

1.0 INTRODUCTION

1.1 Project Overview and Background

De Beers Canada Inc. (De Beers, or the Proponent) has identified a diamond resource, approximately 90 km west of the First Nation community of Attawapiskat, within the James Bay Lowlands of Ontario, (Figure 1-1). The resource consists of two kimberlite (diamond bearing ore) pipes, referred to as Victor Main and Victor Southwest. The proposed development is called the Victor Diamond Project. Appendix A is a corporate profile of De Beers, provided by the Proponent.

Advanced exploration activities were carried out at the Victor site during 2000 and 2001, during which time approximately 10,000 tonnes of kimberlite were recovered from surface trenching and large diameter drilling, for on-site testing. An 80-person camp was established, along with a sample processing plant, and a winter airstrip to support the program.

Desktop (2001), Prefeasibility (2002) and Feasibility (2003) engineering studies have been carried out, indicating to De Beers that the Victor Diamond Project (VDP) is technically feasible and economically viable. The resource is valued at 28.5 Mt, containing an estimated 6.5 million carats of diamonds. De Beers' current mineral claims in the vicinity of the Victor site are shown on Figure 1-2.

The Proponent's project plan provides for the development of an open pit mine with on-site ore processing. Mining and processing will be carried out at an approximate ore throughput of 2.5 million tonnes/year (2.5 Mt/a), or about 7,000 tonnes/day. Associated project infrastructure linking the Victor site to Attawapiskat include the existing south winter road and a proposed 115 kV transmission line, and possibly a small barge landing area to be constructed in Attawapiskat for use during the project construction phase. Existing regional transportation systems (the Moosonee to Attawapiskat, west James Bay winter road and barging systems), and the Ontario Northland Railway (ONR) system, are also essential to the project. There is also a need to reinforce the existing 115 kV coastal transmission line system to provide power to the Victor site, by constructing a parallel 115 kV line from Abitibi Canyon (near Pinard) to Kashechewan, with appropriate tie-ins to the existing system.

Construction would be for a three year period starting in the winter of 2006, followed by a 12 year mine life, and a 5 year reclamation phase, with most reclamation occurring in the first 2 years of this period. The construction schedule is driven in part by access logistics, which currently allow winter access only, because of the site's isolation and pervasive muskeg terrain. The only current non-winter access to the site is by helicopter.

Various environmental baseline studies have been carried out by the Proponent in support of the work to date, and environmental permits for the advanced exploration program were obtained from the provincial government, including an approved closure plan.

The Proponent held consultations with the Attawapiskat First Nation (AttFN) and with provincial agencies throughout the advanced exploration program, as part of the permitting process. Members of the AttFN have also been actively involved in work at the Victor site, comprising up to 50% of the site work force during the advanced exploration program. In addition, members of the AttFN have

assisted the Proponent in carrying out environmental baseline studies, and have received training in conducting environmental monitoring programs at the Victor site.

A Memorandum of Understanding (MOU) was signed by De Beers and the AttFN in 1999 to facilitate AttFN community involvement in the VDP. This agreement was later superseded by a Feasibility Partnering Agreement (FPA) in 2002, which will in turn be superseded by an Impact Benefit Agreement (IBA – currently being finalized). Another agreement, outlining how De Beers and the communities will work together to maximize job and procurement opportunities, will be developed with the other west James Bay area First Nations (Fort Albany, Kashechewan and Moose Cree First Nations).

Various components of the project require a number of federal regulatory approvals before it can proceed. Before issuing those federal approvals, the federal authorities are required to ensure that an environmental assessment is conducted pursuant to the *Canadian Environmental Assessment Act* (CEA Act). In addition, there are provincial environmental assessment requirements, as well as a number of environmental permits to be obtained from the provincial government.

1.2 Purpose of the Project

The Proponent has stated that the purpose of the VDP is to mine and process diamond-bearing kimberlite ore, of sufficient tonnage, grade and throughput, to provide a competitive return on investment, and to carry out these functions in an environmentally sustainable and socially responsible manner.

1.3 Project Need and Justification

De Beers has a corporate responsibility to its worldwide organization, owners, shareholders, suppliers, distributors and sightholders¹ to sustain the production of diamonds from its various operations. As existing mines approach exhaustion, new developments are required to replace or increase the supply of diamonds. In this capacity, De Beers has made a corporate decision to strengthen its presence in Canada, and following from this initiative, De Beers is pursuing a number of diamond prospects in Canada, one of which is the VDP. Developing the project would therefore contribute to the company's Canadian production and strategic goals.

Also, mining comprises an integral part of the northern Ontario economy. As ore bodies are mined out, there is a need to locate and develop new ore bodies to help maintain the existing economy. In addition, mining generates a considerable proportion of spin-off and trickle-down employment. It is estimated that development of the VDP will create 390 direct employment positions during operation, together with construction jobs for a period of nearly 3 years peaking at approximately 600, and additional employment opportunities associated with the closure and post-closure phases of the project. The project is estimated to add \$6.7 billion to the Ontario economy.

