Randle Reef Sediment Remediation Project

Scoping Document

Environment Canada

November 6, 2003
Updated February 25, 2008

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1.0 Introduction

Environment Canada is leading the development of a multi-partnered *Randle Reef Sediment Remediation Project* located in Hamilton Harbour, Ontario. Hamilton Harbour is one of 43 "Areas of Concern" (AOC) identified in the Great Lakes Water Quality Agreement between Canada and the United States. The Hamilton Harbour Remedial Action Plan (commonly called the "RAP") is a detailed strategy to clean up the Harbour, which would result in the "delisting" of the Harbour as an AOC. Remediation of various contaminated sediment sites within the Harbour have been recommended under the Hamilton Harbour RAP.

Randle Reef is located in Hamilton Harbour and is considered to be one of the more complex and highly contaminated sediment sites throughout the Canadian AOCs in the Great Lakes. Randle Reef sediments contain polynuclear aromatic hydrocarbons (PAHs) in very high concentrations in coal tar. This site is a priority for remediation in the Hamilton Harbour RAP and under the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem.

The proposed remediation of Randle Reef involves the construction of a dry cap dyked containment facility about 9.5 ha (hectare) in size. This would cover in-situ about 130,000 m^3 of sediments contaminated with PAHs, and contain about 500,000 m^3 of PAH contaminated sediments from the immediate surrounding project area, as well as other toxic sites in the Harbour. Its proposed end use will be a mix of 2/3 port activities and 1/3 naturalized open space. The port facility will be suitable for ships of Seaway draught. The channel, to be provided between the peninsula and the extension to Pier 15 will also allow vessels to enter and exit the berths along Pier 15 north of Sherman Inlet.

2.0 Purpose of the Scoping Document

Environment Canada is considering whether to provide partnership funding to enable the remediation of Randle Reef to be carried out. As such, Environment Canada has determined that it must exercise one of the powers, duties or functions prescribed under section 5 of the *Canadian Environmental Assessment Act* (CEAA), and is therefore a Responsible Authority (RA) for the proposed project and has agreed to lead the environmental assessment.

Fisheries and Oceans Canada is also an RA for the proposed project as a result of the requirement for an authorization under subsection 35(2) of the *Fisheries Act*, as is Transport Canada due to the requirement for an approval under subsection 5(1)(a) of the *Navigable Waters Protection Act*, both Law List triggers. Under the *Port Authority Environmental Assessment Regulations*, the Hamilton Port Authority is also subject to CEAA since they are considering providing partnership funding for the project and because they own the bed of the Harbour in the Randle Reef area (i.e., a land trigger). Health Canada has indicated that they are a Federal Authority and will provide expert advice in relation to the project.

Environment Canada is the proponent for the proposed project. The Cities of Burlington and Hamilton, the Hamilton Conservation Authority and the Ontario Ministry of Labour are some of the members of the Project Advisory Group (PAG) who participated in the review of remedial alternatives. These municipal and provincial agencies will continue to advise the RAs in the development of the comprehensive study report.

Environment Canada has determined that the appropriate environmental assessment track for this project is a comprehensive study under CEAA, pursuant to paragraph 28(c) of the *Comprehensive Study List Regulations*. While the RAs have determined that a detailed assessment would be undertaken for the sediment remediation project, it is the end use or port component of the overall project that results in the regulated requirement to undertake a comprehensive study. Paragraph 28(c) of the *Comprehensive Study List Regulations* requires that a comprehensive study be undertaken for the construction of a marine terminal designed to handle vessels larger than 25,000 DWT (dry weight tonnage) that is not planned for lands considered to be routinely and historically used as a marine terminal or designated for use in a land use plan that has been subject to public consultation.

The comprehensive study will be undertaken in accordance with the provisions of CEAA and the *Canada Port Authority Environmental Assessment Regulations*.

The RAs are required to determine the scope of project and scope of assessment for the proposed project, in conjunction with the expert federal authorities. The purpose of this document is to define the scope of project and scope of assessment for the comprehensive study that must be completed for this proposed project. The scoping document is intended to be used as a guide for federal departments who will be involved in the preparation of the environmental assessment.

