especially if spawning and/or rearing may be affected, vegetation, and macroinvertebrates);
- monitoring programs, including post-decommissioning, for surface water, ground water and sediment for metals and other relevant substances. Consider seasonality, sampling medium (water, sediment, biota) and other factors such as water bodies sampled, sample sites, precipitation and runoff levels, downstream and point-source discharges;
- short and long term affects which may be associated with the potential loss and or enhancement of rare and endangered species identified and their habitats;
- potential long term impacts of the decommissioning alternatives to the current and future use of the FalC, local and regional ground water regime and the Saskatchewan River; and
- commitments for operational response procedures to be followed should monitoring identify environmental changes or unforeseen/unacceptable impacts during the life of the project and post-project, as required.

2.11 Ancillary Developments

Ancillary developments describe those developments whose planning, construction and/or operation are not led by the proponent or are outside the scope of the project proposal. The EIS needs to provide a description of ancillary developments anticipated as a result of the proposed development. Each ancillary development must be described and analyzed in sufficient detail for the reader of the EIS to determine the environmental and social significance of the proposed development and the major social, economic and environmental implications as related to the development described in this EIS.

Ancillary projects may be individually screened under the EA Act to determine if they are considered a ‘development’. Ministerial approval for the proposed project described in this EIS does not pre-suppose approval for ancillary developments even if the ancillary development is essential to the operation of the mine. Where such ancillary development(s) are inextricably linked to the proposed mine the ministry may need to seek identification of proposed route and anticipated impacts from the proponent of the linked development prior to a final decision being made on the proposed Star - Orion South project.

2.12 Commitments Register

The EIS must contain a summary table of the avoidance, mitigation and monitoring commitments made by the proponent throughout the EIS that will be updated with any terms and conditions put forward by the Minister should the Minister approve the development. See Appendix A for an example of structure for a commitments register.

The commitments register can be a component of a proponent's Environmental Management System or can stand alone. The register is a cost-effective, logical and systematic approach to enhancing the effectiveness of the implementation of EIA by defining and communicating intentions to all interested parties including internal stakeholders; allowing proponents to assign, track and close out these commitments during the detailed design, construction, installation and commissioning phases of the project; and by assisting regulators to monitor and improve on the delivery of EIA outcomes, particularly when approval conditions are integrated into the register.

3.0 Regulatory Approvals

3.1 Provincial Regulatory Approvals

It should be noted that, if the project is found to be environmentally acceptable, Shore Gold would be required to apply to the ministry and other government ministries and agencies for the necessary approvals, permits and licences that regulate the construction and operation of the project and to comply with all applicable provincial and federal laws. **Identifying and obtaining these approvals is the proponent's responsibility.**

The ministry has identified the following regulatory requirements:

- Research permits, if required, may be obtained from the Fish & Wildlife Branch;
- Should this development move forward to construction/extraction, the companies will be required to obtain Mineral Surface Leases (MSL) from the Lands Branch. Public access within the MSL boundaries will need to be negotiated with the proponent prior to execution of the MSL. Conditions of the leases will be attached to all environmental, fisheries, etc., permits/approvals;
- The company may be required to remit royalties to the Crown for any gravel/sand/rock extracted within the mineral surface lease area;
- Roadways constructed in the FalC may require additional lease agreements with the Ministry of Environment.
- A Forest Product Permit required from the Forest Service Branch prior to disturbance of the vegetation and as Scaling Plan is required to scale merchantable timber to pay dues and fees;
- Burning permits will be required for all burning activities;
- The following permits are required pursuant to The Environmental Management and Protection Act, 2002:
 - Aquatic Habitat Protection Permit for any work planned in or near water;
 - Fuel or chemical storage will require a Construction and Storage Approval;
 - Approval to Construct Pollutant Control Facility;
 - Approval to Operate Pollutant Control Facility;
 - The proponent will be required to submit a Reclamation and Decommissioning Plan and a Financial Assurance instrument for review;
 - Permit to Operate a Waterworks;
 - Permit to Operate a Sewage Works; and

- Permit to Operate a Waste Disposal Ground may be required.

Saskatchewan Watershed Authority provided the following information:

- Any diversion, impoundment or drainage of surface water will require a licence and/or approval from the Saskatchewan Watershed Authority. Water used for processing and the work camp require a Water Rights Licence from the regional office.
- Ground water extraction requires approval. Apply to the head office in Moose Jaw for necessary approvals.

The Ministry of Health has identified the following:

- Construction of the plumbing and sewage system be approved, inspected and permitted by the Kelsey Trail Health Region in accordance with the Saskatchewan Plumbing and Drainage Regulations, 1996. If water usage at the site exceeds 4000 gallons per day, the Ministry of Environment would need to be consulted for approval of the proposed water and sewage system.