The Proponent anticipates that a meaningful portion of the project labour force will derive from the west James Bay area Cree communities, most notably from the community of Attawapiskat that is

¹ Sightholders: World leading buyers with specialized diamond and marketing expertise that inspect and purchase diamonds on behalf of various organizations.

closest to the project site, and that the VDP will also bring training benefits and business opportunities to these areas.

1.4 Regional Setting

The following section is an introduction to the descriptions of the environment relating to Valued Ecosystem Components (VECs) that are presented in Chapter 5.

Physical and Chemical Environment

The physical and chemical environment includes: air quality and climate, geology and geochemistry, terrain and soils, surface water, groundwater, and ice regimes.

The air quality of the project area is considered to be typical of unimpaired, northern Ontario wilderness areas. The site area experiences cold winters and warm summers with an annual average precipitation of approximately 690 mm in water equivalents, composed of 480 mm rainfall and 240 cm equivalent snowfall. The dominant wind direction is from the west-northwest in winter and from the southwest in summer.

Geologically, the VDP is located within the seismically stable Hudson Bay Platform, with the area being subject to gradual isostatic uplift in the order of 1 m per century. Geochemical analysis of the Victor kimberlites and sedimentary host rock shows that the neutralizing (acid consuming) potential of both the kimberlite and host rock formations is very high, and that the acid generating potential is very low, such that there is effectively no potential for the development of acid mine drainage at the Victor site.

The terrain is exceedingly flat and poorly drained, resulting in the development of extensive organic soils (peatland, or muskeg). Better soils occur only in areas immediately adjacent to the rivers and major creeks, where improved drainage limits organic soil development. The only upland sites are small, scattered limestone bedrock outcrops (bioherms); scattered areas of slightly raised, permanently frozen ground (peat plateau bogs and palsa bogs), which constitute the only areas of permafrost in the region; complexes of glacial depositional features (eskers, outwash deposits, and kames) and raised beach ridges, which are common to the west, north and south of the Victor site.

The Victor site area is drained by two small creeks, North Granny Creek and South Granny Creek, which flow into the Nayshkootayaow River. The Nayshkootayaow River drains to the Attawapiskat River. The Granny Creek system is quite small, with a watershed area of approximately 90 km². The Nayshkootayaow River has a watershed area of 2,100 km², and the much larger Attawapiskat River has a watershed area of approximately 49,000 km² opposite the Victor site. Annual runoff yields for the region are in the order of 260 to 300 mm, with a pronounced seasonal flow regime. Water quality conditions in the Victor site area show no overt evidence of industrial influence and exhibit generally good water quality. Groundwater is moderately saline, with salinity concentrations generally increasing with depth.

The Attawapiskat River generally freezes over in mid to late November, and break-up typically occurs in May. Both freeze-up and break-up can range over a period of approximately 30 days. Ice jams are common on the major rivers, and can cause flooding and ice scour effects.

Biological Environment

Vegetation communities of the region are dominated by pervasive muskeg (peatland) terrain, underlain by clays and silts. The muskeg is saturated and consists of two principal vegetation community types: bog and fen. Tree growth in both community types is stunted by the wet conditions. Well-developed forests, consisting mainly of black spruce with lesser amounts of white spruce, balsam fir, poplar, and occasionally white birch and white cedar, are confined mainly to the river and creek margins where improved drainage occurs. Some developed tree growth also occurs on patches of frozen ground, on rock outcrops and at other such locations where a slight raise in the landscape produces improved drainage.

Excluding the James Bay coastal environment, which provides significant waterfowl and shorebird habitat (see below), the James Bay Lowlands provide comparatively modest environments for most wildlife species because of the vast expanses of low productivity muskeg. The three habitat types in the region, which do provide important wildlife habitat, are rich riverbank forests, creek margin forests, and northern ribbed fens with broad flarks (pools).

Reported moose and caribou densities for the whole of the Hudson/James Bay Lowlands are in the order of one moose for every 130 km² of land area, and one caribou for every 50 km². As far as is known, local caribou populations are non-migratory in the traditional sense, but they are known to move around extensively within the general area.

Wolves and black bear are the largest predators in the region. Local furbearers include beaver, muskrat, snowshoe hare, marten, mink, otter, red fox, and lynx, with marten and beaver being the most economically important species. Most furbearers tend to be concentrated along the watercourses, either because they are directly associated with aquatic habitats, or because they prefer forest and forest/shrubland habitats which border the creeks and rivers.

Waterfowl and shorebirds occur in extremely large numbers nearer to the James Bay coast, especially during the spring and fall migration periods. The James Bay coastal zone and near coast areas are a recognized international flyway for waterfowl and shorebirds. Waterfowl and shorebird numbers decrease further inland. A variety of raptors (eagles, osprey, hawks, and owls) also occur in the area, including bald eagles and osprey. Numerous other bird species also occur in the region, particularly in forest and open fen habitats.

