

**Environmental Assessment Track Report**

**For  
The Petrochemical and  
Liquefied Natural Gas Facilities at  
Goldboro, N.S.**

**CEAR Reference Number: 05-03-10471**

**SUBMITTED TO THE  
MINISTER OF THE ENVIRONMENT  
PURSUANT TO SUBSECTION 21(2) OF THE  
CANADIAN ENVIRONMENTAL ASSESSMENT ACT**

**BY**

**Transport Canada  
and  
Fisheries and Oceans Canada**

**October 14, 2005**

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## **1.0 Introduction**

This Environmental Assessment Track Report was prepared by Transport Canada (TC) and Fisheries and Oceans Canada (DFO), pursuant to paragraph 21(2)(a) of the *Canadian Environmental Assessment Act* (CEAA). DFO and TC, as Responsible Authorities (RAs) under CEAA, each has a responsibility to ensure that an environmental assessment (EA) is conducted. Each of the two RAs has scoped a different project, however both projects are subject to the Comprehensive Study (CS) EA process. Since the project, as scoped by DFO, falls within the project, as scoped by TC, and both projects require a CS level EA, it was determined that only one scoping document and one Environmental Assessment Track Report would be prepared to meet the requirements under CEAA.

Consistent with the requirements of paragraph 21(2)(a) of CEAA, this report to the Minister describes:

- the scope of the project;
- the factors to be considered, and the scope of those factors;
- public concerns in relation to the project;
- the potential of the project to cause adverse environmental effects; and
- the ability of the CS to address issues related to the project.

The information contained in this report and the recommendation to the Minister of the Environment provided under paragraph 21(2)(b) from the RAs, are intended to assist the Minister of the Environment in making a determination under subsection 21.1(1). The Minister must decide whether to continue the EA by means of a CS, or refer the project to a mediator or review panel in accordance with section 29 of CEAA.

## **2.0 Background**

### **2.1 Overview of the Development Proposal**

Keltic Petrochemicals Inc. (Proponent) proposes to construct and operate a Petrochemical Complex and Liquefied Natural Gas (LNG) Importation and Vapourization Facility. The proposal includes petrochemical plants, a marginal wharf, a LNG Terminal, LNG storage and regassification facilities, industrial water supply and an electrical co-generation facility. A pipeline will be constructed from the Vaporization Plant to the property boundary. The proposal also includes construction of a highway between the development site and Antigonish. These facilities, and any associated auxiliary facilities, are referred to collectively in this document as the development proposal. Refer to Figures 1 and 2 in Appendix 1.

#### **2.1.1 Proposal Location**

The Petrochemical Complex, supported by a Liquefied Natural Gas (LNG) Importation and Vapourization Facility and an Electric Co-generation Plant, would be located in

Goldboro, Guysborough County, Nova Scotia. A portion of the proposal (landbased facilities) would be located within the Goldboro Industrial Park. The associated marine facilities would be located on the northeast side of Isaacs Harbour. The highway would connect the Goldboro site and Antigonish. Refer to Figure 1 of Appendix 1.

### **2.1.2 Components of the Development Proposal**

#### **LNG Importation (includes the LNG Terminal) and Vapourization Facility**

The LNG Facility will offload, store and revapourize LNG for the supply of feed stock and energy requirements for the Petrochemical Complex and the Electric Co-generation Plant. The capacity will be 1 billion cubic feet (BCF) per day of LNG, expandable to 2 BCF per day. Sufficient natural gas pipeline take-away capacity exists in close proximity to the LNG facility, if there is residual gas for market.

The LNG will be offloaded at the LNG Terminal located in Isaacs Harbour. The LNG Terminal will accommodate special ships designed for the transportation of LNG in the range of 70 000 dead weight tonne (DWT), with a draft up to fourteen meters and capable of holding up to 250,000 m<sup>3</sup> of LNG. The LNG Terminal will be constructed of pipe pile mooring piers and berthing dolphins. The piers will be capped and connected with a concrete bridge and deck. The LNG transfer line will be routed to the LNG storage tanks via a pipeline and maintenance trestle.

LNG vessels will arrive approximately every eight days at the facility's initial capacity. Hotelling and unloading of LNG ships will typically require 24 hours. This will include activities such as customs and immigration, servicing, provisioning and unloading. LNG vessels will be brought in fully loaded and reballasted offshore.

Onboard ship pumps will deliver LNG to low pressure onshore LNG storage tanks via stainless steel loading arms and cryogenic piping. A total of four marine unloading arms will be installed, three for liquid delivery and one for vapour return to the ship.

There will be three full containment, top entry storage tanks. Three additional tanks are planned, for future expansion. The LNG will be contained in an inner tank. An outer tank will surround the inner tank. The bottom of the tank will be insulated with foamglass. The LNG tank foundation will be elevated several feet above the ground to prevent frost heave. All connections to the LNG tanks will be from the top.

#### **Petrochemical Complex (includes the Marginal Wharf)**

The Petrochemical Complex will consist of process units for ethylene, propylene, polypropylene, high density polyethylene, low density polyethylene, and linear low density polyethylene. The plants will obtain their feedstock (ethane, propane and butane) and process gas from both the LNG system and Sable Offshore Energy Inc. (SOEI). Gas obtained from SOEI will be returned to the SOEI gas plant after extraction of the feedstock liquids described above. Power will be supplied by the Electric Co-generation

Facility. The Petrochemical Complex will require an industrial water supply. A marginal wharf will be constructed in Isaacs Harbour.

Other feedstocks (e.g., refinery propylene, methanol) will be imported to the Goldboro site by ship and offloaded at the marginal wharf. The products and byproducts of the Petrochemical Complex will be transported to the marginal wharf for storage in silos (as required), and will be shipped out from there. One side of the marginal wharf will be used for berthing tugs and pilot boats.

The marginal wharf will be approximately 670 meters in length and 330 meters in width. Construction will be done using pre-cast concrete caissons. The caissons will be floated into position, and placed on a granular mattress on the seabed. This will eliminate the need to dredge and dispose of seabed materials. Fill will be placed in the area behind the caissons.

#### **Electric Co-generation Plant**

The Electric Co-generation Plant will have a gas turbine and heat recovery steam generator with a capacity of 200 megawatts, to meet the development requirements. The electricity will be generated at 35 kilowatts per annum, three phase and 60 Hertz. This will enable connection to the Nova Scotia Power Inc. grid for purchase of incremental power required by the site, and to provide some backup.

#### **Highway**

The existing highways, although not at capacity, are not well suited for industrial traffic. The proposed 100 series highway would begin at the Goldboro site, and run north-northeast through Guysborough County to the Trans Canada Highway 104/Beech Hill Road intersection at Antigonish, a distance of approximately 60 kilometers.

#### **Pipeline**

A pipeline will be constructed from the LNG Vaporization Plant to the property boundary, to allow for future connection, by other parties, with the existing Maritimes and Northeast Pipeline system.

#### **Dam/Impoundment**

On July 11, 2005, the proponent advised that there was a new component to the development proposal. The new component involves construction of a dam on the Isaacs Harbour River just below Meadow Lake. Meadow Lake is located a short distance, approximately 7 kilometers, from the development site. The dam is required to create an impoundment that would provide an industrial supply of water to the Petrochemical and Electrical Co-generation facilities.

## 2.2 Involvement of the Responsible Authorities

TC and DFO became aware of the development proposal after receipt of a notification, in accordance with the Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements, from the Canadian Environmental Assessment Agency (Agency). The notification included a memorandum dated August 30, 2004, and a project description.

TC's responsibilities under CEAA arise from the anticipated requirement for a *Navigable Waters Protection Act* (NWPA) paragraph 5(1)(a) approval to allow for an interference to navigation, associated with the LNG Terminal and marginal wharf.

DFO's responsibilities under CEAA arise from the anticipated requirement for a *Fisheries Act* subsection 35(2) authorization for the harmful alteration, disruption, or destruction of fish habitat associated with the marginal wharf. A large area would be infilled during construction of the marginal wharf; therefore, the work would involve the destruction of approximately 220,000 m<sup>2</sup> of intertidal and subtidal marine fish habitat.

In relation to the new component of the development proposal that TC and DFO became aware of in July, 2005, specifically the dam and impoundment component, TC and DFO have determined that they are both likely to require an EA. This is due to TC's anticipated requirement for a *Navigable Waters Protection Act*, paragraph 5(1)(a) approval, and DFO's anticipated requirement for a *Fisheries Act* subsection 35(2) authorization. In order to ensure that the assessment of the new component proceeds in a timely manner, TC and DFO have decided to proceed with a joint screening level EA immediately.

Adequate information is not available, at this time, to determine if an EA is likely in relation to the watercrossings associated with the highway component of the development proposal. When sufficient details are provided by the proponent, TC and DFO will determine if they have any environmental assessment responsibilities. If it is determined that an environmental assessment(s) is required, it is likely to go forward at a screening level.

