



ALDERON
IRON ORE CORP

KAMI CONCENTRATE STORAGE & LOAD-OUT FACILITY, Québec

**Kami Iron Ore Project
Environmental Impact Statement**

VOLUME II Part I

September 2012

ENVIRONMENTAL IMPACT STATEMENT DOCUMENT ORGANIZATION

VOLUME I : KAMI IRON ORE MINE AND RAIL INFRASTRUCTURE, LABRADOR

Plain Language Summary

Executive Summary

PART I

1. Introduction
2. Project Description
3. Description of the Existing Environment
4. Effects Assessment
5. Avoidance and Mitigation Measures
6. Cumulative Effects Assessment
7. Effects of the Environment on the Project
8. Environmental Management
9. Significance of Residual Adverse Environmental Effects
10. Consultation
11. Economic and Social Benefits of the Project
12. Benefits of the EA to Canadians
13. Assessment Summary and Conclusion

PART II

14. Atmospheric Environment
15. Landforms, Soils, Snow and Ice
16. Water Resources
17. Wetlands
18. Freshwater Fish, Fish Habitat and Fisheries
19. Birds, Other Wildlife and their Habitats, and Protected Areas
20. Species at Risk and Species of Conservation Concern
21. Historic and Cultural Resources
22. Current Use of Lands and Resources for Traditional Purposes by Aboriginal Persons
23. Other Current Use of Lands and Resources
24. Community Services and Infrastructure
25. Health and Community Health
26. Economy, Employment and Business
27. Commitments Made in the EIS
28. References
29. Glossary and Acronym List

Appendices

- | | | | |
|------------|---|------------|--|
| Appendix A | Qualifications of Personnel Conducting Surveys for Migratory Birds, Species at Risk and Species of Conservation Concern, and Wetland Delineations | Appendix P | Additional Monitoring Station Details of Stream Gauging Stations S1, S2, S3, S4, and S5 and Hydrological Monitoring Results of Stream Gauging Stations |
| Appendix B | EIS Guidelines | Appendix Q | Regional Relationships for Mean Monthly Maximum, Minimum; and Average Daily Flow Rate for Drainage Areas |
| Appendix C | Key Subject Index | Appendix R | Flow Hydrographs of Watersheds and Subwatersheds within the LSA; and FDCs of Watersheds and Subwatersheds within the PDA and LSA |
| Appendix D | Tailings Management Facility Preparation Plan | Appendix S | Low Flow Analysis of Watersheds and Subwatersheds within the PDA and LSA |
| Appendix E | Number and Temporal Distribution of Workforce Occupations and Activities Throughout the Construction Phase of the Project | Appendix T | Flood Flow Curves for Watersheds and Subwatersheds within the PDA and LSA |
| Appendix F | Air Quality Monitoring Baseline Report | Appendix U | Mapping of Water Quality Concentration Contours across the Province |
| Appendix G | Water Resources Baseline Report | Appendix V | Laboratory Analytical Results |
| Appendix H | Fish, Fish Habitat, and Fisheries Baseline Report | Appendix W | Monthly Water Balance Tables for the Design Wet and Dry Years |
| Appendix I | Wetlands Baseline Report | Appendix X | Process Effluent Discharge into Long Lake Projected to Meet MMER Water Quality at End of Pipe |
| Appendix J | Socio-economic Baseline Report | Appendix Y | ELC and Wildlife Species Habitat Analysis |
| Appendix K | Summary of Effluents and Discharges for Other Projects | Appendix Z | Lavoie and Gelinas Aboriginal Report |
| Appendix L | NCC Land and Resource Use Study | | |
| Appendix M | Aboriginal Engagement Strategy and Action Plan | | |
| Appendix N | Kami Project Public Consultation Plan | | |
| Appendix O | Copies of Presentation Materials and Public Notices for Public Meetings | | |

VOLUME II : KAMI CONCENTRATE STORAGE AND LOAD-OUT FACILITY, QUÉBEC

Plain Language Summary

Executive Summary

PART I

1. Introduction
2. Project Description
3. Description of the Existing Environment
4. Effects Assessment
5. Avoidance and Mitigation Measures
6. Cumulative Effects Assessment
7. Effects of the Environment on the Project
8. Environmental Management
9. Significance of Residual Adverse Environmental Effects
10. Consultation
11. Economic and Social Benefits of the Project
12. Benefits of the EA to Canadians
13. Assessment Summary and Conclusion