Comments received from a June 11, 2003 public open house on the *Randle Reef Sediment Remediation Project* (see Section 9.0 – Public Consultation) were considered in developing this scoping document.

3.0 Project Location

The proposed project is located along the south shore of Hamilton Harbour in the vicinity of Piers 14, 15 and 16 (Stelco Inc.(Stelco)). The location of the project site is shown in Figure 1.

Figure 1: Randle Reef Sediment Remediation Project – Project Location

4.0 Need for and Purpose of the Project

Purpose of the Project

The purpose of the project is to remediate a priority zone of sediments contaminated with high levels of PAHs in the Randle Reef area, with the potential to address other sediments from elsewhere in the Harbour.

Need for the Project

There is a need to reduce the exposure of organisms in the Harbour to the most persistent toxic substances in the sediments. The physical characteristics of the Randle Reef site are such that it has high potential for re-circulation of contaminants on the south shore of Hamilton Harbour. As noted in Section 1.0, the site is a priority for remediation in the Hamilton Harbour RAP and under the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem.

5.0 Project Background

The process to develop a preferred approach to remediate the highly contaminated sediments near Randle Reef has been underway since 1995 and has involved considerable input from a variety of agencies and stakeholders. In November 2001, Environment Canada, as the project lead, formed a multi-stakeholder Project Advisory Group (PAG) consisting of 17 participating organizations to develop a consensus around a solution that will satisfy the objectives of the *Randle Reef Sediment Remediation Project* and those of the stakeholders represented. The PAG consists of representatives from the Bay Area Restoration Council (BARC), Hamilton Harbour RAP Office, Great Lakes United, Clean Air Hamilton, Central North End West Neighbourhood Association, Hamilton Beach Preservation Committee, Hamilton Industrial Environmental Association Citizen Liaison Committee, City of Hamilton, City of Burlington, Stelco, Local 1005 (USWA), Ontario Ministry of Environment (MOE), Ontario Ministry of Labour, Environment Canada, DFO, Hamilton Conservation Authority (HCA) and the Hamilton Port Authority.

A range of remediation options were considered by PAG, including: removal and disposal; removal and re-use; and in-situ containment.

In April 2002, after careful consideration of the advantages and disadvantages of each of the remediation options, PAG recommended the in-situ containment option as the preferred remediation approach. This option was selected since it provides a cost-effective solution for remediating the priority zone of highly contaminated sediment, as well as having the potential to address other acutely toxic sediments in the Harbour (achieve a larger scale clean-up), has a low technological risk and provides greater opportunity for partnership resources.

Subsequently, a Project Implementation Team (PIT) of stakeholders was formed to develop various conceptual design options for review by the PAG. The members of PIT are the City of Hamilton, Clean Air Hamilton, DFO, Environment Canada – Great Lakes Sustainability Fund (GLSF) and Hamilton Harbour RAP Coordinator, HCA, Hamilton Port Authority, MOE, BARC and Stelco.

In September 2002, consultants were contracted to develop a conceptual design study (see report by Acres & Associated/Headwater dated March 2003). The objective of this study was to develop alternative conceptual design options for the containment facility that recognized the environmental, technical and socioeconomic requirements and constraints associated with the project. Three options were developed for all-natural and mixed-use alternatives (i.e., natural/commercial mix). Variations of the multi-use concept were further analyzed.

The conceptual design study examined these options by comparing project objectives and key issues within four categories: environmental; technical; socio-economic; and financial.

In December 2002, those in attendance at the PAG meeting recommended a conceptual design for the containment facility. The proposed design involves a 9.5 ha structure that would cover and contain approximately 630,000 m^3 of acutely toxic sediments at the Randle Reef site, and potentially from elsewhere in the Harbour. The PAG recommended that the site optimize the ability to address PAH contaminated sediment greater than 200 parts per million (ppm). The proposed containment facility incorporates some naturalized shoreline and land use, as well as port uses.

