# Table of Contents

1.0 **INTRODUCTION** .................................................................................................................. 1

1.1 **THE PROPOONENT** ............................................................................................................. 2

1.2 **OVERVIEW OF THE DEVELOPMENT PROPOSAL, AND OVERVIEW OF THE PROJECT** ....................................................................................................................... 2

1.3 **PROJECT PURPOSE** ............................................................................................................. 5

1.4 **RATIONALE AND NEED FOR THE PROJECT** ...................................................................... 5

1.5 **PURPOSE AND ORGANIZATION OF THE CSR** ................................................................... 5

2.0 **REGULATORY CONTEXT FOR THE ENVIRONMENTAL ASSESSMENT** .................................. 7

2.1 **OVERVIEW OF EA/EIA PROCESSES FOR PROJECT EIDER ROCK** ................................... 7
  2.1.1 **Federal Environmental Assessment** ........................................................................... 7
  2.1.2 **Federal Coordination** ............................................................................................... 8
  2.1.3 **Federal/Provincial Coordination** ................................................................................ 9

2.2 **REGULATORY FRAMEWORK** ............................................................................................ 10
  2.2.1 **Canadian Environmental Assessment Act** ................................................................. 10
  2.2.2 **Environmental Assessment Process under CEAA** .................................................... 11
  2.2.3 **Law List Regulations** .................................................................................................. 12
  2.2.4 **Comprehensive Study Track Decision** ...................................................................... 12

2.3 **SCOPE OF THE EA FOR THE PROJECT** ........................................................................... 13
  2.3.1 **Scope of the Project** ..................................................................................................... 13
  2.3.2 **Factors to be Considered** ............................................................................................ 14
  2.3.3 **Scope of Factors to be Considered** ............................................................................... 15

2.4 **OTHER LEGISLATION THAT MAY BE APPLICABLE TO THE PROJECT** ......................... 17
  2.4.1 **Fisheries Act** ................................................................................................................. 17
  2.4.2 **Canadian Environmental Protection Act** .................................................................... 17
  2.4.3 **Navigable Waters Protection Act** ................................................................................ 18
  2.4.4 **Canada Shipping Act** .................................................................................................. 18
  2.4.5 **Species at Risk Act** ...................................................................................................... 19
  2.4.6 **Migratory Birds Convention Act** ................................................................................ 19
  2.4.7 **Other Approvals, Permits, and Authorizations** ............................................................... 20

3.0 **PROJECT DESCRIPTION** ....................................................................................................... 22

3.1 **DESCRIPTION OF THE PROJECT: MARINE TERMINAL AND OTHER MARINE-BASED INFRASTRUCTURE** .................................................................................................................. 22
  3.1.1 **Overview** .................................................................................................................. 22
  3.1.2 **Location and Layout** ................................................................................................... 25
  3.1.3 **Description of the Marine Terminal Facilities** ............................................................ 25
  3.1.4 **Project Schedule** ....................................................................................................... 40
  3.1.5 **Environmental Management** .................................................................................... 41
3.2 PROJECT ALTERNATIVES ...........................................................................................................
3.2.1 Alternatives to the Project ...................................................................................................
3.2.2 Alternative Means of Carrying Out the Project ...................................................................

3.3 CONSTRUCTION .....................................................................................................................
3.3.1 Construction and Installation of Jetty and Other Marine-Based Infrastructure ....................
3.3.2 Marine Vessel Berthing and Deberthing .......................................................................... 54

3.4 OPERATION ............................................................................................................................
3.4.1 Marine Vessel Berthing and Deberthing ...........................................................................
3.4.2 Crude Oil and Finished Product Transfer .........................................................................
3.4.3 Wastewater, Seawater, and Storm Water Release .............................................................

3.5 DECOMMISSIONING AND ABANDONMENT ....................................................................... 59
3.5.1 Removal of Facilities and Site Reclamation ....................................................................... 60

3.6 EMISSIONS AND WASTES ...................................................................................................... 60
3.6.1 Air Contaminant, GHG, and Sound Emissions .................................................................... 61
3.6.2 Wastewater ....................................................................................................................... 68
3.6.3 Wastes ................................................................................................................................ 69

4.0 CONSULTATION AND ENGAGEMENT .................................................................................
4.1 CONSULTATION AND ENGAGEMENT CONDUCTED BY RESPONSIBLE AUTHORITIES .........
4.1.1 Public Participation ............................................................................................................
4.1.2 First Nations Engagement ................................................................................................