PART II

14. Atmospheric Environment
15. Landforms, Soils, Snow and Ice
16. Water Resources
17. Wetlands
18. Freshwater Fish, Fish Habitat and Fisheries
19. Birds, Other Wildlife and their Habitats, and Protected Areas
20. Species at Risk and Species of Conservation Concern
21. Historic and Cultural Resources
22. Current Use of Lands and Resources for Traditional Purposes by Aboriginal Persons
23. Other Current Use of Lands and Resources
24. Community Services and Infrastructure
25. Health and Community Health
26. Economy, Employment and Business
27. Commitments Made in the EIS
28. References
29. Glossary and Acronym List

Appendices

- | | |
|------------|---|
| Appendix A | Qualifications of Personnel Conducting Surveys for Species at Risk and Species of Conservation Concern |
| Appendix B | EIS Guidelines |
| Appendix C | Key Subject Index |
| Appendix D | Number and Temporal Distribution of Workforce Occupations and Activities Throughout the Construction Phase of the Project |
| Appendix E | Freshwater Fish, Fish Habitat, and Fisheries Baseline Study |
| Appendix F | Water Resources Baseline Study |
| Appendix G | Air Quality Dispersion Modeling Study |
| Appendix H | Socio-economic Baseline Study |
| Appendix I | NCC Land and Resource Use Study |
| Appendix J | Aboriginal Engagement Strategy and Action Plan |
| Appendix K | Kami Project Public Consultation |
| Appendix L | Copies of Presentation Materials and Public Notices for Public Meetings |

Foreword

In the preparation of the Environmental Impact Statement for the Kami Iron Ore Project, Alderon has strived to produce a focused assessment which provides useful information in a readable format. It is our objective to allow the reader to quickly gain an overall understanding of the Project and its predicted effects and then to move on the specific areas of interest.

We have designed the Environmental Impact Statement and supporting documentation to achieve this objective. The information is presented in two separate volumes; one for the Project components located in Labrador (Volume One), and one for the Project components in the province of Québec (Volume Two).

Each Volume is divided into two parts: Part I of each Volume presents the overall findings of the assessment with sufficient detail to allow the reader to understand the issues, Project effects and the proposed mitigation measures; Part II of each Volume presents the details of the assessment on a Valued Ecosystem Component basis. Supporting baseline studies are attached as appendices.

Although this format may be a deviation from a more typical presentation, we have ensured that we have addressed the Guideline requirements in their entirety. The table of concordance presented at the beginning of each Volume is provided to help the reader in navigating through the document.

The preparation of the Environmental Impact Statement is the result of many dedicated scientists, engineers and environmental assessment practitioners. Alderon would like to thank Stantec, Amec, BBA Engineering, Golder Associates, Strategic Concepts Norton Rose Canada, and Osler, Hoskin & Harcourt LLP for their professional contributions to this effort.

We would also like to acknowledge the cooperation of the federal and provincial regulatory agencies and public stakeholders and Aboriginal groups who have contributed to our understanding of their expectations, issues and information requirements.

Finally, I would like to thank the Alderon project team for their diligence and support during the preparation of this documentation and, in particular, a special acknowledgment to Elisabeth Poirier-Garneau, Alderon's Manager of Environmental Assessment for her patience, understanding and fortitude.

Alderon looks forward to advancing to the next steps of the Environmental Assessment process.

Original Signed By

Todd Burlingame
Executive Vice President Environment and Aboriginal Affairs
Alderon Iron Ore Corp.

EXECUTIVE SUMMARY

Alderon Iron Ore Corp. (Alderon) is proposing to construct and operate the Kami Iron Ore Project which will consist of an open pit iron ore mine and associated infrastructure in western Labrador, as well as a terminal facility at the Pointe-Noire Terminal at the Port of Sept-Îles, Québec (the Project). The Québec terminal facility will consist of the Kami Concentrate Storage and Load-Out Facility (the Kami Terminal).

The Kami Terminal will require federal approvals, which trigger the requirement for a federal environmental assessment (EA) under the *Canadian Environmental Assessment Act* (CEAA), at the comprehensive study level. The project does not trigger the provincial EA process under article 31 of the Québec *Environmental Quality Act* (QEQA). This Environmental Impact Statement (EIS) has been prepared to address regulatory requirements for a provincial and federal EA and specifically address the EIS Guidelines (refer to Appendix B) and issues raised by the public through Alderon's public consultation process.