Fisheries and aquatic resources of the James Bay Lowlands (excluding James Bay itself) are provided principally by riverine systems, and by scattered, comparatively small and shallow lakes and ponds. The Attawapiskat and Nayshkootayaow Rivers and Granny Creek are typical of large, intermediate, and small watercourses that occur throughout the region.

The Attawapiskat River is a large system that originates on the Canadian Shield far to the west. Riverbed materials throughout the river consist mainly of mixtures of gravel, cobble, and boulder,

with bedrock exposures along upper reaches of the river, near the Victor site. Larger fish species inhabiting the Attawapiskat River include walleye, pike, sturgeon, whitefish, suckers and burbot. Brook trout are also common in many of the feeder creeks. A variety of minnow species are also present. The Nayshkootayaow River is a smaller system, and supports lake sturgeon, walleye, pike, whitefish, sucker, brook trout, and a variety of minnow species. Sturgeon and whitefish use the Nayshkootayaow River mainly during spawning.

Granny Creek is typical of the smaller creeks in the area, and exhibits bottom substrates consisting mainly of muck and clay/silt. Its fish community is composed mainly of minnow species, but also includes low numbers of brook trout, sucker and pike. Muskeg ponds may or may not support minnow populations depending on local conditions.

James Bay Coastal Zone

The west James Bay coastal zone is characterized by low-gradient, broad tidal mudflats, backed by salt and freshwater marshes. Water depths are extremely shallow, and the tidal range is in the order of 2 m. James Bay waters are saline, but less so than Hudson Bay. James Bay nearshore waters are turbid, and visibility is generally restricted to less than 0.5 m depth.

The coastal zones of the west and south James Bay areas provide important staging areas for vast numbers of geese, ducks, and shorebirds that migrate to and from their northern nesting grounds. Marine mammals (seals and beluga whales) and polar bears also inhabit the coastal zones. The marine coastal waters of James Bay are inhabited by a variety of fish species.

First Nation Communities

The First Nation communities with a principal interest in the project include, from south to north, New Post (Taykwa Tagamou First Nation), Moose Factory (Moose Cree First Nation and MoCreebec), Fort Albany, Kashechewan, and Attawapiskat. Members of the MoCreebec Council of the Cree Nation reside in Moose Factory and Moosonee. Table 1-1 summarizes the distance of these communities from the Victor site and population statistics.

**TABLE 1-1
 FIRST NATION COMMUNITIES OF INTEREST**

	Distance from the Victor Site (Cross-country) (km)	Population
Moosonee	300	2,500 (approximately)
Moose Factory	300	2,500 (approximately)
Fort Albany	180	605
Kashechewan	180	1,561
Attawapiskat	90	1,293
New Post	500	97

MoCreebec members reside mainly in Moose Factory and Moosonee, and are included in population estimates provided in the table.

Each of the communities listed in Table 1-1 constitutes a First Nation in its own right, with the exception of Moosonee, which comprises a municipal government, namely the Moosonee Development Area Board, and the people of MoCreebec, who reside mainly in Moose Factory and Moosonee. The population of Moosonee is primarily Aboriginal, but Moosonee is a municipality and not a First Nation. MoCreebec people have no reserve lands in Moosonee or Moose Factory, or elsewhere in Ontario, and MoCreebec is designated as the 'MoCreebec Council of the Cree Nation', as apposed to a First Nation per se. MoCreebec members originated from the Quebec side of James Bay and are not part of the NAN alliance. A description and discussion of anticipated project effects on the communities are provided in Chapter 7.

The demographics of the west James Bay area First Nation communities are heavily weighted towards the younger age groups, and the local economies are focused mainly on providing services to the communities themselves, although less so for Moosonee and Moose Factory, where the economies are somewhat more diversified. Unemployment rates are high, as employment opportunities are limited, especially in the northernmost communities of Attawapiskat, Fort Albany and Kashechewan. A large number of community members participate in the traditional pursuits of hunting and fishing, and to a lesser extent trapping. Most of this activity is concentrated along or near the major rivers and creeks, and the James Bay coast. The one notable exception is caribou hunting, which takes place in more open country.

Cree culture and traditions, like those of many northern Aboriginal peoples, are tied to the land, and to traditional resources (hunting, fishing, and trapping) and spiritual well being derived from the land. This association between the people and the land is a collective one, in which the Cree view their role as custodial.

Social organization is based on the family group, in which Elders take a prominent role. Decision-making tends to be by consensus, but within the context of a Chief and Council leadership structure. Information tends to be handed down orally through experience and anecdote.

1.5 Regulatory and Planning Context

Following the environmental assessment, a number of federal and provincial environmental approvals, permits and authorizations will be required before the project can proceed. There is some overlap between federal and provincial jurisdictions, but there is a co-operative working relationship between the two levels of government, as to specific responsibilities and mandates. To limit regulatory duplication, including consultation needs, the federal and provincial regulatory agencies have agreed, to the extent practicable and allowed by current legislation, to co-ordinate their respective EA and permitting requirements.