## 2.3 Involvement of Other Federal Authorities

Environment Canada (EC), Natural Resources Canada (NRCan), Health Canada (HC) and DFO will provide specialist or expert information and knowledge in support of the EA process. The following illustrates the type of information/advice that may be provided by each of the expert federal authorities, and is not specific to this particular EA.

EC may provide expert advice on such things as air, water, soil and sediment quality; wildlife species at risk; migratory birds; wetlands; environmental emergencies; greenhouse gas emissions; and potential disposal of materials at sea.

NRCan may provide expert advice on such things as environmental geochemistry; sources, transport, cycling, and fate of metals in marine and terrestrial environments; and environmental impacts of mining and mineral processing.

HC may provide expert advice on such things as air, water and soil quality guidelines/standards; toxicology (multimedia - air, water, soil, food); drinking water and sewage management; contaminated sites; impacts of noise on human health; community health (First Nations); environmental and occupational toxicology; health risk assessment and risk management; and radiation protection (ionizing and non-ionizing).

DFO may provide expert advice in regards to fish, fish habitat and fisheries.

#### **2.4 Reasons for the Initiation of the Comprehensive Study**

A CS is required under CEAA, pursuant to paragraph 28(c) of the *Comprehensive Study List Regulations*. This is because both the LNG Terminal and marginal wharf will be designed to handle vessels larger than 25 000 dead weight tonnes, and the lands on which the terminal will be located have not been used routinely or historically for a marine terminal nor have they been designated for such use in a land-use plan subject to public consultation.

#### **2.5 Federal/Provincial Cooperation**

The development proposal is subject to a provincial EA in accordance with the Nova Scotia *Environment Act*. The provincial EA was initiated on January 12, 2005, when the proponent registered a Class II EA Registration Document with Nova Scotia Environment and Labour.

The federal EA will be coordinated, to the extent possible, with the provincial EA. However, the federal and provincial governments will each make decisions on matters within their own legislative authorities.

### **3.0 Scope**

TC and DFO, as RAs, prepared a document entitled, "Scoping Document for the Petrochemical and Liquefied Natural Gas Facilities at Goldboro, N.S." (Scoping Document), dated May 24, 2005. This document is attached as Appendix 1: the initial proposed scope of the project is found in Section 6.1 (page 21), the factors to be considered in the EA are found in section 6.2 (page 22) and the scope of the factors to be considered are found in section 6.3 (page 23).

The Scoping Document was prepared in consultation with the Agency, and the expert federal authorities. It included information on the proposed scope of project, factors to be considered and the scope of those factors. The Scoping Document was made available

for review and comment by the public, as per subsection 21(1) of CEAA, for the period from June 1<sup>st</sup> to July 3<sup>rd</sup>, 2005.

As mentioned in this EA Track Report, in both the Introduction (Section 1.0), and the Scoping Document (Appendix 1), DFO and TC each have a responsibility to ensure that an EA is conducted in accordance with CEAA. As outlined in CEAA, subsection 15(1), the scope of the project to be assessed is determined by the RA. Each of the two RAs has scoped a different project, however both projects are subject to the CS EA process. For this assessment, the project scope identified by DFO falls within the project scope identified by TC.

Based on the project being assessed by TC, TC initially determined that the scope of the project for the purposes of TC's EA to be the construction, operation, maintenance, modification and decommissioning of the following components: LNG Terminal, marine transfer pipelines, the LNG storage tanks, the marginal wharf, any temporary marine facilities and structures and equipment that are connected with the movement of goods between ships and shore, the regassification plant. Refer to section 4.2 of this report for any revisions to TC's scope as a result of comments received during the public consultation period.

Based on the project being assessed by DFO, DFO initially determined that the scope of the project for the purposes of DFO's EA was the construction and operation of the marginal wharf. It was stated that the operation of the marginal wharf does not include shipping, but does include docking and deberting of vessels. Refer to section 4.2 of this report for any revisions to DFO's scope as a result of comments received during the public consultation period.

Refer to section 4.2 of this report for any revisions to the Factors and Scope of Factors as a result of comments received during the public consultation period.

DFO and TC will work together to conduct a single federal EA process that will allow both RAs to fulfill their respective responsibilities under CEAA, in a unified non-duplicative manner. This includes each meeting their respective requirements to report to the Minister of the Environment under paragraph 21(2)(a) in this joint document, and to make recommendations to the Minister of the Environment on the EA track in accordance with paragraph 21(2)(b).

The proponent advised the RAs and the Agency of the new dam\impoundment component (referenced in section 2.2 of this EA Track Report) in July 2005. In order to ensure that the environmental assessment of the new component proceeds in a timely manner, TC and DFO have decided to proceed with a joint screening level EA of the dam\impoundment project immediately.



#### 4.0 Public Consultation

In accordance with CEAA, subsection 55(1), a Canadian EA Registry (Registry) must be established for each EA. The Registry consists of an Internet Site and project file. It provides notice of the EA, and facilitates public access to records related to the EA.

TC is taking the lead role for the Registry, for both the Internet Site and the project file. This EA was registered on the Internet Site, under No. 05-03-10471, on June 1, 2005. It can be found by conducting a search using the Registry number from the following addresses:

English - [http://www.ceaa.gc.ca/050/index\\_e.cfm](http://www.ceaa.gc.ca/050/index_e.cfm)

French - <http://www.ceaa.gc.ca/050/indexf.cfm>

CEAA requires that public consultation be conducted at three points during a CS:

- during the preparation of the Scoping Document [subsection 21(1)];
- during the preparation of the comprehensive study report (section 21.2); and
- during a review of the completed comprehensive study report prior to the Minister of the Environment's issuance of an EA decision statement (section 22).

#### 4.1 Past Public Consultation

Pursuant to subsection 21(1) of CEAA, on June 1, 2005 and June 3, 2005 TC and DFO, invited the public to comment on the Scoping Document. The following actions were taken:

- A notice was posted in the Chronicle-Herald and the Guysborough Journal on June 1<sup>st</sup>
- A notice was posted in Le Courrier de la Nouvelle -Ecosse on June 3<sup>rd</sup>

The document was available for public review at the following locations:

- The Ecology Action Centre, Halifax
- Municipality of the District of Guysborough, Guysborough
- Sherbrooke Branch Library, Sherbrooke
- Isaacs Harbour Medical Centre, Isaacs Harbour.

Comments were requested to be provided by July 3, 2005.

Copies of notices requesting public comment on the Scoping Document are included in Appendix 2.

#### 4.2 Public Concerns in Relation to Consultation on the Scoping Document

Two expert federal authorities, EC and HC, provided comments on the Scoping Document. EC raised concerns related to shipping, contaminants, and a species at risk, i.e., the roseate tern. HC raised issues related to the assessment of socio-economic impacts. HC also raised concerns about the fact that shipping would not be considered, specifically as it relates to human health. Based on EC and HC comments, TC will include shipping within 25 km of Country Island. The RAs will require that the species at risk environmental component refer specifically to the roseate tern. Contaminants in the environment will have to be quantified by the project proponent during the collection of baseline information.

Based on comments from HC, a decision was also made to present information on biophysical and socio-economic ECC in two separate tables in the Track Report. The list of health determinants, provided by HC, was included in Table 2, to further describe the "Public Health and Safety" ECC.

In general, for the comments received from the public, concerns were expressed in regards to the effects of the development proposal on the environment, on companies that conduct business in the area, and on local residents.

A summary of the comments received from the public, and the means by which the RAs intend to address the comments, are provided in the tables located in Appendix 3. Public comments were received from 20 individuals and groups. Appendix 4 provides information on organizations/associations that submitted comments on the Scoping Document on behalf of the groups that they represent.

In relation to the scope of project (refer to Appendix 3: Table 3-1), requests were received to increase the scope of project to include the highway, shipping, traffic during construction, and decommissioning of the facilities. After considering public comments, DFO has determined that the scope of project will remain as originally described in the Scoping Document. However, DFO recognizes that docking and deberting of vessels, included in the project scope, is actually part of shipping. Based on comments received during the public consultation period, TC will amend its scope of project to include shipping within 25 km of Country Island.

In relation to public comments on the factors and scope of factors (refer to Appendix 3: Table 3-2), requests were received to consider 1) a variety of environmental components (e.g., property values, community services, economic development, water quality), 2) certain factors (e.g., alternative means of carrying out the project, cumulative effects), and 3) certain effects (e.g., effects related to contamination and marine accidents). Based on the comments that were received from the public, two additional "Possible Environmental Components of Concern" will have to be considered in the EA (i.e., aquaculture and tourism). However, it should be reiterated that the list included in the Scoping Document is not exhaustive. During collection of baseline information, the project proponent is expected to expand on this list if it is determined that there are

additional environmental components of concern.

Any revisions to project scope, factors and scope of factors will be reflected in an update to the Notice of Commencement. If the project remains as a CS, the proponent will be advised of any changes to the scope for each of the projects, factors, and scope of the factors to be considered.