4.2 CONSULTATION AND ENGAGEMENT CONDUCTED BY THE PROPONENT ......................
4.2.1 Proponent-Led Consultation and Engagement Tools ........................................................
4.2.2 Key Stakeholder Engagement ...........................................................................................
4.2.3 Key Issues Raised by the Public and Key Stakeholders ....................................................
4.2.4 First Nations Engagement ................................................................................................

5.0 ENVIRONMENTAL ASSESSMENT METHODS ......................................................................
5.1 EA METHODOLOGY ................................................................................................................
5.1.1 Overview of Approach ........................................................................................................
5.1.2 Scoping of the Assessment ................................................................................................
5.1.3 Existing Conditions ............................................................................................................
5.1.4 Project Interactions with the Environment ........................................................................
5.1.5 Environmental Effects Assessment .....................................................................................
5.1.6 Determination of the Significance of Residual Environmental Effects ............................
5.1.7 Follow-up and Monitoring ................................................................................................
5.1.8 Potential Accidents, Malfunctions and Unplanned Events .................................................

5.2 VALUED ENVIRONMENTAL COMPONENTS .........................................................................
5.2.1 Selected Valued Environmental Components for this CSR .............................................

5.3 OTHER PROJECTS AND ACTIVITIES ....................................................................................

6.0 DESCRIPTION OF THE EXISTING ENVIRONMENT ................................................................

CEAR # 07-03-28779 September 10, 2009
# Table of Contents

8.1.6 Spatial Boundaries ...................................................................................................... 171
8.1.7 Administrative and Technical Boundaries ................................................................. 172
8.1.8 Residual Environmental Effects Rating Criteria ........................................................... 177

8.2 **EXISTING CONDITIONS** .................................................................................................... 179

8.2.1 Current Health Status – Baseline Public Health Assessment .............................................. 179
8.2.2 Predicted Baseline Human Health Risks – Existing Environmental Chemical Concentrations ........................................................................................................................................... 182

8.3 **POTENTIAL PROJECT-VEC INTERACTIONS** ................................................................. 184

8.4 **ENVIRONMENTAL EFFECTS ASSESSMENT** ................................................................. 186

8.4.1 Assessment of Project-Related Environmental Effects ................................................... 188
8.4.2 Determination of Significance ..................................................................................... 190

8.5 **ASSESSMENT OF CUMULATIVE ENVIRONMENTAL EFFECTS** ................................... 190

8.5.1 Project Cumulative Environmental Effect Mechanisms for a Change in Public Health ........................................................................................................................................... 193
8.5.2 Characterization of Residual Cumulative Environmental Effects for Change in Public Health ........................................................................................................................................... 194
8.5.3 Determination of Significance ..................................................................................... 200

8.6 **FOLLOW-UP AND MONITORING** ................................................................................. 200

9.0 **COASTAL WETLAND ENVIRONMENT** ......................................................................... 201

9.1 **SCOPE OF ASSESSMENT** ............................................................................................. 201

9.1.1 Regulatory Setting ...................................................................................................... 201
9.1.2 Issues and Concerns Identified During Public and Stakeholder Engagement ................. 202
9.1.3 Selection of Environmental Effect ................................................................................. 202
9.1.4 Selection of Measurable Parameters ............................................................................ 202
9.1.5 Temporal Boundaries .................................................................................................. 203
9.1.6 Spatial Boundaries ...................................................................................................... 203
9.1.7 Administrative and Technical Boundaries .................................................................... 203
9.1.8 Residual Environmental Effects Rating Criteria ........................................................... 204

9.2 **EXISTING CONDITIONS** ................................................................................................ 204

9.3 **POTENTIAL PROJECT-VEC INTERACTIONS** ................................................................. 207

9.3.1 Determination of Significance ..................................................................................... 208

9.4 **FOLLOW-UP AND MONITORING** ................................................................................. 208

10.0 **MARINE ENVIRONMENT** ........................................................................................... 209

10.1 **SCOPE OF ASSESSMENT** ............................................................................................. 211

10.1.1 Regulatory Setting ...................................................................................................... 211
10.1.2 Issues and Concerns Identified During Public, Stakeholder, and Aboriginal Engagement ........................................................................................................................................... 213
10.1.3 Selection of Environmental Effect ................................................................................. 213
10.1.4 Selection of Measurable Parameters ............................................................................ 213
10.1.5 Temporal Boundaries .................................................................................................. 214
10.1.6 Spatial Boundaries ...................................................................................................... 215
12.1.2 Issues and Concerns Identified During Public, Stakeholder and Aboriginal Engagement ................................................................. 384
12.1.3 Selection of Environmental Effect ........................................................................................................................................... 385
12.1.4 Selection of Measurable Parameters ........................................................................................................................................ 385
12.1.5 Temporal Boundaries .................................................................................................................................................................. 386
12.1.6 Spatial Boundaries ....................................................................................................................................................................... 386
12.1.7 Administrative and Technical Boundaries ............................................................................................................................... 386
12.1.8 Residual Environmental Effects Rating Criteria ....................................................................................................................... 389