Federal Requirements

Key environmental authorizations, approvals and licences required from the federal government before portions of the VDP can proceed, are listed in Table 1-2. Prior to a federal authority completing a power, duty or function, such as issuing an approval, authorization, or permit, an environmental assessment of the project must be conducted pursuant to the CEA Act. A

comprehensive study level environmental assessment was conducted for the Victor Diamond Project. The information obtained and recommendations made through the environmental assessment process formed the basis for this comprehensive study report. Within this context, it is important to note that the VDP falls under CEA Act 1992 and subsequent amendments prior to those that came into force on October 30, 2003.

**TABLE 1-2
 FEDERAL ENVIRONMENTAL PERMITS AND APPROVALS FOR PROJECT
 CONSTRUCTION AND OPERATION**

Permit/Approval	Project Components or Effects
Approval of Works in Navigable Waters <i>Navigable Waters Protection Act,</i> Canadian Coast Guard (CCG)	<ul style="list-style-type: none"> • Construction of creek and river crossings, barge handling facility, and intake/outfall structures on navigable waters
Authorization for Works Affecting Fish Habitat <i>Fisheries Act,</i> Department of Fisheries and Oceans (DFO)	<ul style="list-style-type: none"> • Destruction of fish habitat within muskeg ponds supporting minnow populations • Destruction of fish habitat within South Granny Creek • Destruction of fish habitat for the construction of inflow and outfall structures in the Attawapiskat River • Disruption of natural flows within the Nayshkootayaow as a result of groundwater dewatering and associated flow supplementation systems • Destruction of fish habitat as a result of the installation of various culverts associated with on-site all-season roads • Destruction of fish habitat for the construction of barge handling facilities near Attawapiskat
Licence for a Factory and Magazine for Explosives <i>Explosives Act,</i> Natural Resources Canada (NRCan)	<ul style="list-style-type: none"> • Construction and operation of an explosives factory and magazine(s)

The CEA Act is a planning and decision-making tool used by the federal government in respect of a project to:

- Identify environmental effects and mitigation measures; and,
- Determine if significant adverse environmental effects are likely.

Through careful study and consultation with government agencies, the local First Nations, and others, the objective is to develop a project plan that will protect the environmental and cultural values of the area, while at the same time providing economic benefits to the local and regional economies, and De Beers.

The CEA Act process was initiated due to the potential requirements for various federal approvals, authorizations and permits as identified in Table 1-2. The project was subject to a comprehensive study level environmental assessment because the following components were scoped into the federal environmental assessment:

- Construction of a facility for the extraction of 200,000 m³/a or more of groundwater; and,
- Construction of an all-season runway with a length of 1,500 m or more.

Federal agencies participating in the CEA Act process include the decision makers or responsible authorities (RAs) and the expert federal Authorities (FAs). The RAs for this review include Natural Resources Canada (NRCan), Fisheries and Oceans (DFO), Transport Canada (TC), and Human Resources and Skills Development Canada (HRSDC). The FAs involved in this review include Environment Canada (EC), Indian and Northern Affairs Canada (INAC), and Health Canada (HC). The Canadian Environmental Assessment Agency (CEA Agency) is responsible for co-ordinating the environmental assessment review.

The principal steps in the CEA Act process include the following:

- Preparation of a project description by De Beers for review by federal authorities;
- De Beers pre-consultation with federal and provincial authorities, and other stakeholders;
- Development of a project scope, and guidelines for the conduct of the comprehensive study, for the EA by the RAs and the FAs;
- Consultation on the project scope and guidelines for the conduct of the comprehensive study by the RAs and the FAs;
- Preparation of a Comprehensive Study EA (CSEA) by the Proponent;
- Consultation and review of the CSEA by federal and provincial agencies and other stakeholders;
- Response by the Proponent (De Beers) to comments received from stakeholders;
- Preparation of a draft Comprehensive Study Report (CSR);
- Preparation of a final CSR by the RAs;
- Publication of the final CSR by the CEAA Agency for the mandatory public review period, and,
- Ministerial decision on the CSR.

Stakeholders involved in consultations in the environmental assessment include provincial government agencies, local First Nations (most notably the Attawapiskat, Fort Albany, Kashechewan, Moose Cree, Mocrebec, Constance Lake, and the Marten Falls First Nations), the Mushkegowuk Council and the Nishnawbe Aski Nation (NAN), the municipalities of Moosonee, Timmins, Cochrane, Hearst and Kapuskasing, the community of Sanikiluaq (Nunavut Territory), non-governmental organizations (Northwatch and MiningWatch Canada), and the general public.

Provincial Requirements

A number of provincial approvals are also required for the project. These approvals require the participation of the Ministry of Northern Development and Mines (MNDM), the Ministry of the Environment (MOE), the Ministry of Natural Resources (MNR) and the Ontario Energy Board (OEB). These agencies are participating in the CEA Act comprehensive study review of the proposed project.

The key provincial environmental permits that are likely to be required for the VDP are listed in Table 1-3. Much of the information required for provincial approvals will be included in the federal EA, and provincial approval applications will be made in parallel to the federal approvals process.