In relation to the ability of the CS to address issues relating to the Project (refer to Appendix 3: Table 3-3), seven submissions supported a panel review and four submissions supported a CS.

#### 4.3 Future Public Consultation

If the Minister of the Environment determines that the projects will continue to be assessed as a CS, under paragraph 21.1(1)(a) of CEAA, the RAs will ensure that the public is provided with an opportunity, in addition to those provided under subsection 21(1) and section 22, to participate in the CS.

The Agency administers a Participant Funding Program which supports individuals and non-profit organizations interested in participating in EAs. The Agency will provide up to a total of \$40,000 in participant funding, should this EA proceed as a CS. Notification by the Agency of the availability of participant funding was provided on June 6, 2005. The closing date for application was July 5, 2005.

#### 5.0 Potential of the Projects to Cause Adverse Environmental Effects

The potential of the projects to cause adverse environmental effects has been considered, as summarized in tables 1 and 2 below. The tables were developed based upon preliminary development proposal information, and the RAs' experience with similar projects. It is anticipated that the adverse environmental effects identified in the table could occur, should mitigation measures not be put in place. The Environmental Components of Concern (ECC) will be studied during the EA. Potential adverse environmental effects will be determined, and mitigation measures will be identified as appropriate.

##### Table 1. Potential Effects on the Bio-Physical Environment

Table 1 lists possible Bio-Physical ECC, and provides associated information on the potential adverse environmental effects. This list is not intended to be exhaustive. Additional ECC may be identified during the EA.

Possible Bio-Physical ECC	Potential Adverse Environmental Effects
freshwater quality/quantity	♦ If on-land structures are to be built in areas where waterbodies are located, the waterbodies could be directly impacted by the footprint of the facilities.

Possible Bio-Physical ECC	Potential Adverse Environmental Effects
	<ul style="list-style-type: none"> <li>Adverse effects could result from such things as exposing acidic slats, disturbing gold mine tailings, exposing erodible soils, etc.</li> </ul>
marine water quality/quantity	<ul style="list-style-type: none"> <li>Disturbance of sediments, especially if there are contaminants in the sediments, and release of pollutants could result in the degradation of marine water quality.</li> </ul>
groundwater quality/quantity	<ul style="list-style-type: none"> <li>The use of groundwater as a water supply would reduce the quantity of groundwater remaining in the system.</li> <li>Release of pollutants could result in the degradation of groundwater quality.</li> </ul>
terrestrial soil/sediment quality	<ul style="list-style-type: none"> <li>Removal or movement of soil, and release of pollutants, could result in the degradation of soil quality.</li> </ul>
marine sediment quality	<ul style="list-style-type: none"> <li>Release of pollutants could result in the degradation of sediment quality.</li> <li>Changes in water flow/direction could cause changes to sediment size distribution which may result in adverse effects on sediment quality and fish habitat.</li> </ul>
hydrology	<ul style="list-style-type: none"> <li>More work is required to determine potential adverse effects, and identify mitigation measures as appropriate.</li> </ul>
air quality	<ul style="list-style-type: none"> <li>Release of pollutants could result in the degradation of air quality.</li> </ul>
climatic conditions	<ul style="list-style-type: none"> <li>More work is required to determine potential adverse effects, and identify mitigation measures as appropriate.</li> </ul>
terrestrial vegetation	<ul style="list-style-type: none"> <li>Removal of vegetation associated with the on-land facilities could result in the loss of terrestrial wildlife habitat.</li> </ul>
species at risk (specifically the roseate tern)	<ul style="list-style-type: none"> <li>The project could impact on the foraging habitat of the roseate tern.</li> </ul>
fish	<ul style="list-style-type: none"> <li>Degradation of environmental quality could impact on the survival or health of fish.</li> <li>Noise/light could result in changes to the use of habitat by fish or changes to movements of fish.</li> </ul>
fish habitat	<ul style="list-style-type: none"> <li>Intertidal and subtidal fish habitat will be destroyed as a result of the construction of the marginal wharf (i.e., infill). There could be adverse effects on fish habitat due to such things as changes to water movement associated with the presence of the marginal wharf. The RAs will work with the proponent to determine appropriate mitigation, which includes compensation, for the loss of fish habitat.</li> <li>There could be adverse effects on fish habitat due to such things as changes to water movement associated with the construction of the LNG Terminal. The RAs will work with the proponent to determine appropriate</li> </ul>

Possible Bio-Physical ECC	Potential Adverse Environmental Effects
	mitigation measures.
wildlife and wildlife habitat	<ul style="list-style-type: none"> <li>Wildlife could be adversely affected directly, by on-land construction activities, or indirectly due to loss of habitat.</li> </ul>
migratory birds	<ul style="list-style-type: none"> <li>Degradation of environmental quality could impact on the survival or health of migratory birds.</li> <li>Noise/light conditions could be detrimental to the health of birds.</li> </ul>
migratory bird habitat	<ul style="list-style-type: none"> <li>Migratory bird habitat could be destroyed (e.g. infill associated with the marginal wharf), or made unsuitable for use (e.g., due to vessel movement, noise, lighting), as a result of the project.</li> </ul>
wetlands	<ul style="list-style-type: none"> <li>More work is required to determine potential adverse effects, and identify mitigation measures as appropriate.</li> </ul>
marine mammals	<ul style="list-style-type: none"> <li>Effects could relate to loss of habitat.</li> <li>Also vessel traffic, noise and light conditions, and the presence of in-water structures, could cause avoidance of the area by marine mammals.</li> </ul>
lighting conditions	<ul style="list-style-type: none"> <li>Lighting could result in the death of migratory birds or could affect their movements.</li> <li>Lighting could adversely affect residents living nearby.</li> </ul>
acoustic environment	<ul style="list-style-type: none"> <li>Noise created as a result of the project could affect fish, wildlife, migratory birds, marine mammals and nearby residents.</li> </ul>

**Table 2. Potential Effects on the Socio-Economic Environment, Caused by Changes to the Bio-Physical Environment**

CEAA's definition of environmental effect also includes an indirect examination of such things as health and socio-economic conditions. Table 2 lists possible socio-economic and health ECC, and provides associated information on the potential adverse environmental effects that relate to a change in the bio-physical environment. This list is not intended to be exhaustive. Additional socio-economic ECC may be identified during the EA.

Possible Socio-economic ECC	Potential Changes to the Environment	Potential Adverse Environmental Effects
public health and safety (determinants of health include such things as air and water quality, noise,	<ul style="list-style-type: none"> <li>Accidental events or project activities could result in the release of pollutants causing a degradation of</li> </ul>	<ul style="list-style-type: none"> <li>Adverse effects on human health related to exposure to pollutants; adverse effects related to</li> </ul>

Possible Socio-economic ECC	Potential Changes to the Environment	Potential Adverse Environmental Effects
vibration, light, contamination of traditional foods, impacts on future traditional use of land and water)	<p>environmental quality (e.g., air, water, soil, fish)</p> <ul style="list-style-type: none"> <li>• Accidental events or acts of terrorism could result in hazardous situations (e.g., explosions)</li> <li>• Presence of the facility (e.g., a change in the perception of aesthetics)</li> <li>• Project activities could result in an increase in noise, vibration, lighting</li> </ul>	<p>changes in a person's ability to earn a livelihood (e.g., closure of a fishery due to contamination)</p> <ul style="list-style-type: none"> <li>• Individuals could be harmed or killed</li> <li>• Adverse effects related to changes in a person's ability to earn a livelihood (e.g., reduction in tourism, decrease in property sales).</li> <li>• Adverse effects related to a person's ability to rest, relax, sleep</li> </ul>
navigation (including recreational boating)	<ul style="list-style-type: none"> <li>• Presence of in-water structures</li> </ul>	<ul style="list-style-type: none"> <li>• Restricted navigation due to physical structures in the water</li> </ul>
marine safety and security	<ul style="list-style-type: none"> <li>• The presence of the marine facilities, and additional ships traveling in the area</li> </ul>	<ul style="list-style-type: none"> <li>• Terrorist activities such as explosions</li> <li>• Vessels collisions</li> </ul>
fisheries (i.e., commercial, aboriginal and recreational)	<ul style="list-style-type: none"> <li>• Presence of in-water structures</li> <li>• Accidental events or project activities could result in the release of pollutants causing a degradation of environmental quality (e.g., air, water, soil, fish)</li> </ul>	<ul style="list-style-type: none"> <li>• Effects related to restricted navigation due to physical structures in the water</li> <li>• Adverse effects on fish populations being fished</li> </ul>
aquaculture operations	<ul style="list-style-type: none"> <li>• Accidental events or project activities could result in the release of pollutants causing a degradation of</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse effects on the health or quality of the cultured species could result in a decrease in</li> </ul>