12.2 EXISTING CONDITIONS ........................................................................................................................................................................... 389

12.3 POTENTIAL PROJECT-VEC INTERACTIONS ...................................................................................................................................... 393

12.4 ENVIRONMENTAL EFFECTS ASSESSMENT ........................................................................................................................................... 394
12.4.1 Assessment of Project-Related Environmental Effects .................................................................................................................. 396

12.5 ASSESSMENT OF CUMULATIVE ENVIRONMENTAL EFFECTS .............................................................................................................. 397
12.5.1 Determination of Significance ...................................................................................................................................................... 398

12.6 FOLLOW-UP AND MONITORING .............................................................................................................................................................. 398

13.0 MARINE SAFETY ................................................................................................................................................................................................. 399

13.1 SCOPE OF ASSESSMENT ...................................................................................................................................................................................... 399
13.1.1 Regulatory Setting ............................................................................................................................................................................. 399
13.1.2 Issues and Concerns Identified During Public and Stakeholder Engagement .......................................................................................... 400
13.1.3 Selection of Environmental Effect ............................................................................................................................................ 401
13.1.4 Selection of Measurable Parameters ........................................................................................................................................ 401
13.1.5 Temporal Boundaries .................................................................................................................................................................. 402
13.1.6 Spatial Boundaries ....................................................................................................................................................................... 402
13.1.7 Administrative and Technical Boundaries ............................................................................................................................... 402
13.1.8 Residual Environmental Effects Rating Criteria ....................................................................................................................... 405

13.2 EXISTING CONDITIONS ...................................................................................................................................................................................... 406

13.3 POTENTIAL PROJECT-VEC INTERACTIONS ...................................................................................................................................... 408

13.4 ENVIRONMENTAL EFFECTS ASSESSMENT ........................................................................................................................................... 410
13.4.1 Assessment of Project-Related Environmental Effects .................................................................................................................. 412

13.5 ASSESSMENT OF CUMULATIVE ENVIRONMENTAL EFFECTS .............................................................................................................. 413
13.5.1 Determination of Significance ...................................................................................................................................................... 415

13.6 FOLLOW-UP AND MONITORING .............................................................................................................................................................. 415

14.0 HERITAGE AND ARCHAEOLOGICAL RESOURCES ........................................................................................................................................ 416

14.1 SCOPE OF ASSESSMENT ...................................................................................................................................................................................... 416
14.1.1 Regulatory Setting ............................................................................................................................................................................. 416
14.1.2 Issues and Concerns Identified During Regulatory, Public, Stakeholder, and Aboriginal Engagement .................................................................................................................. 417
14.1.3 Selection of Environmental Effect ............................................................................................................................................ 417
14.1.4 Selection of Measurable Parameters ........................................................................................................................................ 417

13.1.1 Regulatory Setting ............................................................................................................................................................................. 399
List of Appendices

Appendix A: Glossary
Appendix B: List of Acronyms and Units
Appendix C: Preliminary Considerations for Marine Habitat Compensation for the Project
Appendix D: Environmental Assessment Track Report and Scoping Document
Appendix E: Summary of Federal Coordination Results
Appendix F: List of Tables and Figures
1.0 INTRODUCTION

This is the Comprehensive Study Report (CSR) for the environmental assessment (EA) of the marine terminal for Project Eider Rock ("the Project") proposed by Irving Oil Company, Limited ("Irving Oil", "the Proponent") in Saint John Harbour, New Brunswick. Project Eider Rock (the "Development Proposal") involves the proposed construction and operation of a new petroleum refinery and marine terminal in Saint John.

The CSR is intended to address the specific requirements for a federal environmental assessment (EA) under the Canadian Environmental Assessment Act (CEAA) for the marine terminal. The scope of EA under CEAA includes the marine terminal and other facilities and infrastructure being constructed in the marine waters of Mispec Bay in Saint John Harbour, New Brunswick. As such, this CSR is focused on the assessment of those features and structures in the marine environment that are proposed as part of the Development Proposal, which are subject to the requirements of CEAA.