**TABLE 1-3
 PROVINCIAL ENVIRONMENTAL PERMITS AND APPROVALS FOR PROJECT
 CONSTRUCTION AND PRODUCTION**

Major Permits/Approvals	Project Components
<p>Approval of Industrial Sewage Works <i>Ontario Water Resources Act,</i> Ministry of the Environment</p>	<ul style="list-style-type: none"> • In-pit sumps and linear fen systems for the treatment of quarry discharge water (3 quarries), and water from foundation excavations during construction • Construction and operation of the fine processed kimberlite containment (PKC) facility • Pit water settling pond (including oil water separator) for Years 1 – 6 • Pit water settling pond (including oil water separator) for Years 7+
<p>Permit to Take Water <i>Ontario Water Resources Act,</i> Ministry of the Environment</p>	<ul style="list-style-type: none"> • Withdrawal of water from quarries (3 sources) and foundation excavations during construction • Water supply (well) for the construction camp • Water supply for freezing winter roads (3 roads) • Withdrawal of groundwater via the dewatering well field for open pit dewatering • Withdrawal of water from the Attawapiskat River to provide process and potable water, and water for flow supplementation of the Nayshkootayaow River system during low flow periods • Withdrawal of water from the open pit sumps
<p>Approval for Air Emissions <i>Environmental Protection Act,</i> Ministry of the Environment</p>	<ul style="list-style-type: none"> • Air and noise emission control equipment associated with the quarry crushers (3 sites) • Air and noise emission control equipment associated with the incinerator • Air and noise emission control equipment associated with the construction phase generators (4 generators plus standby systems) • Air and noise emission control equipment associated with the processing plant
<p>Approval of Drinking Water System <i>Safe Water Drinking Act,</i> Ministry of the Environment</p>	<ul style="list-style-type: none"> • Treatment, storage, and distribution of potable water for the construction and operations phase accommodation complexes and ancillary facilities
<p>Approval of Private Sewage Works <i>Ontario Water Resources Act,</i> Ministry of the Environment</p>	<ul style="list-style-type: none"> • Treatment and disposal of domestic sewage from the construction and operations phase accommodation complexes and ancillary facilities

Major Permits/Approvals	Project Components
Approval of a Waste Management System <i>Environmental Protection Act,</i> Ministry of the Environment	<ul style="list-style-type: none"> Establishment and operation of facilities for collecting, handling, transporting, storing, and processing (incineration) of domestic and industrial waste
Generator Registration <i>Environmental Protection Act, O. Reg. 347/00</i> Ministry of the Environment	<ul style="list-style-type: none"> Temporary (seasonal) storage and transportation of hazardous wastes at the Victor site and at the Attawapiskat fuel farm (until accessible by winter road or barge)
Work Permit and/or Land Use Permit <i>Public Lands Act and/or Lakes and Rivers Improvement Act,</i> Ministry of Natural Resources	<ul style="list-style-type: none"> General site clearing, infrastructure development, drainage works, etc. adjacent to Attawapiskat for a barge handling facility (if required) Construction of new winter roads (west) and upgrading of the existing south winter road Construction of two dykes/dams associated with the diversion of South Granny Creek and other in-water works associated with the diversion of South Granny Creek Work permits for construction of transmission line corridor Disposition of Crown Land for transmission line corridor
Approval of Fuel Oil and Handling <i>Technical Standards and Safety Act, 2000</i> Ministry of Consumer and Business Services	<ul style="list-style-type: none"> Fuel storage tanks, vehicle dispensing stations and fuel oil delivery systems. They must comply with the Liquid Fuel Handling Code and the Fuel Oil Code.
Aggregate Permit <i>Aggregate Resources Act,</i> Ministry of Natural Resources	<ul style="list-style-type: none"> Access to various aggregate sources for construction material (3 quarries, and 1 sand and gravel pit)
Mine Closure Plan <i>Mining Act,</i> Ministry of Northern Development and Mines	<ul style="list-style-type: none"> Closure of the project site, including processing plant complex, open pit, stockpiles, fine PKC facility, etc.

In addition, there is a requirement for three provincial level EAs, as per the following:

- MNR Class EA relating to the disposition of Crown lands and rights thereto;
- MOE Screening level EA for construction phase, on-site diesel generating facilities (<5 MW); and,
- MOE Screening level EA for the construction of a new 115 kV transmission line from Abitibi Canyon (near Pinard) to Kashechewan, and from Attawapiskat to the Victor site.

MNR Class EA requirements substantively overlap with CEA Act requirements, and as a result, MNR has determined to screen the VDP based on the outcome of the federal environmental assessment process, to which they have been a party.

1.6 Roles of the Federal and Provincial Government Agencies in Carrying out the CEA Act

Each of the responsible federal and provincial government agencies has a mandate to review any and all aspects of the Victor EA, at its discretion and without restriction. Within this overall context, the different agencies have certain specialized interests, mandates and responsibilities.

Federal Agencies

The CEA Agency, in co-ordination with NRCan as the lead RA, has the responsibility to ensure that all process requirements of CEA Act are carried out in accordance with the applicable regulations and guidelines. The CEA Agency has been co-ordinating much of the work related to the environmental assessment of the project.