In addition, PAG recommended proceeding to undertake the detailed engineering for the proposed facility. Therefore, the conceptual design study was followed by a detailed engineering phase which commenced in fall 2003.

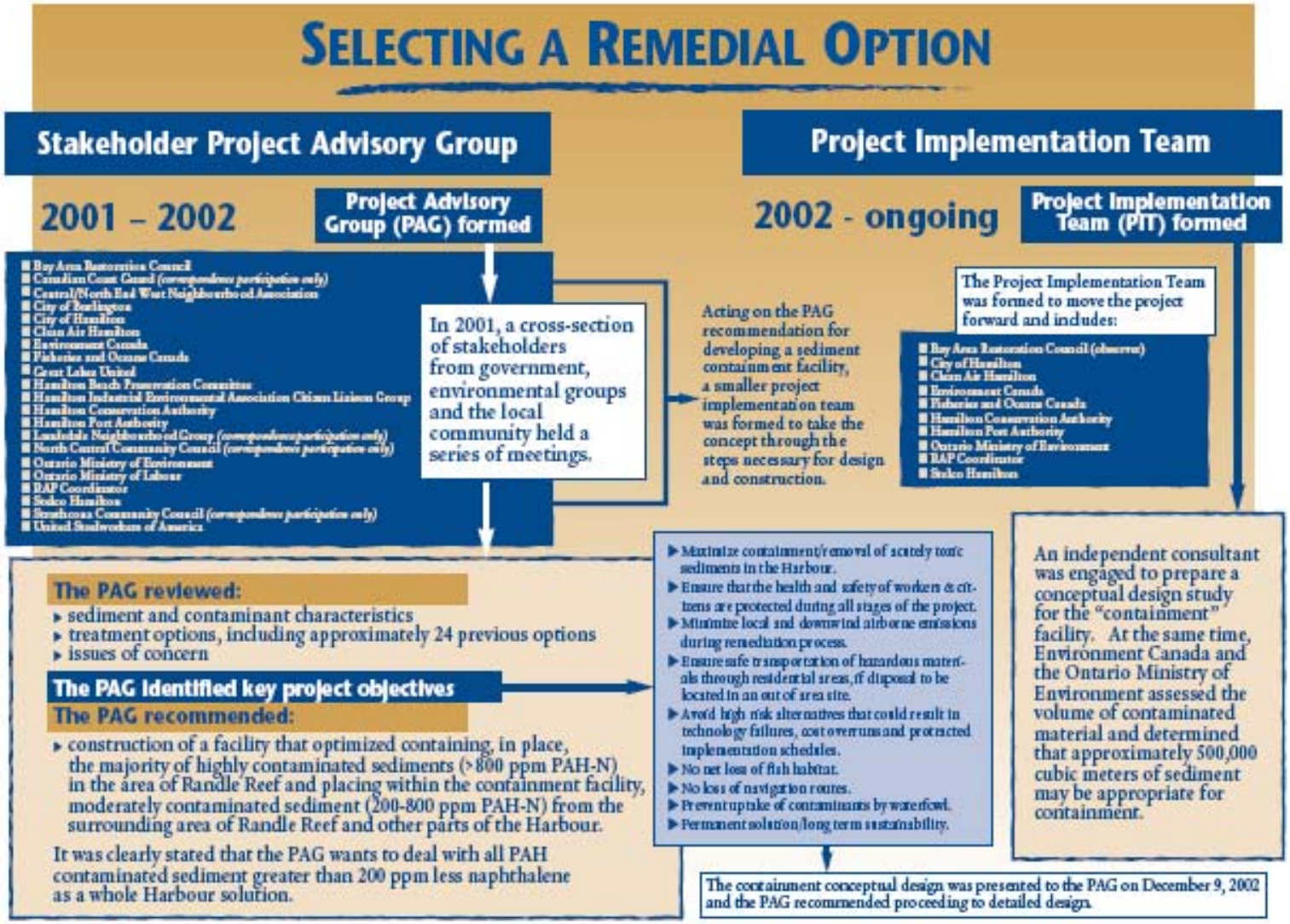
Figure 2 illustrates the PAG and the process for selecting a remedial option. Further details on the project background and the evaluation of alternatives will be provided in the comprehensive study report.