For the purpose of this CSR, the project to be assessed is the marine terminal proposed as part of the Development Proposal, including the proposed jetty, barge landing facility, and other marine infrastructure that will be constructed to support the Development Proposal in its entirety. Other components of the Development Proposal on land (e.g., the proposed petroleum refinery and other land-based infrastructure) are being assessed under a separate environmental impact assessment (EIA) under the New Brunswick Environmental Impact Assessment Regulation - Clean Environment Act and are not assessed under CEAA. The Responsible Authorities (RAs) and several other federal authorities have been participating in the provincial EIA process to advise the Province of New Brunswick on environmental matters relating to the environmental effects of the proposed refinery and other land-based infrastructure.

The CSR has been developed in response to the Environmental Assessment Track Report ("EA Track Report") and Scoping Document (Government of Canada 2007a) issued on November 21, 2007 by the RAs for the EA—namely Fisheries and Oceans Canada (DFO); Transport Canada (TC); and Environment Canada (EC). The CSR documents the results of the EA of the Project and evaluates potential environmental effects of the Project, optimizes the positive environmental effects, reduces adverse environmental effects resulting from the Project through mitigation, and recommends a follow-up and monitoring program as appropriate.

It is important to emphasize that the scope of project for the federal EA is focused on the construction, operation, decommissioning and/or abandonment of those components of the proposed development that are likely to require approvals (and therefore trigger CEAA) from the three identified RAs. Based on the EA Track Report and Scoping Document (Government of Canada 2007a), the EA under CEAA examines:

"the construction, operation, decommissioning and/or abandonment of the following triggered components of the development proposal, and the related activities (e.g., blasting, dredging, infilling, disposal at sea):

- the pier or monobuoy for crude tanker unloading, and/or the use of the existing monobuoy at Canaport;"
In the Scoping Document, the RAs also proposed that the scope of project would include docking and deberthing of vessels. However, the scope of project does not include shipping, as shipping issues will be addressed via a TERMPOL Review Process.

The scope of project also includes a fourth component, as noted in Section 4.4 of the EA Track Report:

- “in-water physical structures, constructed on either a temporary or permanent basis, in the marine environment, and any navigational dredging that may be required.”

Jacques Whitford Stantec Limited prepared this CSR on behalf of Irving Oil, who was formally delegated the responsibility to prepare the CSR by the RAs pursuant to their authority under Section 17(1) of CEAA.

1.1 The Proponent

The Proponent of the Project is Irving Oil Company, Limited, a body corporate governed by the laws of Canada and the Province of New Brunswick. The contact details of the Proponent are as follows:

Irving Oil Company, Limited
10 Sydney Street
Saint John, NB  E2L 4K1
Tel:  (506) 202-2000
Fax:  (506) 202-7002

1.2 Overview of the Development Proposal, and Overview of the Project

Although the CSR is focussed on those components of the Development Proposal that will be built in the marine environment, in the interests of providing overall context for the Development Proposal, it is appropriate to provide the following brief overview of the Development Proposal as a whole, which is the subject of the separate EIA Report developed to meet the provincial EIA requirements (Jacques Whitford Stantec Limited 2009a). The Project is one component of the Development Proposal as a whole which is subject to the requirements of CEAA.

The Development Proposal involves the construction and operation of a new petroleum refinery, marine terminal, and associated land-based and marine-based infrastructure in the Red Head area, in Saint John, New Brunswick. The refinery will be designed with a rated nameplate capacity of up to 40,000 m³/d (250,000 bbl/d, nominal) of crude oil, for refining petroleum products and feedstocks from imported crude oil. The refinery will be designed to produce up to 48,000 m³/d (300,000 bbl/d, nominal) of a variety of petroleum products including diesel fuel, gasoline, coke, sulphur and other petroleum products for transportation fuel, home heating, and industrial energy use in North America and elsewhere. The Development Proposal also includes the development of a new marine terminal for transferring crude and products to and from the refinery. The marine terminal is defined as “the Project” in this document and requires an environmental assessment under CEAA. The location of the Development Proposal including the Project is shown in Figure 1.1.
Map Parameters
Projection: NB Stereographic
Scale: 1:320,000
Date: August 8, 2008
Project No.: 1013263.

Data Source: ESRI, Natural Resources Canada

Figure 1.1
Project Location: Project Eider Rock

0 5 10 20 Kilometres
The Development Proposal is currently undergoing provincial review (with federal participation); the reader should refer to the EIA Report (Jacques Whitford Stantec Limited 2009a) for additional detail on the refinery and land-based components of Project Eider Rock that have been assessed under the provincial EIA.