NRCan, as the lead RA, has co-ordinated the input of all other federal RAs, as well as that of the provincial government. DFO, HRSDC, and TC are also RAs for the VDP.

NRCan is also responsible for issuing federal permits related to the use, manufacture, and storage of explosives. DFO's primary responsibility is to ensure the protection of fish habitat and fisheries resources. TC has responsibility for the administration of the *Navigable Waters Protection Act*. HRSDC will be providing funding to assist with training Aboriginal people to access employment opportunities at the proposed Victor Diamond Mine. HRSDC will also provide advice on matters relating to the socio-economic impacts of the project and ensuring appropriate mitigation measures are implemented.

EC provides technical advice on matters relating to federal responsibilities involving migratory birds, species at risk, wetlands, water quality, toxics management, meteorology, climatology, and air quality. EC and NRCan will also assist DFO in matters pertaining to hydrology and hydrogeology. Health Canada (HC) provides specialist information on matters related to human health, including socio-economic aspects, First Nations health, and health impacts related to biophysical environmental effects, such as effects to country foods. INAC will assess the construction and operation of on-reserve facilities should the Proponent decide to locate any facilities on reserve lands.

Provincial Agencies

The provincial agencies bring added technical expertise and local knowledge to the federal process.

MNDM has a responsibility to ensure the orderly development of mineral resources in the Province, including the disposition of Crownlands for mining, as well as responsibilities for northern development generally, and First Nation interests. MNDM, as part of its general mandate, is also responsible for mine closure activities.

MNR has a broad mandate that includes the administration and management of Crown lands, and the resources associated with such lands, including aggregates, timber, fish, wildlife resources and surface waters, as well as more generalized aspects related to overall ecosystem quality, functioning, and management.

The MOE grants permits and approvals that address project aspects dealing with water and air quality (including noise), and waste management, and is responsible for application of the provincial *Environmental Assessment Act*.

The OEB is the regulator for Ontario's natural gas and electricity markets, and has responsibility for related approvals.

1.7 Roles of the First Nations in Carrying out the CEA Act

Attawapiskat First Nation

The Victor site and its access route west from Attawapiskat are located entirely within lands traditionally used by the AttFN. Traditional lands used by the community of Attawapiskat are shown in Figure 1-3 and include Akimiski Island in James Bay. Sharing of traditional lands occurs between the First Nations in boundary areas, but lands in the immediate vicinity of the VDP site, and along the Attawapiskat River area, are utilized solely by members of the AttFN.

The Proponent has consulted with the AttFN on all environmental matters relating to the VDP, and has thus far been the focus of all project-related First Nations' agreements, namely the MOU, the FPA and the IBA (nearing completion). Over 70 meetings have been held with the AttFN, and or their representatives, thus far on the project, and De Beers has made commitments that the project will not proceed without AttFN support. The major portion of the employment and training opportunities associated with the VDP is focused on providing direct benefit to the AttFN.

In an effort to understand First Nation concerns and issues with the proposed project, RAs and FAs held public consultations meetings and met with Chief and Council in Attawapiskat in October 2003, and issues raised during these meetings were taken into consideration during the development of the draft *Guidelines for the Conduct of a Comprehensive Study and the Preparation of a Draft Comprehensive Study Report* (the Guidelines). Further consultations were held with Attawapiskat on the draft guidelines in January 2004. Consultations were also held on the Comprehensive Study Environmental Assessment, and a satellite public registry has been operating in Attawapiskat.

Other First Nation and Aboriginal Communities

Although not a recognized First Nation community, Moosonee will be the primary staging area for the shipment of materials to the project site, since it has winter road and barge links to Attawapiskat, and rail links to Cochrane to the south. The diversity and strength of the Moosonee economy also carries over to adjacent Moose Factory.

The communities of Moose Factory, Fort Albany and Kashechewan are located along the winter road route from Moosonee to Attawapiskat. The Taykwa Tagamou Nation currently resides on the New Post No, 69A Reserve, in Brower Township, approximately 20 km southeast of Cochrane. The main Reserve (New Post No. 69), located between Moosonee and Cochrane, and just east of the Ontario Northland Railway and the Abitibi River, is unoccupied. MoCreebec has members within the communities of Moose Factory and Moosonee.

Based on the winter road linkage and the general regional proximity to the Victor site, it is expected that all of the west coast James Bay communities will derive some level of economic benefit (training, employment and service opportunities) from development of the VDP. They may also experience negative impacts from development. De Beers has committed to the development of a

formal agreement, or agreements, with Moose Cree, Kashechewan and Fort Albany First Nations to cover how the company and communities will work together.

Priority for business, employment and training will also be extended to members of the other main affected communities in the region, including Moosonee, members of MoCreebec, and the Taykwa Tagamou First Nation.

Consultations were also held with the First Nation communities of Constance Lake and Ogoki Post (Marten Falls First Nation) in regard to other possible access and power alternatives that were considered by the Proponent further inland from James Bay.