6.0 Project Overview

The conceptual design of the containment facility incorporates a roughly 9.5 ha site, consisting of a peninsula attached to Pier 15 (the primary site) in addition to a triangular extension to Pier 15 (the secondary site).

The site footprint is expected to cover the majority of the most contaminated sediment in the priority zone area (the area of highest contamination). Based on the conceptual design, it is estimated that about 500,000 m^3 of toxic sediments may be dredged and contained within the containment structure. This will include contaminated sediments from the Randle Reef area not

Figure 2: PAG and Selecting a Remedial Option



covered by the proposed containment structure, and possibly sediments from the Strathearne Avenue Approach Channel (Windermere Arm) – see Figure 3. The volume of sediment estimated to be contained in-situ is approximately 130,000 m^3. The final elevation of the facility is estimated to be 76.2 m., which is level with the existing piers. Capping material could come from elsewhere in the Harbour, and/or from sources off-site, provided it meets suitable criteria for capping material.

The north and west side of the peninsula will be naturalized with appropriate plantings.

The facility will need to accommodate approximately 5 ha of the primary site for port facility and operations.

In addition, the facility will need to accommodate the operations of the existing port uses at the Pier 15 berth as well as the Stelco water intake and outfall, or make provision for moving the intake and outfall to another location.

A conceptual plan of the proposed project is shown in Figure 4.

7.0 Scope of Project

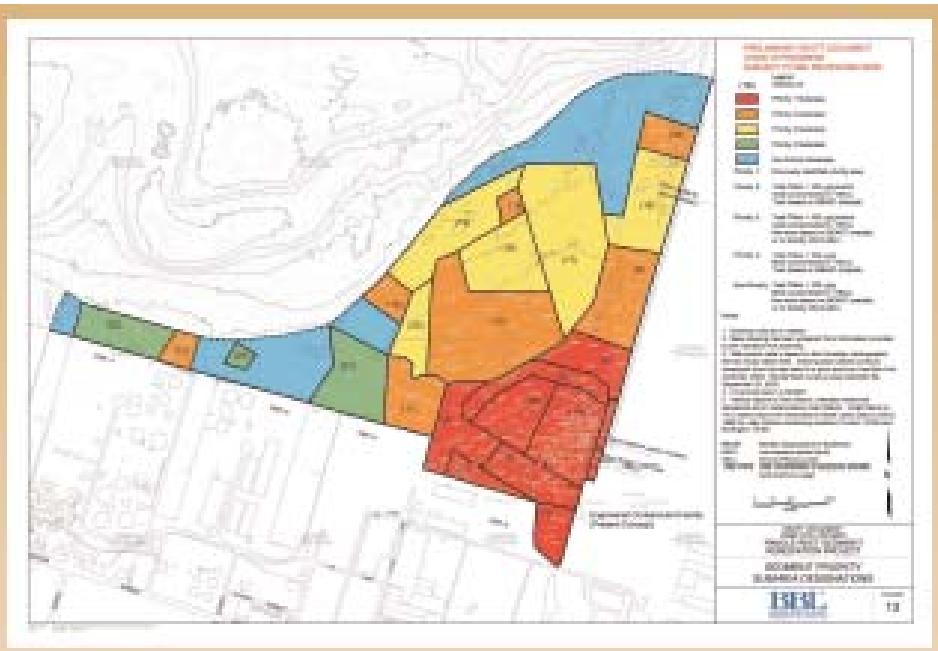
The scope of the project includes all aspects related to the physical construction and operation of the containment structure, including: the preparation, operation, modification and decommissioning of work sites, including laydown areas; transportation and removal of equipment; dredging and sediment transportation activities; dewatering; capping of containment area; cap naturalization; shipping facility; monitoring; and any ancillary undertakings (e.g., related to temporary on-site treatment and storage facilities, construction or alteration of access roads and rail lines, relocation of affected water intakes and outfalls, shoreline modifications).