The Project being assessed in this EA is focused on the marine terminal to be built as part of the Development Proposal. A new marine terminal consisting of a jetty equipped with up to five berths for crude and product ships on a common trestle will be built near Mispec Point, to support the refinery operation for the receipt of crude oil and shipment of products from the refining operation. A cooling water intake structure and wastewater outfall may also be constructed at Mispec Point to support the refinery operation. A new barge landing facility will be constructed in Mispec Bay to receive large construction modules during Construction of the Project. A heavy haul road will be constructed between the barge landing facility and the new refinery to allow for the transportation of the large modules to the construction site.

1.3 Project Purpose

The purpose of the Project to be assessed under the Canadian Environmental Assessment Act (CEAA) is to build and operate a marine terminal and associated marine-based infrastructure at Canaport in Saint John, New Brunswick, for the transfer of crude oil and finished products used or produced by the Eider Rock refinery.

1.4 Rationale and Need for the Project

Irving Oil has put forth the Development Proposal to increase its petroleum refining capacity in Saint John, New Brunswick. The marine terminal being assessed in this CSR is an integral part of the Development Proposal, and is intended to support the Proponent’s goal and overall vision: The Project will facilitate the transfer of crude and petroleum products to and from the Development Proposal and enable the shipping of products to market.

The sole purpose of the marine terminal is to support the Development Proposal in terms of shipping, receipt, transfer and storage of raw materials and products for the Development Proposal. In doing so, the Development Proposal will secure the existing and future refining infrastructure in the region, contribute to and maintain economic prosperity in the province, support the further development and stability of the Energy Hub, and increase the supply of ultra-low sulphur gasoline and diesel fuel for the North American market.

1.5 Purpose and Organization of the CSR

This CSR has been developed to meet the requirements of the EA Track Report and Scoping Document that specify the specific requirements to be assessed as part of the EA of the Project under CEAA. The CSR is organized in 18 chapters, as follows.

- Chapter 1 provides an introduction to the CSR, identifies the Proponent and provides a brief Project overview, and outlines the structure and content of the CSR.
- Chapter 2 provides a discussion of the applicable regulatory framework, including the regulatory requirements for the EA; the scope of the Project and the scope of the EA.
Chapter 3 provides a detailed Project Description, including alternative means of carrying out the Project, and describes how the Project will be constructed, operated, and ultimately decommissioned and abandoned. Emissions and wastes, and a summary of key technical studies undertaken as part of the EA of Project to assist in characterizing its potential environmental effects, are also provided.

Chapter 4 provides a summary of public, stakeholder, and Aboriginal consultation and engagement efforts conducted both by Responsible Authorities for the EA as well as by the Proponent.

Chapter 5 provides a description of the methodology used to conduct this EA to meet the requirements of the EA Regulation and CEAA. Additionally, the selection of valued environmental components (VECs) for the EA and a list of other projects and activities that are considered for the assessment of cumulative environmental effects are provided.

Chapter 6 provides a summary of the existing environmental setting of the Saint John Region, including the ecological and socio-economic context of the region.

Chapters 7 to 14 provide an assessment of potential environmental effects, including cumulative environmental effects, for each VEC of relevance and importance to this EA.

Chapter 15 provides an assessment of the effects of the environment on the Project.

Chapter 16 provides an assessment of potential accidents, malfunctions, and unplanned events.

Chapter 17 provides closing remarks and a statement of limitations in respect of this EA.

Chapter 18 provides the references cited in the CSR.

Additionally, a number of appendices appear at the end of the CSR to support the document, as follows.

Appendix A provides a glossary of selected technical terms used in this CSR.

Appendix B provides a list of acronyms and units used in this CSR.

Appendix C outlines preliminary considerations for marine habitat compensation for the Project.

Appendix D contains the Environmental Assessment Track Report and Scoping Document developed by the RAs to outline the scope of project, factors to be considered, and scope of factors to be considered for the federal EA of the Project under CEAA.

Appendix E contains a summary of the results of the federal coordination process conducted by RAs.

Appendix F contains a list of tables and figures contained in the CSR; this has been placed at the end of the document for convenience.
2.0 REGULATORY CONTEXT FOR THE ENVIRONMENTAL ASSESSMENT

This chapter:

- Provides an overview of the EA/EIA processes for the Development Proposal that are being conducted at the federal and provincial levels;
- Summarizes the regulatory framework applicable to the Project, with particular emphasis on the federal EA requirements;
- Describes the scope of the EA as determined by the federal regulatory agencies responsible for the EA of the Project (Responsible Authorities) under their respective scoping processes, including the scope of project factors to be considered, and scope of factors to be considered to meet the requirements of the Comprehensive Study Scoping Document, issued pursuant to Section 21(1) of the Canadian Environmental Assessment Act; and
- Provides a brief description of other approvals, permits, and authorizations that may apply to enable the Project to be carried out.