Possible Socio-economic ECC	Potential Changes to the Environment	Potential Adverse Environmental Effects
	<p>environmental quality with resulting impacts on the quality or health of cultured species</p> <ul style="list-style-type: none"> <li>Project activities could result in the introduction of foreign species into the area</li> </ul>	<p>business profits</p> <ul style="list-style-type: none"> <li>Adverse effects on the business could result in a loss of jobs</li> </ul>
tourism	<ul style="list-style-type: none"> <li>Presence of the facilities (e.g., a change in the perception of aesthetics)</li> </ul>	<ul style="list-style-type: none"> <li>Possible decrease of tourism in the area</li> </ul>
physical and cultural heritage	<ul style="list-style-type: none"> <li>Presence of the facilities</li> </ul>	<ul style="list-style-type: none"> <li>More work is required to determine potential adverse effects, and identify mitigation measures as appropriate.</li> </ul>
current use of lands and resources – Aboriginal persons	<ul style="list-style-type: none"> <li>Presence of the facilities</li> </ul>	<ul style="list-style-type: none"> <li>More work is required to determine potential adverse effects, and identify mitigation measures as appropriate.</li> </ul>
structures/sites of significance	<ul style="list-style-type: none"> <li>Presence of the facilities</li> </ul>	<ul style="list-style-type: none"> <li>More work is required to determine potential adverse effects, and identify mitigation measures as appropriate.</li> </ul>

## 6.0 Ability of a Comprehensive Study to Address Issues Relating to the Projects

The Scoping Document, which was reviewed by federal authorities and the public, provides information regarding the scope of project, factors to be considered and the scope of the factors for consideration in the CS.

The following is based on the nature of the project, the understanding of environmental issues related to EAs of similar projects, and consideration of the views of the expert authorities and comments received from the public. Given the anticipated environmental effects and issues of the project:

- TC has determined that a CS has the ability to address the issues relating to the project, as scoped by TC

- DFO has determined that a CS has the ability to address the issues relating to the project, as scoped by DFO



# Appendix 1 – Scoping Document for the Petrochemical and Liquefied Natural Gas Facilities at Goldboro, N.S.

## 1.0 Introduction

Keltic Petrochemicals Inc. (Proponent) proposes to construct and operate a Petrochemical Complex and Liquefied Natural Gas (LNG) Importation and Vaporization Facility, in Goldboro, Nova Scotia. The proposal includes petrochemical plants, a marginal wharf, a LNG Terminal, LNG storage and regassification facilities, and an electrical co-generation facility. A pipeline will be constructed from the Vaporization Plant to the property boundary. The proposal also includes construction of a highway between the development site and Antigonish. These facilities, and any associated auxiliary facilities, are referred to collectively in this document as the development proposal. Refer to Figures 1 and 2.

Transport Canada (TC) and Fisheries and Oceans Canada (DFO) are each required to exercise regulatory decision-making authorities in regard to some components of the development proposal in order for it to proceed. For this reason, both departments are required to ensure that a federal environmental assessment is conducted, pursuant to the *Canadian Environmental Assessment Act* (the Act), prior to taking their respective decisions.

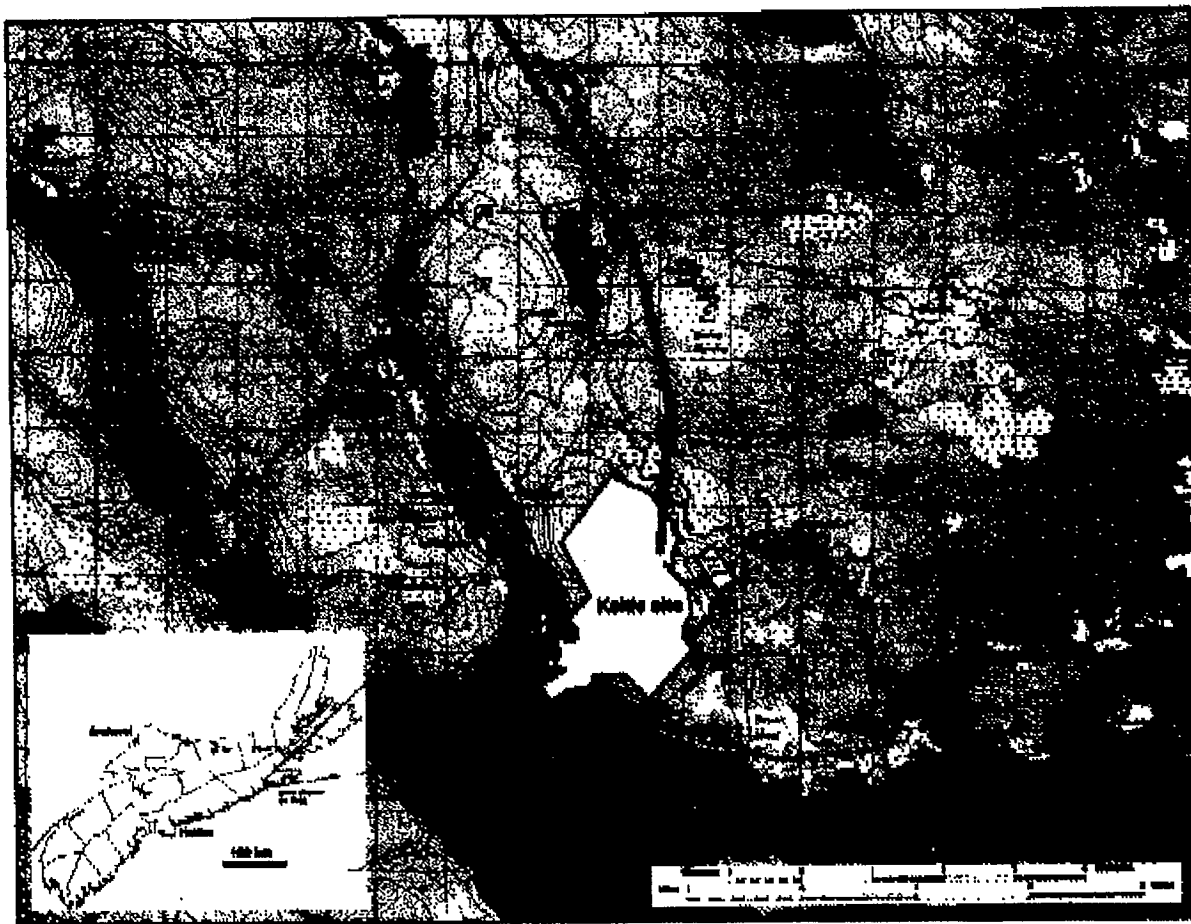
The development proposal is subject to a provincial environmental assessment in accordance with the Nova Scotia *Environment Act*. The federal environmental assessment will be coordinated, to the extent possible, with the provincial environmental assessment. However, the federal and provincial governments will each make decisions on matters within their own legislative authorities.

The purpose of this document is to provide information to the public on the federal environmental assessment process, and to seek public comment on the federal assessment to be conducted in relation to the development proposal. Specifically, this document provides an opportunity for the public to comment, in accordance with section 21(1) of the Act, on the following:

- proposed scope of the project for the purposes of a federal environmental assessment;
- the factors proposed to be considered;
- the proposed scope of those factors; and
- the ability of a comprehensive study to address issues relating to the components of the development proposal subject to the Act.

Information on the deadline for comment, and how to submit comments, are found in Section 7.0.

Following the public comment period, in accordance with Section 21(2) of the Act, DFO and TC will provide a report to the federal Minister of the Environment. DFO and TC will also make a recommendation to the Minister on whether to continue with the environmental assessment by means of a comprehensive study or to refer the project to a mediator, for mediation, or a review panel.