Specifically, the scope of the project for the environmental assessment of the *Randle Reef Sediment Remediation Project* is described as follows:

- The containment facility which comprises two parts - a peninsula adjacent to Pier 16 with an area of approximately 8.1 ha and a triangular extension to Pier 15 with an area of 1.4 ha.

- Dredging of areas of contaminated sediments that lie outside the perimeter of the containment facility and underneath proposed perimeter walls, transporting and placement of these sediments in the containment facility.

Figure 3: Areas of Potential Contaminant Dredging



Contaminated sediment sub-areas will be dredged from priority 1 moving out to priority 4. The sequence and removal of the priority sediments will take into account other considerations for dredging, including the practical limits of dredging equipment, bathymetry of the bottom surface, dredge operations, required environmental controls, and other construction limitations. The four priority categories are defined as follows:

PRIORITY 1

Priority 1 sediments include the 14.6-hectare (36.5-acre) priority area. These sediments have been previously identified as containing significant concentrations of contaminants (PAHs and metals), as well as showing demonstrated toxicity.

PRIORITY 2

Priority 2 sediments have demonstrated toxicity based on BEAST analysis and elevated concentrations of PAHs and/or metals. Elevated concentrations are defined as total PAH concentrations >100 mg/kg or concentrations of one or more of the metals of interest (arsenic, chromium, copper, iron, lead, nickel, and zinc) that exceed the SELs.

PRIORITY 3

Priority 3 sediments have total PAH concentrations >100 mg/kg or concentrations of one or more metals of interest that exceed the SELs, but do not have demonstrated toxicity. This priority category includes sediments in areas for which no toxicity data are available, as well as areas where the BEAST analysis found no toxicity.

PRIORITY 4

Priority 4 sediments have total PAH concentrations <100 mg/kg, and concentrations of metals of interest below the SELs. However, Priority 4 sediments have demonstrated toxicity based on BEAST analysis.

Figure 4: Randle Reef Sediment Remediation Project – Proposed Project (Natural/Commercial)

- A double berth of length and depth suitable for ships of Seaway draught would be provided between the peninsula and the extension to Pier 15. (This channel also allows vessels to enter or exit the berths along Pier 15 north of Sherman Inlet). Sheet pile walls or similar would be used for the piers on either side of the channel.

- Naturalization of the north and west sides of the primary ECF. The naturalized land area would be landscaped with appropriate plantings to provide a naturalized feature without focusing on enhancing a specific habitat type. The proposed naturalized area is approximately 3.1 ha.

- Development of 5 ha of the peninsula for port uses (see below for port facility requirements).

- Provision of road and rail access to the peninsula from the Hamilton Port Authority's existing property on the eastern part of Pier 15.

- The maintenance of water supply to Stelco's pump houses by an open channel or buried culvert running along the existing Pier 16 wall, extending from the pump houses to the northern end of the peninsula (approximately Stelco's chainage 0+122 m (0+400 ft)). Appropriate measures, such as capping, would be required along the toe of the Pier 16 wall to contain contaminated sediments beneath this channel or culvert.

- The peninsula is located over the majority of sediments with PAH-N >800 ppm. Dredging or disturbance of these materials will be minimized. However, some isolated areas in the channel to the Pier 15 berths north of Sherman Inlet would need to be dredged and placed in the containment facility. Work areas will be managed during dredging.

- A containment element, for example sealable sheet piling, would be installed around the perimeter of the containment and keyed into uncontaminated overburden materials underlying the contaminated sediments. The type of containment element eventually selected will depend on a number of engineering, environmental, constructability and cost considerations, some of which will be determined by a risk assessment (see Section 9.0 - Scope of Factors to be Considered). Design features would be required along ship berthing areas to prevent impact loads from docking operations acting on the containment element and potentially reducing its integrity.