2.1 Overview of EA/EIA Processes for Project Eider Rock

Certain elements of Project Eider Rock have triggered the requirement of a federal EA, pursuant to Section 5(1) of the Canadian Environmental Assessment Act.

Additionally, although not discussed in this CSR, several elements of Project Eider Rock have triggered the requirement for an EIA pursuant to Section 5(1) of the New Brunswick Environmental Impact Assessment Regulation 87-83 filed under the Clean Environment Act. An EIA of the Development Proposal as a whole is being concluded in parallel to this EA by the Province of New Brunswick, and several federal agencies are participating in that review.

2.1.1 Federal Environmental Assessment

The Canadian Environmental Assessment Act (CEAA), originally enacted in 1992, defines the requirements for federal EA for projects or activities that fall under federal jurisdiction. Several levels of assessment exist under CEAA, including: screening, comprehensive study, mediation, and review panel. All EAs under CEAA are screenings unless they are on the Comprehensive Study List Regulations or unless they have been referred to a review panel or mediation.

The Project requires an EA under CEAA because of the requirement for authorizations that are listed in the Law List Regulations to enable the Project to be carried out. These include, in relation to the construction and operation of the marine terminal (the Project):

- The requirement for an authorization for harmful alteration, loss, disruption or destruction (HADD) of fish habitat under the Fisheries Act;
- The requirement for an authorization for the destruction of fish by means other than fishing under the Fisheries Act.
- The requirement for a permit under the Navigable Waters Protection Act (NWPA); and/or
The requirement for a permit for disposal at sea under the Canadian Environmental Protection Act.

As currently conceived, there are no triggers for CEAA to apply to any of the land-based components of the Development Proposal.

Section 28(c) of the Comprehensive Study List Regulations states that a comprehensive study is required for the proposed construction, decommissioning or abandonment of a marine terminal designed to handle vessels larger than 25,000 dead weight tonnes (dwt), unless the terminal is located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation. As such, the marine terminal to be constructed as part of the Project requires a comprehensive study under CEAA.

2.1.2 Federal Coordination

On January 25, 2007, the EIA Registration/Project Description document for the Project was submitted as a “project description” under CEAA to the Canadian Environmental Assessment Agency (the “Agency”) and the likely RAs – namely Fisheries and Oceans Canada (DFO), Environment Canada, and Transport Canada (TC), for the purpose of initiating the EA under CEAA.

In accordance with the Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements (known as the Federal Coordination Regulations), the Agency, acting as the Federal Environmental Assessment Coordinator (FEAC) under Section 12 of CEAA, distributed the Project Description to the federal authorities that were or may be RAs, as well as those that may be in possession of specialist or expert information or knowledge with respect to the Project. The Agency distributed the Project Description to:

- Environment Canada (EC);
- Fisheries and Oceans (DFO);
- Health Canada (HC);
- Indian and Northern Affairs Canada (INAC);
- Industry Canada (IC);
- National Energy Board (NEB);
- Natural Resources Canada (NRCan);
- Canadian Transportation Agency (CTA);
- Saint John Port Authority; and
- Transport Canada (TC).

These federal authorities were asked to determine if they would be required to exercise a power, or perform a duty or function pursuant to Section 5(1) of CEAA that would necessitate an EA. Federal authorities were also asked to confirm if they were in possession of expertise or specialist knowledge that would be pertinent to such an EA.

On May 7, 2007, DFO, EC, and TC declared that they were RAs for the EA of the Project under CEAA and that they would conduct a comprehensive study of the marine terminal and other
marine-based infrastructure associated with the Development Proposal. NRCan and Health Canada, as federal authorities under CEAA, identified areas of expertise that they could make available to the RAs upon request. A summary of the results of the federal coordination process under CEAA is provided in Appendix E.

On May 23, 2007, the RAs released a draft Scoping Document to outline the scope of the EA under CEAA (Government of Canada 2007b). The draft Scoping Document outlined the draft proposed scope of the Project, factors to be considered, and scope of factors to be considered for the EA under CEAA as determined by the Responsible Authorities. The draft Scoping Document proposed that the scope of the EA under CEAA consider the aspects of the Development Proposal that are to be constructed and operated in the marine environment (e.g., jetty, outfall). The public comment period on the draft Scoping Document ended on June 30, 2007.