The community of Sanikiluaq was also consulted in relation to the project alternative of shipping fuel through Hudson Bay and James Bay.

Regional First Nation Organizations

The west James Bay area First Nation communities of Moose Factory, Fort Albany, Kashechewan and Attawapiskat, as well as Taykwa Tagamou, form part of the Mushkegowuk Council group of First Nations. Mushkegowuk indicated that it would take responsibility for representing regional First Nation interests in the VDP, including those of the Fort Albany, Kashechewan, Moose Cree, and Taykwa Tagamou First Nations, and that the AttFN will represent local First Nation interests in the Victor site area. It should be noted that Mushkegowuk does not represent the interests of Mocreebec. Mushkegowuk in turn comprises part of the larger Nishnawbe Aski Nation (NAN) alliance. NAN evolved out of the Grand Council Treaty No. 9, and represents most of the Ontario Treaty No. 9 and Treaty No. 5 First Nations located within the area that drains to Hudson Bay and James Bay.

1.8 Roles of Non-Aboriginal Communities

The economic benefits of the VDP are expected to reach out to northeastern Ontario, Ontario and then Canada. Within this context, Timmins is notable as the regional mining centre and Cochrane is linked by rail to Moosonee. As previously mentioned, Moosonee will be the primary staging area for the shipment of materials to the project site. These three communities have been consulted and have expressed a strong interest in seeing the project proceed. Consultations also extended to Hearst and Kapuskasing in relation to access and power alternatives considered in the EA.

1.9 Scope and Timing of the Environmental Assessment

According to *Section 16 (1) of the Canadian Environmental Assessment Act 1992*, the EA 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 any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out". This is an intentionally broad definition that is meant to be inclusive. At the same time, it is recognized that, in the interests of effective decision-making, it is important to scope the assessment to emphasize priority issues (CEAA1996).

The scope of the project, as defined in the *Guidelines for the Conduct of a Comprehensive Study and the Preparation of a Draft Comprehensive Study Report*, February 26, 2004, is as follows:

The RAs, in consultation with the expert FA and the Canadian Environmental Assessment Agency (Agency) and with input of First Nations communities (Attawapiskat, Fort Albany, Kashechewan and Moose Cree), have made a determination that the scope of the project for the purpose of the environmental assessment will include the construction, operation, modification, decommissioning, closure or other undertaking in relation to the following physical works:

- Access roads, including winter roads from Attawapiskat to the mine site, winter road from Moosonee to Attawapiskat, the west winter road and any new access roads to be constructed within the community of Attawapiskat;
- Accommodation complex;
- Aggregate, topsoil and muskeg storage facilities, excavation areas such as pits and quarries;
- Airstrip and any proposed modification to the existing airport facilities;
- Barge handling and staging areas, including any docks, wharfs, piers or any proposed modification to existing infrastructure;
- Facility for manufacture, storage and handling of explosives;
- Fuel pipeline and associated infrastructure;
- Fuel storage and handling areas;
- Kimberlite processing and management facilities;
- Laydown areas including container storage areas;
- Mine rock storage facilities;
- Mine water management facilities;
- Open pit;
- Chemical storage facilities;
- Sewage facilities;
- Utility area-power house (diesel generators), other power generation facilities and electricity transmission towers/line;

- Water inlet, outlet, sump, pumps and diversion structures;
- All waste management facilities, including incinerators and off-site disposal;
- Work camp and visitors centre;
- Workshops, warehouses and administration complexes;
- Emergency response facility;
- Fencing and lighting and other required buildings and infrastructure; and,
- Berms, dams, erosion control structures.

The scope of the project also includes a number of physical activities associated with these physical works, including the following:

- Water, waste, aggregate, chemical, explosives, resource, processed kimberlite and waste rock handling, storage and disposal, as appropriate;
- Shipping and transportation;
- Fuel storage, fuel handling and transfer (including James Bay and Attawapiskat);
- Dredging and dredge disposal and handling ;
- Relocation of South Granny Creek;
- Nayshkootayaow River flow supplementation;
- Reclamation;
- Environmental data collection; and,
- Aircraft and helicopter movements.

During the environmental assessment, De Beers investigated alternatives and made changes to the originally proposed project. The scope of the project was not amended because federal authorities believed that it still contained all the components of the project and alternatives. It should nonetheless be noted that the “access roads” include the alternative of a winter road from Hearst, and that the fuel items are now considered part of an alternative instead of being components of the proposed project.

1.10 Spatial and Temporal Boundaries

The project boundaries, as defined in the *Guidelines for the Conduct of a Comprehensive Study and the Preparation of a Draft Comprehensive Study Report*, February 26, 2004, are as follows.