- Within the containment, other contaminated materials could be placed over the sediments that would remain in-situ. It has been assumed that the top elevation of these materials would be at elevation 73.5 m, so that they would remain submerged even under lower

lake level conditions. A total of about 500,000 m^3 of potential volume is provided in the peninsula and in the extension to Pier 15.

- Clean fill and an environmental cap (i.e., clay cap or geosynthetic containment material such as a high-density polyethylene (HDPE) liner) may be placed above the contaminated materials up to the new ground level of elevation 76.2 m, which is the approximate ground level of the existing piers. The requirement for an environmental cap will be determined based on fate and transport modeling of contaminants and groundwater/stormwater transport requirements.

- Fish habitat compensation works to address loss of fish habitat (see Section 9.0 – Environmental Enhancement Opportunities).

- Monitoring will include both short-term monitoring during construction and dredging operations, as well as long-term monitoring to ensure the integrity of the facility. Monitoring during construction and dredging operations will be undertaken to ensure that there are no releases of harmful substances into the air, water or on land. Air quality monitoring will start prior to any significant activity in the Harbour and will provide detailed background site information. In addition to this baseline monitoring, the Ministry of the Environment will continue to operate existing ambient air monitoring stations in the vicinity of the project area. The water quality monitoring program will address turbidity, total suspended solids and water chemistry. All applicable federal, provincial and local regulations, guidelines and criteria must be adhered to. The long-term monitoring program will be developed and implemented as part of the engineering design of the facility.

In addition, the minimum specifications for the proposed port facilities include the following project components:

Steel Sheet Pile wall
- vessel design draft = 10.7 m below IGLD 1985 (74.2 m)
- concrete bulkhead

Water services
- minimum 10” (25 cm) diameter PVC domestic line
- 6” (15 cm) diameter PVC fire line

Sanitary sewer
- minimum 300 mm diameter PVC line

Storm sewer
- all storm water to remain on site (i.e., not transferred via storm sewer to main Pier 15 property)

- catchbasins and storm sewers designed for 5 year storm

Electrical supply
- 13.8 kV underground service to an on-site sub-station

Gas
- 150 mm diameter Yellow jacket, maximum 60 psi operating pressure

Bell telephone
- 4-100 mm diameter concrete encased ductbank

Lighting
- along roadway at 50 m spacing, minimum 250 Watt fixtures
- dock lighting as required

Provision for a future 250 mm diameter pipeline (liquid product) to site

Dock load limits
- minimum 1000 pounds per square foot within the first 12.2 m (40 feet) of the wall
- minimum 2000 pounds per square foot beyond first 12.2 m (40 feet)

Buildings
- minimum 7,000 m^2 (75,000 square feet) warehouse with office
- pile-supported building or other suitable foundations
- 3 or 4 domes, 45.72 m (150 foot) diameter

Dock surface
- asphalt or concrete on suitable granular base, throughout

Roads/rail
- minimum 10 m wide roadway to site
- one rail siding onto site from HPA's main Pier 15 rail siding

Landscaping
- landscaping treatments along access road
- entrance features to site.

At the request of HPA's tenants, a proposed dry-docking slip is to remain east of the east face of Pier 14 (approximately 55 m (180 feet) wide) to accommodate expansion plans.

The length of dock at the primary site is required to be at a minimum 250 m, with a vessel design draft of 10.7 m. A new ship channel of about 90 m in width would be created between the primary site and the secondary site of Pier 15.

8.0 Factors to be Considered

Subsection 16(1) of CEAA outlines the following factors to be considered for a comprehensive study:

(a) *"the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;*

(b) *the significance of the effects referred to in paragraph (a);*

(c) *comments from the public that are received in accordance with this Act and the regulations;*

(d) *measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and*

(e) *any other matter relevant to the … comprehensive study … such as the need for the project and alternatives to the project, that the responsible authority … may require to be considered".*

In addition, subsection 16(2) of CEAA requires that every comprehensive study include a consideration of the following:

(a) *"the purpose of the project;*

(b) *alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;*

(c) *the need for, and the requirements of, any follow-up program in respect of the project; and*

(d) *the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future*".