**Figure 1 – Development Proposal Site**

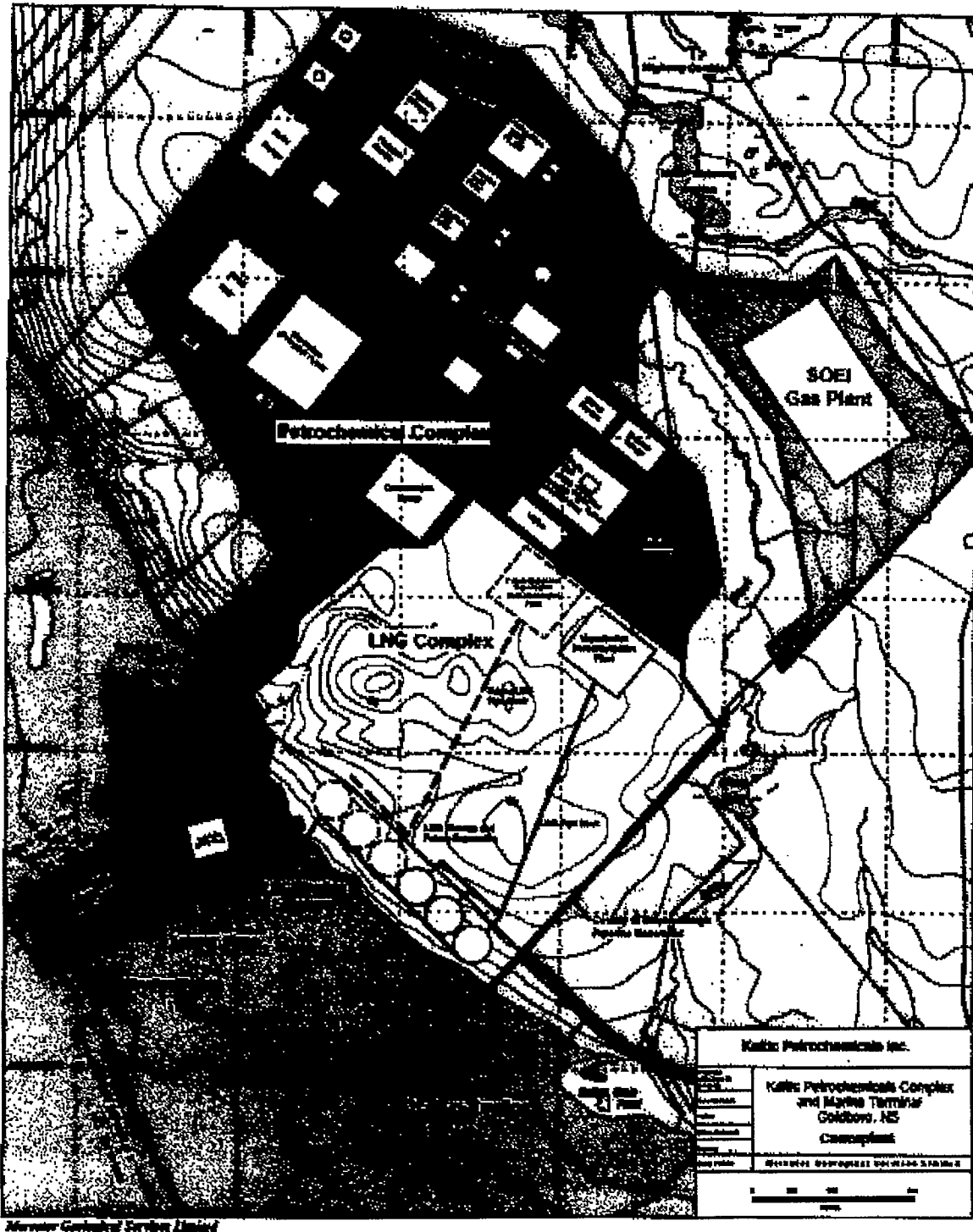


Figure 2 – Detailed Development Proposal Site Plan

## 2.0 Federal Environmental Assessment

### 2.1 Regulatory Context

DFO and TC are both required to ensure that a federal environmental assessment is conducted in accordance with the CEAA. Therefore, both departments are RAs under the Act. Each RA's responsibility to ensure an assessment is conducted relates to the issuance of a permit, license or other approval that is included in the *Law List Regulations* of the CEAA.

#### 2.1.1 Transport Canada

TC's responsibilities under the Act arise from the anticipated requirement for a *Navigable Waters Protection Act* (NWPA), section 5(1)(a), approval to allow for an interference to navigation, associated with the LNG Terminal and marginal wharf (refer to Figure 2).

#### 2.1.2 Fisheries and Oceans Canada

DFO's responsibilities under the CEAA arise from the anticipated requirement for a *Fisheries Act* section 35(2) authorization, for the harmful alteration, disruption, or destruction of fish habitat associated with the marginal wharf (refer to Figure 2).

### 2.2 Level of the Environmental Assessment

A comprehensive study is required under the CEAA, pursuant to paragraph 28(c) of the *Comprehensive Study List Regulations*, because both the LNG Terminal and marginal wharf will be designed to handle vessels larger than 25 000 dead weight tonnes.

### 2.3 Overview of the Environmental Assessment Process

Following this initial public consultation, pursuant to subsection 21(2) of the CEAA, the RAs must report to the Minister of the Environment on the following:

- the scope of the project, the factors to be considered in the environmental assessment and the scope of those factors;
- public concerns in relation to the project;
- the project's potential to cause adverse environmental effects; and
- the ability of the comprehensive study to address issues relating to the project.

The RA's must also recommend to the Minister of the Environment whether the environmental assessment should be continued by means of a comprehensive study, or whether the project should be referred to a mediator or review panel.

After considering the subsection 21(2) report and recommendation, the Minister of the Environment must decide whether to refer the project back to the RAs to continue with the comprehensive study process, or refer the project to a mediator or review panel. If

the Minister of the Environment decides that the project should continue as a comprehensive study, the project cannot be referred to a mediator or review panel at a later date.

If the Minister of the Environment determines that the environmental assessment will continue as a comprehensive study, an environmental assessment will be undertaken. The RAs will delegate the preparation of the comprehensive study report (CSR) to the Proponent. The CSR will be prepared, and then submitted to the Minister of the Environment and to the Canadian Environmental Assessment Agency (Agency). During the comprehensive study process, public participation is required.

Following submission of the CSR, the Agency will invite the public to comment on the report prior to the Minister of the Environment making his determination. The Minister of the Environment also has the power to request additional information or require that public concerns be addressed before issuing the environmental assessment decision statement. Once the environmental assessment decision statement is issued, the Minister of the Environment will refer the project back to the RAs for action.

If after considering the subsection 21(2) report and recommendation, the Minister of the Environment refers the project to a mediator or review panel, the project will no longer be subject to a comprehensive study under the Act. The Minister of the Environment, after consulting the RAs and other appropriate parties, will set the terms of reference for the review, and appoint the mediator or review panel members.

Whether the environmental assessment proceeds by means of a comprehensive study or is referred to a review panel, participant funding will be made available by the Agency to facilitate public participation.

#### **2.4 Provision of Expert Advice from other Departments**

Environment Canada (EC), Natural Resources Canada (NRCan), and Health Canada (HC) will provide specialist or expert information and knowledge in support of the environmental assessment process.

#### **3.0 Canada-Nova Scotia Harmonization**

The development proposal is subject to a provincial environmental assessment in accordance with the Nova Scotia *Environment Act*. The federal environmental assessment will be coordinated, to the extent possible, with the provincial environmental assessment. However, the federal and provincial governments will each make decisions on matters within their own legislative authorities.

A document outlining the information that the Proponent must provide, as part of the provincial environmental assessment, was finalized on April 8, 2005. It is entitled "Terms of Reference, As Required by the *Environment Act* for Preparation of an Environmental Assessment Report, Proponent: Keltic Petrochemical Inc., Project:

Petrochemical Plant and LNG Facilities, Goldboro, NS". The document can be viewed at <http://www.gov.ns.ca/enla/ess/ea/kelticpetro.asp>. Information provided by the Proponent will be used as part of both the provincial environmental assessment process, and the federal environmental assessment process.

#### **4.0 TERMPOL**

TERMPOL Review Process refers to the Technical Review Process of Marine Terminal Systems and Transshipment sites. The purpose of the TERMPOL review is to objectively appraise operational ship safety, route safety, management and environmental concerns associated with the location, construction and operation of a Marine Terminal.

It is the policy of Transport Canada to initiate TERMPOL upon the request of the Proponent and upon the initiation of the federal environmental assessment process for the project. If the Proponent does not elect to follow the TERMPOL process, the Navigable Waters Protection Division of Transport Canada may require that the Proponent carry out the relevant studies identified in TERMPOL as part of the navigational review process for the NWSA permit. The TERMPOL review is not limited to the scope of the environmental assessment review, nor is the NWSA review process exclusive of the components of the TERMPOL review process. In addition, the LNG tankers will be required to meet all national and international standards for the operation of such tankers.

#### **5.0 Overview of the Development Proposal**

##### **5.1 Proposal Location**

The Petrochemical Complex, supported by a LNG Importation and Vapourization Facility and an Electric Co-generation Plant, would be located in Goldboro, Guysborough County, Nova Scotia. A portion of the proposal (landbased facilities) would be located within the Goldboro Industrial Park. The associated marine facilities would be located on the northeast side of Isaacs Harbour. The highway would connect the Goldboro site and Antigonish. Refer to Figure 1.

##### **5.2 Components of the Development Proposal**

###### **5.2.1 LNG Importation (includes the LNG Terminal) and Vapourization Facility**

The LNG Facility will offload, store and revapourize LNG for the supply of feed stock and energy requirements for the Petrochemical Complex and the Electric Co-generation Plant. The capacity will be 1 billion cubic feet (BCF) per day of LNG, expandable to 2 BCF per day. Sufficient natural gas pipeline take-away capacity exists in close proximity to the LNG facility, if there is residual gas for market.

The LNG will be offloaded at the LNG Terminal located in Isaacs Harbour. The LNG Terminal will accommodate special ships designed for the transportation of LNG in the range of 70 000 dead weight tonne (DWT), with a draft up to fourteen meters and capable

of holding up to 250,000 m<sup>3</sup> of LNG. The LNG Terminal will be constructed of pipe pile mooring piers and berthing dolphins. The piers will be capped and connected with a concrete bridge and deck. The LNG transfer line will be routed to the LNG storage tanks via a pipeline and maintenance trestle.