The following two definitions shall be used when determining the spatial boundaries for the assessment project Study Area:

- The project study area will consist of the immediate geographical vicinity as determined by RAs (land and water) that encompasses all physical works and activities proposed by the Proponent for the Victor Diamond Project. This will include the mine site, the community of Attawapiskat (including Potato Island), all roads, pipeline, facilities in or near Attawapiskat, airstrip, the activities and roads near or along James Bay and the communities of Kashechewan, Fort Albany, and Moose Factory, shipping lane for diesel fuel in James Bay and Hudson Bay south of Belcher Islands south tip around 55° 40' N, and fuel lightering site in James Bay.
- Regional Study Area: The regional study area will encompass the maximum geographical extent (zone of influence) in which impacts from the project may be incurred for each valued ecosystem component (VEC). The selection of VECs will be agreed upon between the Proponent and the RAs. The geographical extent may vary depending on the VEC or issue examined however; each area will be defined and explained in the CS.

During the environmental assessment, De Beers investigated alternatives and made changes to the originally proposed project. The spatial and temporal boundaries of the project were not amended because federal authorities believed that the project study area and the regional study area still contained all the components of the project and alternatives. It should nonetheless be noted that the alternative of a winter road from Hearst/Constance Lake area is included in the regional study area, and that the alternative of shipping fuel in James Bay and Hudson Bay and the lightering site in James Bay are also now considered part of the regional study area.

Spatial boundaries are shown in Figure 1-4.

Project Phases

The CSEA Guidelines (NRCan 2004) indicate that the CSEA should address all phases of the project, including “construction, operations, closure, and post-closure”.

The following list compares the temporal boundary definitions in the guidelines to these standard terms, as used throughout this CSR:

- “Immediate”: equivalent to the construction and operation phases;
- “Near Future”: equivalent to the closure and post-closure phases (addressed specifically in Chapter 2, which describes proposed reclamation activities, and Chapter 8 in regards to follow-up and monitoring programs); and,

- “Far Future”: potentially within the post-closure phase, and beyond the post-closure phase.

1.11 Report Organization and Structure

The CSR organization and structure follow the format recommended by the CEA Agency for Comprehensive Study level assessments, as per the following Table of Contents:

Chapter 1:	Introduction
Chapter 2:	Project Description
Chapter 3:	Evaluation of Alternatives
Chapter 4:	Consultation
Chapter 5:	Description of the Existing Environment
Chapter 6:	Environmental Effects Analysis – Natural Environment
Chapter 7:	Environmental Effects Analysis – Socio-economic Environment
Chapter 8:	Follow-up Programs
Chapter 10:	References
Appendices	

More detailed assessments are provided in the CSEA (AMEC 2004a) and in the associated principal technical documents, as per the following:

- Civil Geotechnical Investigation, Victor Diamond Project, Feasibility Study, Attawapiskat, Ontario, Geotechnical Investigation Report (AMEC 2003);
- Environmental Baseline Study, Victor Diamond Project (AMEC 2004b);
- Processed Kimberlite Containment Facility, Feasibility Design Report (AMEC 2004c);
- Attawapiskat Facilities Geotechnical Investigation Report (AMEC 2004d);
- Fuel Spill Modelling in James Bay (AMEC 2004e);
- Fuel Spill Assessment in the Attawapiskat River (AMEC 2004f);
- Attawapiskat River Dispersion Modelling Study (AMEC 2004g)
- Air Quality Assessment, Victor Diamond Project (AMEC 2004h);
- Re-evaluation of Site Access and Power Supply Alternatives (AMEC 2004i);
- Economic Impact Study in Relation to Feasibility Work on the Victor Diamond Project (AMEC, and the Centre for Spatial Economics 2004);
- De Beers Victor Diamond Project Noise Assessment (HGC 2004);

- Dewatering of the Victor Diamond Project, Predicted Engineering, Costs, and Environmental Factors (Hydrological Consultants Inc. [HCI], Steffen Robertson and Kirsten [SRK] Consulting Inc. 2004a);
- Summary of Geochemical Characterization and Water Quality Estimates, Victor Diamond Project (Steffen Robertson and Kirsten [SRK] Consulting Inc. 2003);
- De Beers Canada Exploration, Victor Project TEK Study (Victor Project TEK Working Group 2004);
- Dewatering of Victor Diamond Project, Predicted Engineering, Cost, and Environmental Factors – Addendum 1, Update of Ground-Water Flow Model Utilizing New Surface-Water Chemistry and Flow Data from Nayshkootayaow River and Results of Sensitivity Analyses – September 2004 (Hydrological Consultants Inc. (HCI), Steffen Robertson and Kirsten (SRK) Consulting Inc. 2004b);
- Response to the November 3, 2004 Letter from Denis Lagacé, Director General NRCan, to Jeremy Wyeth of De Beers, Regarding “Victor Diamond Project Comprehensive Study Environmental Assessment Socio-economic Indicators”- December 10, 2004 (AMEC 2004 j); and,
- Nayshkootayaow River Fisheries Supplementation Module No. 1 (AMEC 2004 k).

Proponent responses to EA review comments received from federal and provincial government reviewers, First Nation reviewers, and members of the general public are documented in Chapter 4.

A glossary of terms and acronyms is provided in Appendix B.

Figure
1-1 Site Location

figure
1-2 Claim Map

figure
1-3 Traditional First Nations' Lands

figure
1-4 Study Areas Boundaries