After considering the comments received from the public on the draft Scoping Document, the federal Minister of the Environment released his Comprehensive Study Track Decision (“Notice of Decision to Continue as a Comprehensive Study” (Government of Canada 2007c) on November 21, 2007, in which the Minister outlined the form of the EA under CEAA. At the same time, the Scoping Document was finalized and released to the public. The federal Minister determined that the EA under CEAA would continue as a Comprehensive Study of the marine terminal and marine infrastructure associated with the Project. The Minister also released an EA Track Report (Government of Canada 2007a) that outlined the scope of Project, factors to be considered, and scope of factors to be considered as part of the EA under CEAA. The EA Track Report and the Scoping Document for the EA of the Project are provided in Appendix D.

This CSR is being submitted to the federal RAs in parallel to the EIA Report (submitted April 30, 2009) to satisfy the requirements of the sub-paragraph 21.1(1)(a) of CEAA, and to allow for public comment on the conclusions and recommendations, or any other aspect of the report, in accordance with Section 22 of CEAA.

Fisheries and Oceans Canada, Transport Canada, and Environment Canada have each determined that certain components of the Irving Oil development proposal require approvals that trigger CEAA. The following specific triggers have been identified:

- Issuance of authorizations pursuant to subsection 35(2) of the Fisheries Act for the harmful alteration, disruption or destruction of fish habitat and/or section 32 of the Fisheries Act for the destruction of fish;
- Issuance of a permit for disposal at sea of dredged material under subsection 127(1) of the Canadian Environmental Protection Act; and,
- Issuance of an approval to allow for an interference to navigation under Section 5(1)(a) of the Navigable Waters Protection Act (NWPA).

2.1.3 Federal/Provincial Coordination

In parallel to the EA under CEAA for the marine terminal, a comprehensive EIA review is being conducted by the Province of New Brunswick for all land-based and marine-based elements of the Development Proposal. Federal agencies (Fisheries and Oceans Canada, Transport Canada, Environment Canada, and Health Canada) are active participants in that review.
Under the New Brunswick Environmental Impact Assessment Regulation – Clean Environment Act, Irving Oil was required to register the Development Proposal as an undertaking for review. On January 25, 2007, Irving Oil registered the Development Proposal with the New Brunswick Department of Environment (“NBENV”). On February 7, 2007, the provincial Minister of Environment (“provincial Minister”) determined that a comprehensive environmental impact assessment (“EIA”) would be required for the entire Development Proposal. The comprehensive EIA process described at http://www.gnb.ca/0009/0377/0002/11-04-e.pdf is managed by NBENV, with input from the public and a technical review committee (“TRC”). The TRC is composed of federal and provincial authorities with pertinent expertise, along with other experts as required. DFO, TC, EC, and Health Canada are all members of the TRC for the Irving Oil development proposal.


The federal EA has been coordinated, to the extent possible, with the provincial process. As with any project subject to both federal and provincial legislation, the federal and provincial governments each make decisions on matters within their own legislative authorities.

### 2.2 Regulatory Framework

#### 2.2.1 Canadian Environmental Assessment Act

CEAA defines the requirements for the federal environmental assessment (EA) process. For an EA under CEAA to be required, there must first be a “project” as defined under CEAA, and there must also be a “trigger” for the project. Thus, an EA is not automatically required for a project; rather, CEAA does not require an EA unless there is a project as defined in the Act, and there are one or more triggers in respect of the Project.

A federal EA is triggered under Section 5(1) of CEAA when a federal authority (Responsible Authority (RA)):

- Proposes a project;
- Provides financial assistance to a proponent to enable a project to be carried out;
- Sells, leases, or otherwise transfers control or administration of federal land to enable a project to be carried out; and/or
- Provides a license, permit or an approval that is listed in the Law List Regulations that enables a project to be carried out.

The “Federal Coordination Regulations” process conducted upon receipt of the project description determined that an EA was required under CEAA and determined the role to be played by each of those federal authorities in the EA. The process also determined the level of EA required (e.g., screening or comprehensive study). These decisions were made in consideration of the Project.
as described in the Project Description and in light of other factors such as the nature and scope of the EA or EIA to be conducted by other jurisdictions.

The Marine Terminal and Other Marine-Based Infrastructure (the Project) is a “project” as defined under CEAA. The federal government is not the proponent, nor is it transferring federal land or providing funding to enable the Project to be carried out. However, there are potential triggers under the Law List Regulations (discussed later), which required an EA of the Project to be conducted under CEAA.

2.2.2 Environmental Assessment Process under CEAA

When CEAA is triggered, all EAs under CEAA are screenings unless the project is on the Comprehensive Study List Regulations or it is referred to a mediator or review panel. The following discussion focuses on the process for screenings and comprehensive studies.

The EA process under CEAA is initiated by filing a project description with a federal authority or the CEA Agency. The submission of the project description initiates a process referred to as federal coordination. The federal departments or agencies (federal authorities) review the information and determine whether or not they are an RA under CEAA in respect of the Project. An RA is a federal authority that exercises some form of decision-making authority in respect of the project (e.g., issues an authorization, transfers land, provides funding).