LNG vessels will arrive approximately every eight days at the facility's initial capacity. Hotelling and unloading of LNG ships will typically require 24 hours. This will include activities such as customs and immigration, servicing, provisioning and unloading. LNG vessels will be brought in fully loaded and reballasted offshore.

Onboard ship pumps will deliver LNG to low pressure onshore LNG storage tanks via stainless steel loading arms and cryogenic piping. A total of four marine unloading arms will be installed, three for liquid delivery and one for vapour return to the ship.

There will be three full containment, top entry storage tanks. Three additional tanks are planned, for future expansion. The LNG will be contained in an inner tank. An outer tank will surround the inner tank. The bottom of the tank will be insulated with foams. The LNG tank foundation will be elevated several feet above the ground to prevent frost heave. All connections to the LNG tanks will be from the top.

### **5.2.2 Petrochemical Complex (includes the Marginal Wharf)**

The Petrochemical Complex will consist of process units for ethylene, propylene, polypropylene, high density polyethylene, low density polyethylene, and linear low density polyethylene. The plants will obtain their feedstock (ethane, propane and butane) and process gas from both the LNG system and SOEI. Gas obtained from SOEI will be returned to the SOEI plant after extraction of the feedstock liquids described above. Power will be supplied by the Electric Co-generation Facility. The Petrochemical Complex will require an industrial water supply. A marginal wharf will be constructed in Issacs Harbour.

Other feedstocks (eg. refinery propylene, methanol) will be imported to the Goldboro site by ship and offloaded at the marginal wharf. The products and byproducts of the Petrochemical Complex will be transported to the marginal wharf for storage in silos (as required), and will be shipped out from there. One side of the marginal wharf will be used for berthing tugs and pilot boats.

The marginal wharf will be approximately 670 m in average length and 330 m in width. Construction will be done using pre-cast concrete caissons. The caissons will be floated into position, and placed on a granular mattress on the seabed. This will eliminate the need to dredge and dispose of seabed materials. Fill will be placed in the area behind the caissons.

### 5.2.3 Electric Co-generation Plant

The Electric Co-generation Plant will have a gas turbine and heat recovery steam generator with a capacity of 200 megawatts, to meet the development requirements. The electricity will be generated at 35 kilowatts per annum, three phase and 60 Hertz. This will enable connection to the Nova Scotia Power Inc. grid for purchase of incremental power required by the site, and to provide some backup.

### 5.2.4 Highway

The existing highways, although not at capacity, are not well suited for industrial traffic. The proposed 100 series highway would begin at the Goldboro site, and run north-northeast through Guysborough County to the Trans Canada Highway 104/Beech Hill Road intersection at Antigonish, a distance of approximately 60 kilometers.

### 5.2.5 Pipeline

A pipeline will be constructed from the LNG Vaporization Plant to the property boundary, to allow for future connection, by other parties, with the existing Maritimes and Northeast Pipeline system.

## 6.0 Scope and Level of the Federal Environmental Assessment

### 6.1 Scope of the Project

DFO and TC, each have a responsibility to ensure that an environmental assessment is conducted in accordance with the Act. As outlined in the Act, section 15(1), the scope of the project to be assessed is determined by the RA.

TC has determined, based on the anticipated NWPA section 5(1)(a) trigger under the Law List Regulations of the Act, that the scope of the project for the purposes of TC's environmental assessment will be the construction, operation, maintenance, modification and decommissioning of the following components: LNG Terminal, marine transfer pipelines, the LNG storage tanks, the marginal wharf, any temporary marine facilities and structures and equipment that are connected with the movement of goods between ships and shore, the regassification plant.

DFO has determined, based on the anticipated *Fisheries Act*, section 35(2) trigger under the Law List Regulations of the Act, that the scope of the project for the purposes of DFO's environmental assessment will be the construction and operation of the marginal wharf. Operation of the marginal wharf does not include shipping, but does include docking and deberting of vessels.

DFO and TC will work together to conduct a single federal assessment process that will allow both RAs to fulfill their respective responsibilities under the Act, in a unified non-duplicative manner.



## 6.2 Factors to be Considered in the Environmental Assessment

The comprehensive study will consider those factors required pursuant to section 16 of the Act:

- 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;
- the significance of the environmental effects referred to above;
- comments from the public that are received in accordance with the Act and the regulations;
- measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project;
- the purpose of the project;
- alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;
- the need for, and the requirements of, any follow-up program in respect of the project;
- the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

In accordance with subsection 16(1)(e) of the Act, the comprehensive study will also include a consideration of the "need for" the project and "alternatives to" the project.

As stated in the Act, "environmental effect" means, in respect of a project:

- a) *any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act*
- b) *any effect of any change referred to in paragraph (a) on*
  - i) *health and socio-economic conditions*
  - ii) *physical and cultural heritage*
  - iii) *the current use of lands and resources for traditional purposes by aboriginal persons, or*
  - iv) *any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or*
- c) *any change to the project that may be caused by the environment*

In relation to c) above, environmental effects, specifically effects of the environment on the project, could occur as a result of such things as:

- geological events (e.g., seismic activity);
- icing and winter conditions;
- erosion, fire, flooding; and
- climate change.

The cumulative effects assessment will take into consideration, effects related to components of the development proposal that are not included in the scope of project (e.g., electrical co-generation plant, petrochemical plants).

It is important to note that the following effects can only be considered when they relate to a change in the environment: health and socio-economic conditions; physical and cultural heritage; the current use of lands and resources for traditional purposes by aboriginal persons; and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance. For example, a decision to place a toll on a highway would not be considered under the Act because the toll is not related to a change in the environment.

### **6.3 Scope of the Factors to be Considered**

#### **6.3.1 Environmental Components**

In order to obtain a good prediction of the effects of a project on the environment, it is important to focus the assessment. "Environmental components" is a term used to describe various aspects of the biological, physical and social environment. Environmental components can be something physical such as vegetation, a process such as biodegradation, or a condition such as biodiversity.

One of the purposes of this public comment period is to identify "environmental components of concern" (ECC). These are the environmental components that exist in the area, and therefore could possibly be impacted by the project. As the assessment proceeds, a determination will be made on which of these environmental components of concern would be impacted by the project, and are of legal, scientific, ecological, cultural, economic, etc. value. These will be referred to as the "valued environmental components" and will be the focus of the environmental assessment.

Please note that the scope of project, as described in Section 5.1 above, does not mean that the area to be studied will be confined to the project site. Rather, the study area, for the purposes of the environmental assessment, must include the area within which the environmental components that could potentially be affected by the scoped project (i.e., undertakings associated with the LNG Terminal and marginal wharf) are located.

The environmental assessment methodology to be used by the Proponent will include the following:

- an overview or study, as appropriate, for each of the ECC, in order to describe the actual conditions in the study area (i.e., baseline conditions);
- prediction of environmental effects;
- identification of mitigation that can be used to avoid or minimize adverse effects on the environment;
- identification and assessment of residual (i.e., still remaining) effects;
- prediction of cumulative environmental effects
- discussion of significance; and

- preparation and implementation of a follow-up program.

The following provides a preliminary list of ECC that will be considered in the environmental assessment. This list is not intended to be exhaustive.

- freshwater quality/quantity;
- marine water quality/quantity;
- groundwater quality/quantity;
- soil/sediment quality;
- hydrology;
- air quality;
- climatic conditions;
- vegetation;
- species at risk;
- fish and fish habitat;
- wildlife and wildlife habitat;
- migratory birds and their habitat;
- physical and cultural heritage;
- current use of lands and resources for traditional purposes by Aboriginal persons;
- navigation;
- marine safety and security;
- wetlands;
- fisheries;
- human health and safety;
- structures/sites of archaeological, paleontological or architectural significance;
- marine mammals;
- lighting conditions;
- acoustic environment.

Temporal and spatial boundaries will be determined for each ECC, early in the assessment. Temporal bounding refers to the determination of the time period during which an ECC could be impacted by the project (e.g., during the construction phase). Spatial bounding refers to the determination of the geographical area within which an ECC could be impacted by the project (e.g. footprint of a building). The study area for the environmental assessment should encompass the area within which all of the ECC could be impacted.

#### **6.4 Ability of the Comprehensive Study to Address Issues Relating to the Project**

Comments are also being solicited on the ability of the comprehensive study to address issues relating to the project. The public is encouraged to identify any reasons why issues, associated with the project that are considered within a federal environmental assessment, can or cannot be properly addressed within the comprehensive study process.

## **7.0 Public Participation**

### **7.1 Submission of Comments**

In consideration of information contained in this document, the public is invited to provide their views and opinions in the following areas:

- the proposed scope of the project;
- the factors proposed to be considered in the assessment
- the proposed scope of those factors; and
- the ability of the comprehensive study to address issues relating to the project.