The Ministry of Municipal Affairs has determined that the proposed project is located on land zoned F – Provincial Forest District under the RM Zoning Bylaw. Mining, including drilling and exploration activity are a permitted use. The proponent should contact the RM Administrator to obtain the required permits and to determine if there are any local comments or concerns regarding the project.

The Ministry of Highways has indicated that negotiations would be required related to access to the highway system, permits and vehicle dimensions/loading, etc. for any new roads constructed in association with the proposed mine.

The Ministry of Energy and Resources has indicated that the project would be subject to the provisions of The Mineral Disposition Regulations 1986, The Reclaimed Industrial Sites Act and The Reclaimed Industrial Sites Regulations.

3.2 Federal Regulatory Approvals

The Departments of Transport Canada, Fisheries and Oceans Canada, Natural Resources Canada, and Indian and Northern Affairs Canada have contemplated steps enabling various aspects of the project to be implemented. These anticipated regulatory approvals exist under the Law List Regulations of the Canadian Environmental Assessment Act, and are triggers under paragraph 5(1)(d). As a result, these departments are likely Responsible Authorities under the CEA Act. Thus, they must ensure that an environmental assessment, as scoped by them, is conducted prior to the issuance of federal licences, authorizations, permits, and/or approvals, as described below.

Transport Canada has identified that regulatory approvals may be required under the Navigable Waters Protection Act (NWPA) for proposed works built in, on, over, under, across or through navigable waterways to ensure that these works do not interfere with the public right to navigate. The Authority to determine if the NWPA applies as it relates

to the administration and enforcement of the NWPA is the sole responsibility of the Minister of Transport or his/her designated representative.

Fisheries and Oceans' role as a Responsible Authority arises from the anticipated requirement for a Fisheries Act section 35(2) Authorization for the harmful alteration, disruption or destruction of fish habitat.

Natural Resources Canada has indicated that an Explosives Factory Licence under section 7(1)(a) of the Explosives Act is required for the manufacturing and storage of explosives.

Indian and Northern Affairs Canada has indicated that the project, as proposed (routes under consideration for transmission line and gas pipeline), may occur on First Nation Reserve lands. As such, land tenure instruments may be required under subsection 18(2) of the Indian Act.

The Canadian Environmental Assessment Agency is the Federal Environmental Assessment Coordinator for the proposed project and is responsible for coordinating the review activities of the federal Responsible Authorities and expert Federal Authorities in accordance with subsection 12 of the CEA Act and in conjunction with the provincial environmental assessment process and The Canadian-Saskatchewan Agreement on EA Cooperation.

4.0 Summary

The EIS must provide a concise, complete statement of the anticipated net environmental costs and benefits of the development in both the short and long terms. The discussion must also include intangible costs and benefits that cannot be expressed in economic terms. The EIS must provide enough information to allow the province and the public to determine the gains and losses (retrievable and irretrievable) which may accrue from the proposed development, should it be allowed to proceed.

Appendix A

Example template for a commitments register

Reference number	Project phase			Commitment type	Description	Source reference	Responsibility/ contractor	Action required by	Action date/ project milestone	Actual close out	Comments
	Design	Construction	Operations								
001		X		management	construction time limited to between 7am and 6pm	meeting minutes, Community Hall meeting #5	Fred Smith, Construct It Ltd.	Construction permit conditions	etc.	etc.	
002			X	etc.	etc.	etc.	etc.	etc.	etc.	etc.	

Appendix B

List of Acronyms

CEA Act	<u>Canadian Environmental Assessment Act</u>
CEAA	Canadian Environmental Assessment Agency
CO	carbon monoxide
DFO	Department of Fisheries and Oceans
EA Act	<u>The Environmental Assessment Act</u> (Saskatchewan)
EA Branch	Environmental Assessment Branch of the Saskatchewan Ministry of Environment
EIA	environmental impact assessment
EIS	environmental impact statement
FalC	Fort à la Corne Forest
guidelines	project-specific guidelines
HADD	harmful alteration, disruption or destruction
HRIA	Heritage Resource Impact Assessment
INAC	Indian and Northern Affairs Canada
m ³ /day	cubic metres per day
MPMO	Major Projects Management Office
MSL	mineral surface lease
NH ₃	ammonia
NO _x	nitrogen oxides
NRCan	Natural Resources Canada
NWPA	<u>Navigable Waters Protection Act</u>
PDF	portable document format
PM ₁₀	particulate matter less than or equal to 10 microns
PM _{2.5}	particulate matter less than or equal to 2.5 microns
Shore Gold	Shore Gold Inc.
SO _x	sulphur oxides
TC	Transport Canada
the Agreement	Canada – Saskatchewan Agreement on Environmental Assessment Cooperation (2005)
the ministry	Saskatchewan Ministry of Environment
TPM	total particulate matter
VEC	valued ecosystem components
VOC	volatile organic compounds