9.0 Scope of Factors to be Considered

The following provides further details on the scope of the factors to be considered in the environmental assessment.

Environmental Factors to be Considered

The comprehensive study report will include an assessment of the environmental effects of the project, including cumulative effects. The following environmental factors [1] will be considered in determining and assessing potential adverse environmental effects.

Effects on the Biophysical Environment	• fish and fish habitat • water birds and other migratory birds • species at risk • vegetation • wetlands • surface water quality, currents and circulation • groundwater quality and movement • air quality – local and downwind airborne emissions (including greenhouse gases, particulate matter, dust, odours and volatiles) • contamination of soils and / or exposure of potential contaminants
Related Effects on the Socio-Economic and Cultural Environments	• adjacent land uses • local neighbourhood and residents • worker health and safety • public health and safety • noise • aesthetics • residential areas beyond local area site • Stelco operations • City storm sewer and combined sewer outfalls • use of lands and resources for traditional purposes by aboriginal persons • shipping and navigation • recreational uses of the Harbour
Cumulative Effects	• cumulative effects on aquatic VECs (e.g., water quality, fish species) • cumulative effects on other VECs
Effects of the Environment on	• seismic activity

[1] These can also be referred to as valued ecosystem components or VECs. VECs are defined as "*Any part of the environment that is considered important by the proponent, public, scientists or government involved in the assessment process. Importance may be determined on the basis of cultural values or scientific concern*" (Cumulative Effects Assessment Working Group, 1999, p. A4).

the Project	• wave and current activity * • changes in lake levels * • icing and winter operations
	* under normal conditions and as a result of climate change
Effects of Accidents and Malfunctions	• failure of safety precautions • spills • containment failure

Spatial and Temporal Boundaries

The spatial boundaries for the assessment will be defined within the comprehensive study report for each environmental component that is likely to be affected by the project and for each component where a measurable effect is predicted for the cumulative effects assessment.

The time frame over which the potential effects of the project are anticipated to continue will be defined. The definition of this time frame will consider potential cumulative effects.

Significance of Environmental Effects

The significance of environmental effects will be determined by applying criteria such as the provincial water quality criteria, RAP objectives and other federal and provincial guidelines.

Alternatives To the Project

In exercising their discretion under subsection 16(1)(e) of CEAA to consider alternatives to the project, the RAs have considered alternatives to the proposed solution for remediating the priority zone of contaminants in the Randle Reef area. As noted in Section 5.0, a range of remediation options were considered by PAG and as part of the previous pre-engineering technical evaluation, including: removal and disposal; removal and re-use; and in-situ containment. The comprehensive study report will describe the alternatives considered and present the comparison of the alternatives based on environmental, technical and economic factors.

Alternative Means of Carrying Out the Project

Alternative means for the design and implementation of the proposed project will be examined in the detailed engineering study and in the environmental assessment. Alternative means will be examined for the following project components:

- environmental dredging;

- isolation structure / methods;
- containment and capping;
- port facility design;
- hydrogeological / water intake / stormwater outfall; and
- sediment handling / dewatering / water treatment.

Each alternative will be assessed by considering environmental effects, constraints, costs and schedule. In all cases, a preferred alternative will be identified for further consideration, including the identification of mitigation and contingency measures. Alternatives for the phasing of containment construction and filling will also be assessed.

Risk Assessment

A risk assessment will be carried out to ensure the long term integrity of containment. The containment design will allow for long term monitoring of the performance of the facility.

The risk assessment for the project will include a site-specific risk assessment that identifies potential receptors and the degree of containment required, and which addresses worker health and safety, containment of the contaminants, end use and the aquatic environment.

Environmental Enhancement Opportunities

The comprehensive study will consider the project's effectiveness in sustaining and enhancing the capacity of renewable resources. The following environmental enhancement opportunities will be examined in the assessment.