This Executive Summary has been prepared for Volume 2: Kami Concentrate Storage and Load-out Facility, Quebec. The environmental assessment of the Kami Iron Ore Mine and Rail Infrastructure, Labrador is presented in Volume 1.

Project Description Overview

The Kami Terminal is located on the Marconi Peninsula in Sept-Îles, Québec on Québec's Côte-Nord region. The project site plan is shown on Figure E.1. The Kami Terminal includes construction, operation, and decommissioning and rehabilitation of the following primary components:

- A Concentrate Unloading, Stacking, Storage and Reclaiming Facility comprising:
 - Rail car dumper;
 - Concentrate storage yard;
 - Stacker-reclaimer;
 - Transfer houses;
 - Conveyors;
 - Maintenance facilities;
 - Access roads;
 - Security fencing and gate;
 - Power supply and substation;
 - Water supply;
 - Office and storage buildings;
 - Water management systems;
 - Dust collection and management systems; and,
- Associated Rail Infrastructure (Rail Loop).

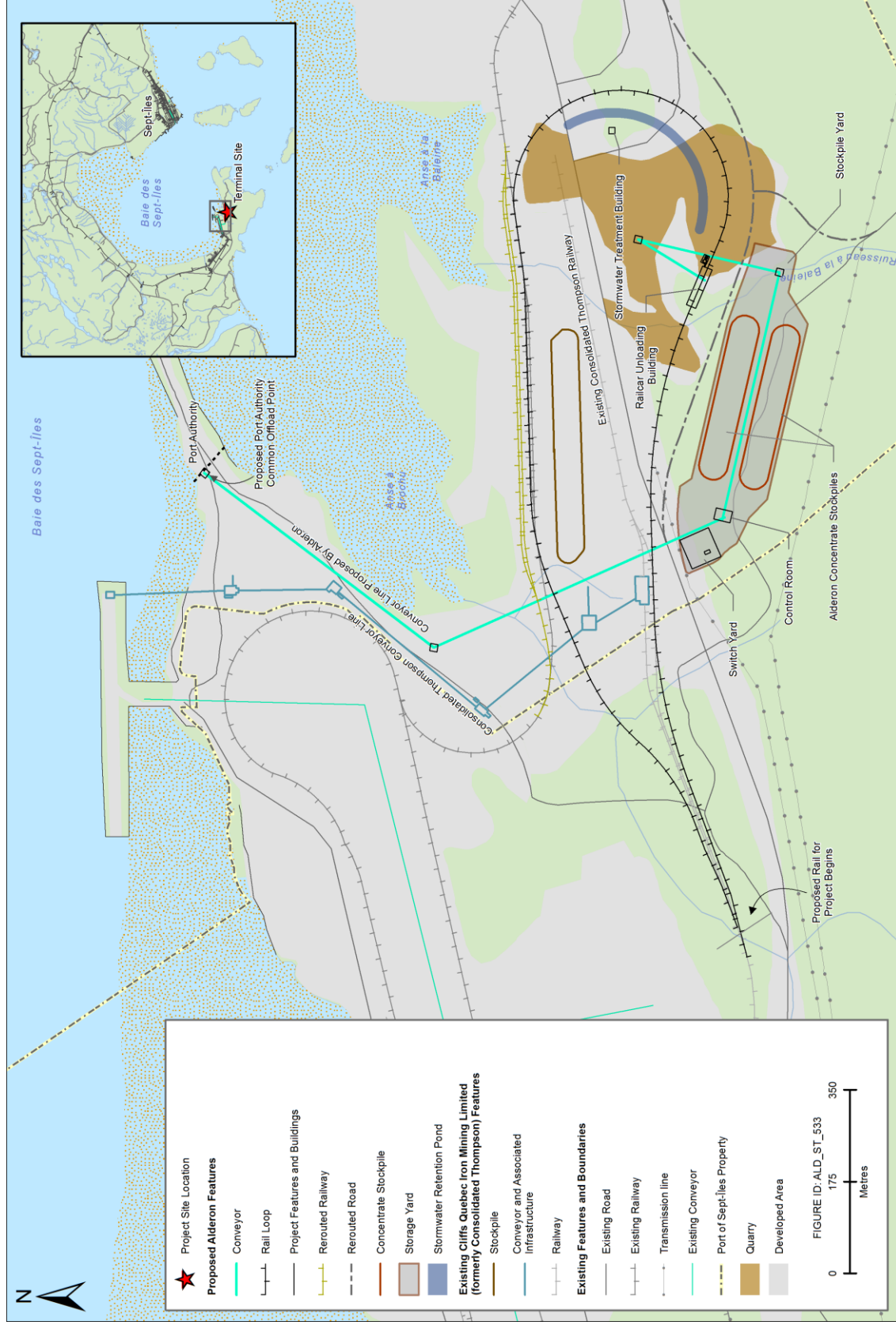
All components of the proposed Concentrate Unloading, Stacking, Storage and Reclaiming Facility will be located on Port Authority land at Sept-Îles. The proposed Rail Loop will connect with the existing Chemin de Fer Arnaud (CFA).