Although it is the RA’s responsibility to conduct an EA of the Project, typically, the proponent prepares the EA Report if it is delegated the responsibility to do this by the RAs under Section 17(1) of CEAA. This was the case for this Project. The EA Report is reviewed by RAs and may require iteration before it is accepted. Once accepted by RAs, and as may be required under CEAA, the EA Report (especially for comprehensive studies) is released to the public for review. The RAs address any comments from the public, and issue a final EA decision following the completion of the public review period.

The Comprehensive Study List Regulations describe those types of projects that must be assessed through a more detailed study, and identifies those types of projects that, if triggered, require as a minimum a comprehensive study (as opposed to a screening). Comprehensive studies involve some additional factors to be considered over that required for screening reports, including the purpose of the project and alternative means of carrying out the project. As well, the decision-making and public consultation requirements, and timeframes are more and longer.

Section 28(c) of the Comprehensive Study List Regulations states that a comprehensive study is required for the proposed construction, decommissioning or abandonment of a marine terminal designed to handle vessels larger than 25,000 dead weight tonnes (dwt), unless the terminal is located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation. The marine terminal to be constructed as part of the Development Proposal exceeds this threshold.

RAs have determined the scope of the Project to be assessed through the federal coordination process under the authority of Section 15 of CEAA (Government of Canada 2007a, 2007b). There are no known triggers for the refinery itself, and thus the refinery has been determined to not form a part of the Project to be assessed pursuant to CEAA. There are no current plans to alter watercourses for the pipelines and rail spur for the Development Proposal that would require an authorization listed in the Law List Regulations. Regardless, those elements of the Development Proposal are not on the Comprehensive Study List Regulations and therefore, would not trigger a comprehensive study, but
would be addressed through separate screenings in the unlikely event that watercourse crossings triggered the need for an EA under CEAA.

2.2.3 Law List Regulations

The Law List Regulations under CEAA identify the federal laws and regulations that can trigger the requirement for an EA under CEAA. Laws identified under this regulation are those for which a federal authority is asked to provide a license, permit, certificate, or other form of regulatory authorization before a project can proceed.

The relevant legislation that applies to the Project, as listed under the Law List Regulations, includes the Fisheries Act, Navigable Waters Protection Act (NWPA), and the Canadian Environmental Protection Act (CEPA). These acts and regulations and their relationship to the EA of the Project are explained in more detail below.

Fisheries Act authorizations that are triggers for an EA under CEAA include the potential for destruction of fish and larvae from physical construction activities or from impingement or entrainment at any cooling water intake structures (Section 32), or the harmful alteration, disruption or destruction of fish habitat (HADD) as a result of the construction of jetty elements of the Project (Section 35(2)). A HADD authorization is required for the construction of the Marine Terminal and any other in-water work in the marine environment. DFO is an RA due to these triggers.

NWPA approvals that are triggers for an EA under CEAA include the approval required for the construction of any in-water structures in the marine environment that could interfere with navigation (Section 5(1)(a)). Transport Canada is an RA as a result of this trigger.

The sections of CEPA that are Law List Regulations triggers for CEAA, and of potential relevance to the Project, relate to the requirement for a permit for ocean disposal. As dredging and disposal in the marine environment will likely be required for the Project, a permit would be necessary under Section 127(1) for the disposal of the dredge spoils in the marine environment. This would trigger CEAA, and Environment Canada is thus an RA.

2.2.4 Comprehensive Study Track Decision

Based on the EA Track Report (Appendix D), and upon the recommendation of the RAs, the federal Minister of Environment decided that the EA of the Project would continue as a comprehensive study; as a result, the project cannot be referred to a mediator or review panel. This study track decision represented the final scope determination for the Project, and documented RA decisions in respect of the scope of the project, factors to be considered and the scope of the factors to be considered pursuant to authority entrusted to them by Sections 15 and 16 of CEAA.

Upon acceptance of the Comprehensive Study Report (CSR) by the RAs, it is submitted to the Minister of Environment and the CEA Agency for approval. RAs will ensure there are opportunities for public participation and First Nations engagement during the comprehensive study process. Following submission and acceptance of the CSR, the CEA Agency will invite the public to comment on the report prior to the Minister of Environment making his determination. There are no timelines but the CEA Agency normally targets to complete this review and decision within 60 days of the acceptance of the CSR for public review. The Minister of Environment may request additional information or require that public concerns be further addressed before issuing the EA decision statement. Once the EA