- Fish Habitat Compensation and Wildlife Enhancement

Fisheries and Oceans Canada requires that there be "no net loss" in the productive capacity of fish habitat as a result of projects that affect fish habitat. In-water works that result in the harmful alteration, disruption or destruction of fish habitat may require compensation. A *Fisheries Act* authorization will only be issued where acceptable measures to compensate for fish habitat losses are developed and implemented by the proponent, where required. A *Fisheries Act* authorization will be sought for this project.

An assessment will be undertaken to determine if compensation is required as a result of the project.

- Volume Compensation for Harbour Infilling

With the proposed project, there is no significant change in Harbour volume because the vast majority of fill is taken from the Harbour as contaminated sediment to be placed in the

containment structure. The RAP attempts to keep Harbour infilling to a minimum and endorses infilling only if for the purpose of implementing remedial actions. For example, infilling was permitted to create fish habitat and wildlife islands.

Any new infilling of the harbour has also been raised as a concern by the public. Measures have been taken to minimize the size of the containment facility (and, therefore, minimize infilling) while maximizing the benefits offered by the containment facility in dealing with contaminated sediment.

- Terrestrial Component of Cap Naturalization

Approximately 4.5 ha of the capped surface area will have upland landscaping features and a naturalized shoreline to provide terrestrial habitat. Details of this component will be developed in the detailed engineering study.

- Associated Naturalization Projects

The Hamilton Conservation Authority has asked that the proposed project attempt to compensate, to the extent possible, for surface area lost in the Harbour by cutting back areas from land surrounding the Harbour. As a result, portions of the shoreline will be considered for naturalization opportunities along the east and south sides of the Harbour. Also, the wetlands proposed for fish habitat compensation will provide surface area compensation, if configured appropriately.

Monitoring and Follow-up

A follow-up program that includes short-term monitoring during project implementation and long-term monitoring post-construction will be required. It is anticipated that future monitoring and maintenance of the containment facility to ensure its long-term performance and security will become the responsibility of the party who assumes ownership of the facility. The containment facility design will allow for long-term monitoring of the performance of the facility. The design will also include features that allow detection of any reduction in containment integrity before contaminants are released into the environment, and provide measures to be taken if this is detected.

The environmental assessment will include the documentation of appropriate monitoring and follow-up measures.

Public, Agency and First Nation Consultation

As noted previously, key stakeholders in the development of the proposed project have been involved through the PAG and PIT. In addition, meetings with individual stakeholders are on-

going. For example, during the conceptual design study, individual meetings were held with the City of Hamilton, Ministry of the Environment, HCA, HPA and Stelco.

First Nations were advised of the project and meetings were held with the Six Nations Council to discuss the project.

In addition, a public open house was held on June 11, 2003 to present and review the status of the *Randle Reef Sediment Remediation Project*, the options that have been considered for remediation, the conceptual design options, the preferred conceptual design and next steps.

The public will also have an opportunity to review and comment on the project prior to the submission of the comprehensive study report to the Canadian Environmental Assessment Agency. Final public and agency consultation will be undertaken through the comprehensive study process which includes:

- submission of the comprehensive study report to the Canadian Environmental Assessment Agency for public review (October 2008);

- a 30 day public review of the comprehensive study report (October to November 2008); and

- decision by the federal Minister of the Environment on the course of action in respect of the project.

10.0 Project Schedule

The next steps in the assessment of the proposed project involve:

- undertaking Phase 2 of the detailed engineering study (completion by October 2008);
- preparing the draft environmental assessment for the project – this will be a comprehensive study report, in accordance with CEAA requirements (to September 2008);
- submission of comprehensive study report to the Canadian Environmental Assessment Agency and formal public review (October 2008);
- securing funding and partnerships (on-going);
- construction and dredging (2009).

It is expected that the project may be initiated in 2009, provided that: the detailed engineering study substantiates the conceptual design and demonstrates that the project satisfies federal environmental assessment requirements; full funding is in place; implementation agreements between Environment Canada and project funding partners are completed; and the tendering

process is completed. The construction and dredging required for project completion is expected to take approximately 5-10 years.

References

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This scoping document was developed from materials **taken directly** from the above references.