Persons wishing to submit comments may do so in writing to the Agency. Comments must be received no later than July 4, 2005. Comments may be sent to:

Transport Canada  
Environmental Affairs, MKE  
P.O. Box 42  
Moncton, NB E1C 8K6  
Fax: (506) 851-7542 or E-mail : [atlwebcomments@tc.gc.ca](mailto:atlwebcomments@tc.gc.ca)

Clearly reference the Keltic LNG Facility and Marginal Wharf on your submission.

The Agency will receive all public comments on the scoping document and distribute them to TC, DFO, EC, HC, and NRCan.

### **7.2 Participant Funding**

The Agency will provide participant funding to assist groups and individuals to take part in the environmental assessment, whether it proceeds by means of a comprehensive study or is referred to a mediator or review panel. Information on the program, including the Participant Funding Program Guide, the application form and the contribution agreement, are available on the Agency's Web site at [www.ceaa-acee.gc.ca](http://www.ceaa-acee.gc.ca).

### **7.3 Canadian Environmental Assessment Registry (CEAR)**

Pursuant to the Act, section 55, a CEAR has been established to provide notice of the environmental assessment, and facilitate public access to records related to the environmental assessment. The CEAR consists of a project file and an internet site. The internet component of the CEAR can be accessed at [http://www.ceaa.gc.ca/050/index\\_e.cfm](http://www.ceaa.gc.ca/050/index_e.cfm). Anyone wishing to obtain copies, or view records, from the CEAR project file should contact TC at 506-851-6962.

If you have general questions in relation to the Act, you can access the Agency website at [www.ceaa-acee.gc.ca](http://www.ceaa-acee.gc.ca) or contact the Atlantic Region office at 902-426-0564.

Appendix 2 – Notice Requesting Public Comment

**Canadian Environmental Assessment Act**  
**Comprehensive Study Assessment of the Proposed**  
**Keltic LNG Facility and Marginal Wharf Project**  
**Public Consultation on the Scoping Document**

Kelco Petrochemicals Inc. proposes to construct and operate a petrochemical complex and Liquid Natural Gas (LNG) importation and exportation facility in Sableville, Nova Scotia. The development project includes a petrochemical plant, a wharf, an LNG terminal, LNG storage and regasification facilities, and an elevated pipeline system. The development proposal also includes construction of a highway between the development site and Sableville.

The LNG Facility and Marginal Wharf components of the overall development proposal are subject to a comprehensive study assessment under the Canadian Environmental Assessment Act pursuant to subsection 2(1) of the Act, Transport Canada and Fisheries and Oceans Canada, as the responsible authorities for the federal environmental assessment, will invite the public to comment on the proposed scope of the project. Further proposals for the construction, proposed scope of these factors and the ability of the comprehensive study to address issues relating to the components of the development proposal subject to the Act.

Comments must be received no later than July 2nd, 2006. Interested persons may submit their comments in the official language of their choice to:

Therapet Canada  
 Environmental Affairs, MCE  
 P.O. Box 42  
 Moncton, NB  
 E1C 2E2  
 Fax: (506) 851-7542 or email: [stakeholders@tc.gc.ca](mailto:stakeholders@tc.gc.ca)

**NOTE:** All documents and/or responses received regarding this project are confidential public and will become part of the public Registry for the environmental assessment. Please quote the project title, Keltic LNG Facility and Marginal Wharf, and the Canadian Environmental Assessment Registry number 2006-02-1001 in all correspondence.


To obtain a copy of the scoping document or for more information on the environmental assessment, contact Therapet Canada at the above address.

Copies of the scoping document are also available for public viewing at the following locations:

Municipality of the District of Chathamville 23-Flanagan Street Chathamville, NS B9N 1R2 Tel: (902) 522-2765	Immers Marine Medical Centre 62-Immers Marine Plaza Immers Marine, NS B9V 1R2 Tel: (902) 267-2998
Southwest Nova Scotia Library 71 Main Street Chathamville, NS B9N 1R2 Tel: (902) 522-2765	Chatham Action Centre Suite 21, 4000 Argyle St. Halifax, NS B9L 2G5 Tel: (902) 426-2288

The development proposal is also being assessed under the Nova Scotia Environment Act. Information on this provincial process is available at: [www.gov.ns.ca/infocentre/esa](http://www.gov.ns.ca/infocentre/esa)

For more information on the environmental assessment and others in your area, please contact the Canadian Environmental Assessment Registry at [www.cae-ace.gc.ca](http://www.cae-ace.gc.ca) or follow the Green link on the home page.





Environnement Canada  
Environment Canada

### Loi canadienne sur l'évaluation environnementale

#### Évaluation approfondie du projet de construction d'installations de GNL et d'un quai longitudinal de Keltic

#### Consultation publique sur le document de consultation de l'étude

Cette consultation sur le contenu de l'étude et d'ajouter les aspects techniques et des installations pour l'opération et la maintenance du port terminal (PMT) à Keltic, en Nouvelle-Écosse. La consultation comprend le document de consultation approfondie, l'avis de consultation des installations de GNL, d'installations de stockage et de redistribution de GNL, et autres installations de navigation maritime. La consultation comprend aussi la consultation d'avis dans le site de construction à Keltic.

Les installations de GNL et le quai longitudinal sont les composantes de la proposition globale qui sont soumises à une évaluation approfondie prévue de la Loi canadienne sur l'évaluation environnementale. Conformément au paragraphe 29(1) de la Loi, l'Agence Canada et l'Agence de l'Énergie, de l'Électricité et des Gaz, ont leur part d'importantes responsabilités. Elles ont le plaisir à travailler avec vous pour l'élaboration du projet, sur les aspects à discuter et leur partie, et sur la valeur de l'étude approfondie et des autres aspects de l'étude relatifs aux composantes de la proposition qui sont soumises à la Loi.

Les commentaires doivent être envoyés au plus tard le 3 juillet 2006. Les personnes intéressées peuvent consulter leurs commentaires dans le langage officiel de leur choix à l'adresse suivante :

Transport Canada  
Bureau international, MCE  
C.P. 42  
Ottawa (N.-É.)  
K1C 0K6  
Tél : (514) 953-7040 ou courriel : [environnement@tc.gc.ca](mailto:environnement@tc.gc.ca)

NOTE : Tous les documents sont disponibles pour consulter le projet Internet ainsi que dans les points de contact et sont aussi disponibles dans les langues officielles. Si vous avez des questions sur le projet, contactez l'Agence de l'Énergie, de l'Électricité et des Gaz, et l'Agence Canada, au 1-800-960-9828 ou à l'adresse de référence de l'Agence de l'Énergie, de l'Électricité et des Gaz (1-800-960-9828) dans votre langue officielle.

Pour obtenir une copie du document de consultation de l'étude ou pour d'autres renseignements sur l'évaluation approfondie, veuillez communiquer avec Transport Canada à l'adresse ci-dessous.

Des copies du document de consultation de l'étude peuvent être obtenues aux adresses suivantes :

Municipality of the City of St. John's c/o Mr. Philpott St. John's (N.-É.) St. John's Tél : (506) 462-2222	Agence Maritime Maritime Centre c/o Agence Maritime Maritime St. John's (N.-É.) St. John's Tél : (506) 462-2222
Ministère de l'Énergie 11, rue Main St. John's (N.-É.) St. John's Tél : (506) 462-2222	Agence Maritime Maritime Centre 11, rue Main, 11 <sup>e</sup> étage St. John's (N.-É.) St. John's Tél : (506) 462-2222

La proposition est aussi disponible en vertu de la Loi sur l'accès à l'information de la Nouvelle-Écosse. Des renseignements sur les procédures provinciales sont disponibles à l'adresse ci-dessous.

Pour plus de renseignements sur cette évaluation approfondie et d'autres avis, visitez notre site Web à l'adresse [www.ec.gc.ca](http://www.ec.gc.ca). Vous pouvez aussi nous écrire par courriel à l'adresse [environnement@tc.gc.ca](mailto:environnement@tc.gc.ca).



### Appendix 3 – Public Comments Received under Subsection 21(1) of CEEA

The following tables provide a summary of written public comments received under subsection 21(1) of CEEA in response to the document "Scoping Document for the Petrochemical and Liquefied Natural Gas Facilities at Goldboro, N.S.". Each submission received during the comment period was numbered and, if appropriate, summarized in one or more of the following three tables: Table 3-1, Public Comments on Scope of Projects; Table 3-2, Public Comments on the Factors and Scope of the Factors; and Table 3-3, Public Comments on the Ability of the Comprehensive Study to Address Issues Relating to the Projects. Responses from the RAs on points raised are included, as required.

Not all submissions are represented in these tables. Some submissions were duplicates, some were information requests, and some simply described their support for the development proposal to proceed.

**Table 3-1. Public Comments on Scope of Project**

Submission No.	Summary of Written Public Comments	RA Response
004	expand project scope to include highway	If required, a separate EA(s) will be conducted in relation to components of the highway associated with federal decisions.
005	expand project scope to include shipping	TC will amend its scope of project to include shipping within 25 km of Country Island.
011	expand project scope to include shipping	TC will amend its scope of project to include shipping within 25 km of Country Island.
018	expand project scope to include shipping	TC will amend its scope of project to include shipping within 25 km of Country Island.
019	expand project scope to include consideration of traffic during construction	This will be addressed in accordance with the scope of the projects identified by both TC and DFO.

021	expand project scope to include the highway	If required, a separate EA(s) will be conducted in relation to components of the highway associated with federal decisions.
022	expand project scope to include decommissioning of the facilities	This will be addressed in accordance with TC's scope of project identified in the scoping document.



Table 3-2. Public Comments on the Factors and Scope of the Factors

Submission No.	Summary of Written Public Comments	RA Response
004	<ul style="list-style-type: none"> <li>• Would like effects related to point and non-point source contamination assessed in relation to the proposed highway.</li> <li>• Would like alternative means of carrying out the project considered, in particular, investigating possibility of using existing highway facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Highway component falls outside the scope of project.</li> <li>• Alternative means must be considered in the EA, as it relates to the scope of project.</li> </ul>
005	<ul style="list-style-type: none"> <li>• Would like alternative means of carrying out the project considered, specifically looking at alternate locations for the project that are zoned for industrial use.</li> <li>• Raised concerns about effects related to the fishery resources, birds, wildlife, seals, water resources, groundwater, air quality, and tourism.</li> <li>• Raised concerns about effects on aquaculture and tourism.</li> <li>• Raised concerns in relation to accidents.</li> <li>• Raised concerns in relation to property values.</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative means must be considered in the EA, as it relates to the scope of project.</li> <li>• These environmental components will be considered in the EA, as they relate to the scope of project.</li> <li>• Aquaculture and tourism will be added as potential ECC. The EA will identify any potential effects on aquaculture facilities and tourism.</li> <li>• The EA will look at effects related to malfunctions and accidents, as they relate to the scope of project.</li> <li>• Property values falls outside the scope of the EA.</li> </ul>
008	<ul style="list-style-type: none"> <li>• Raised concerns about effects on tourism.</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism will be added as a potential ECC. The EA will identify any potential effects on tourism.</li> </ul>
011	<ul style="list-style-type: none"> <li>• Would like the EA to consider cumulative effects, as they relate to the nearby aquaculture facility.</li> <li>• Concerns expressed about water quality in relation to the aquaculture facility.</li> </ul>	<ul style="list-style-type: none"> <li>• Cumulative effects will be assessed as they relate to the project, as scoped.</li> <li>• Aquaculture and tourism will be added as potential ECC. The EA will identify any</li> </ul>

Submission No.	Summary of Written Public Comments	RA Response
		potential effects on aquaculture facilities and tourism.
013	<ul style="list-style-type: none"> <li>• Would like marine transportation; community services and infrastructure; and economic development considered in the EA.</li> </ul>	<ul style="list-style-type: none"> <li>• TC will amend its scope of project to include shipping within 25 km of Country Island. Shipping will also be considered under cumulative effects.</li> <li>• The TERMPOL Review Process will apply.</li> <li>• Community services and infrastructure, and economic development fall outside the scope of the EA.</li> </ul>
018	<ul style="list-style-type: none"> <li>• Would like shellfish aquaculture to be included in the scoping document.</li> <li>• Raised concerns that the project could have effects on an aquaculture facility, in relation to air and water contamination, introduction of foreign species, decreased marketability of the product, effects related to marine accidents, cumulative effects and disruption of the labour market.</li> </ul>	<ul style="list-style-type: none"> <li>• Aquaculture will be added as a potential ECC. The EA will identify any potential effects on aquaculture facilities.</li> <li>• Aquaculture will be added as a potential ECC. The EA will identify any potential effects on aquaculture facilities.</li> </ul>
019	<ul style="list-style-type: none"> <li>• Raised concerns in relation to wildlife, lakes and rivers, vegetation, emissions, lighting, bird migration and mine tailings (mine tailings relate to air, water, sediment and soil quality).</li> </ul>	<ul style="list-style-type: none"> <li>• These environmental components will be considered in the EA, as they relate to the project scope.</li> </ul>
025	<ul style="list-style-type: none"> <li>• Raised concerns about safety of well water, the harbour, the land, wildlife, children's health and way of life.</li> </ul>	<ul style="list-style-type: none"> <li>• These environmental components will be considered in the EA, as they relate to the project scope. In relation to socioeconomic effects, only those that relate to a change in the environment will be considered in the EA.</li> </ul>

**Table 3-3. Public Comments on the Ability of the Comprehensive Study to Address Issues Relating to the Project**

Submission No.	Request by the Public	Reasons for Request	RA Response
008	panel review	<ul style="list-style-type: none"> <li>• Panel review requested given the enormous size of the project, its potential negative effect on the environment, and to provide an opportunity for the public to voice concerns.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted and will be taken into consideration. A comprehensive study provides an opportunity for the public to participate in the environmental assessment process.</li> </ul>
011	panel review	<ul style="list-style-type: none"> <li>• Panel review requested to ensure the concerns and interests of a nearby aquaculture facility are addressed in the EA process.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted and will be taken into consideration.</li> </ul>
012	comprehensive study	<ul style="list-style-type: none"> <li>• Comfortable with the ability of the comprehensive study to address issues relating to the Project.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted.</li> </ul>
013	comprehensive study	<ul style="list-style-type: none"> <li>• In relation to public participation, a comprehensive study provides maximum opportunity for participation, and is cost effective and user friendly.</li> <li>• Other comprehensive studies have been completed in the area, providing information useful to this EA.</li> <li>• Existing regulatory regime justifies not conducting a panel review.</li> <li>• Other similar EAs in the region have not been conducted as a panel review.</li> </ul>	<ul style="list-style-type: none"> <li>• Comments noted.</li> </ul>

Submission No.	Request by the Public	Reasons for Request	RA Response
014	comprehensive study	<ul style="list-style-type: none"> <li>• None provided.</li> </ul>	<ul style="list-style-type: none"> <li>• Noted.</li> </ul>
015	comprehensive study	<ul style="list-style-type: none"> <li>• None provided.</li> </ul>	<ul style="list-style-type: none"> <li>• Noted.</li> </ul>
018	panel review	<ul style="list-style-type: none"> <li>• Panel review requested given the enormous size of the project, its potential negative effect on the environment, and to provide an impartial forum for the public to voice concerns.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted and will be taken into consideration. A comprehensive study provides an opportunity for the public to participate in the environmental assessment process.</li> </ul>
019	panel review	<ul style="list-style-type: none"> <li>• Panel review requested because of the following: size of project, new industry for the Maritimes and public hearings.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted and will be taken into consideration. A comprehensive study provides an opportunity for the public to participate in the environmental assessment process.</li> </ul>
021	panel review	<ul style="list-style-type: none"> <li>• Project of this size, with the potential to affect so many different aspects of the environment (e.g., bird species listed under SARA) and local community, deserves a full panel review.</li> <li>• They understand that the two LNG facilities proposed for Quebec are recommended to undergo a panel review.</li> <li>• Panel would allow the assembly</li> </ul>	<ul style="list-style-type: none"> <li>• Comments noted and will be taken into consideration. A comprehensive study can adequately assess environmental effects.</li> <li>• Each proposal is assessed based on the proposed work and associated federal responsibilities.</li> <li>• Expert opinion is</li> </ul>

Submission No.	Request by the Public	Reasons for Request	RA Response
		<p>of necessary experts.</p> <ul style="list-style-type: none"> <li>• Comprehensive study would limit the ability of the public to contribute meaningfully to the EA.</li> </ul>	<p>sought in a comprehensive study environmental assessment.</p> <ul style="list-style-type: none"> <li>• A comprehensive study provides an opportunity for the public to participate in the environmental assessment process.</li> </ul>
022	panel review	<ul style="list-style-type: none"> <li>• Potential adverse environmental impacts warrant a panel review.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted and will be considered.</li> </ul>
025	panel review	<ul style="list-style-type: none"> <li>• Panel review requested because of the size of the proposal, and because this is new to Atlantic Canada.</li> <li>• A full panel review brings the scientists and other experts in to talk to the people.</li> </ul>	<ul style="list-style-type: none"> <li>• Comments noted and will be considered.</li> </ul>

#### Appendix 4 – Table Showing List of Group Feedback Submissions

Table 4-1. The following table provides information on organizations/associations that submitted comments on the Scoping Document on behalf of the groups that they represent.

Submission No.	Group Name	Format	Position	Approximate No. Represented
002\011	Aquaculture Association of Nova Scotia	Letter	Concerns Expressed	Not known
006	Mainland Nova Scotia Building and Construction Trades Council	Letter	Positive	Stated that group represents 9000 individual members.
009	Antigonish Area Patnership	Letter	Positive	Not known
012	United Association Local 244	Letter	Positive	Not known
023	Antigonish Chamber of Commerce	Letter	Positive	200 members