The mine will have a nominal capacity of 16 million metric tonnes of iron ore concentrate per year. Concentrate will be transported by existing rail to the Pointe-Noire Terminal at the Port of Sept-Îles, where Project-related components will be located on land within the jurisdiction of the Port Authority of Sept-Îles.

The purpose of the Project is to develop the iron ore deposits within the Kami Mine Property in Labrador, and in doing so, to produce iron ore concentrate suitable for sale to international markets. There is currently a very high level of demand for iron ore and steel worldwide, which is creating and maintaining relatively strong markets and good prices for iron and steel.

Kami Terminal construction will occur over approximately 24 months, during which significant direct employment in a wide variety of occupations will be created. During Project operations, further, long-term positions will be created, which will extend for over approximately 17 years. In addition, the requirement for goods and services during Kami Terminal construction and operations will provide significant business opportunities. These direct economic benefits will be supplemented by indirect and induced employment and business opportunities through, for example, spending by Kami Terminal employees and contractors.

Figure E.1 Site Plan



Summary of Consultation and Engagement

Since the acquisition of the Kami Property in December 2010, Alderon has worked to establish open and transparent communication with various potentially interested and/or affected individuals and organizations. Alderon's approach includes engagement with regulatory agencies, Aboriginal groups, municipalities, and the public. Consultation activities have been conducted for the Project as a whole (encompassing the Kami Mine and the Kami Terminal and interests). The frequency of issues raised is presented in Figure E.2.

Aboriginal Engagement

Alderon recognizes the importance of building relationships, based on mutual trust and respect, with those Aboriginal groups who have recognized legal rights or whose traditional land and resource use activities in the Project area may be affected by the Project and is committed to working collaboratively and constructively with Aboriginal groups in proximity to the Kami Project to achieve mutually beneficial outcomes. Alderon has engaged with the following five Aboriginal groups:

- Innu Nation;
- NunatuKavut Community Council;
- Uashat mak Mani-Utenam;
- Matimekush-Lac John; and,
- Naskapi Nation of Kawawachikamach.

Aboriginal engagement during the EIS development included information sharing, community engagement and capacity building. Community engagement activities undertaken with Aboriginal communities and organizations included:

- Meeting with community leaders to identify appropriate engagement activities;
- Offers to conclude formal engagement arrangements, supported by capacity funding, and the provision of financial and other support for community initiatives ; and,
- Providing opportunities for community meetings to provide information and hear community concerns.

Only one issue relating to the Kami Terminal was raised during Aboriginal engagement. The Innu of Uashat mak Mani-Utenam identified the need to be consulted with respect to all components of the Project and not simply the Kami Terminal. Alderon has adopted a comprehensive approach to Aboriginal engagement and has engaged with the Aboriginal communities and organizations with respect to both the Kami Mine and the Kami Terminal.

Public Stakeholder Consultation

The participant list for public stakeholders includes residents of the town of Labrador City, Wabush, Fermont and Sept-Îles. In addition to stakeholders within these boundaries, Alderon has also engaged other potentially affected and/or interested stakeholders including provincial and federal government agencies and departments, non-governmental organizations (NGOs), economic development organizations, and outdoor recreation users and outfitters.

Consultation activities specific to the Kami Terminal consisted of an open-house that was conducted in Sept-Îles to consult with public stakeholders.

The issues that were identified most frequently during public consultation include:

- The availability of housing for workers;
- Potential effects from dust;
- Potential effects on waterbodies;
- Potential effects on water quality;
- Potential effects on wildlife species;
- Potential effects on visual aesthetics;
- Potential effects on community services
- Cumulative effects on community services and infrastructure; and,
- Potential effects on local businesses.

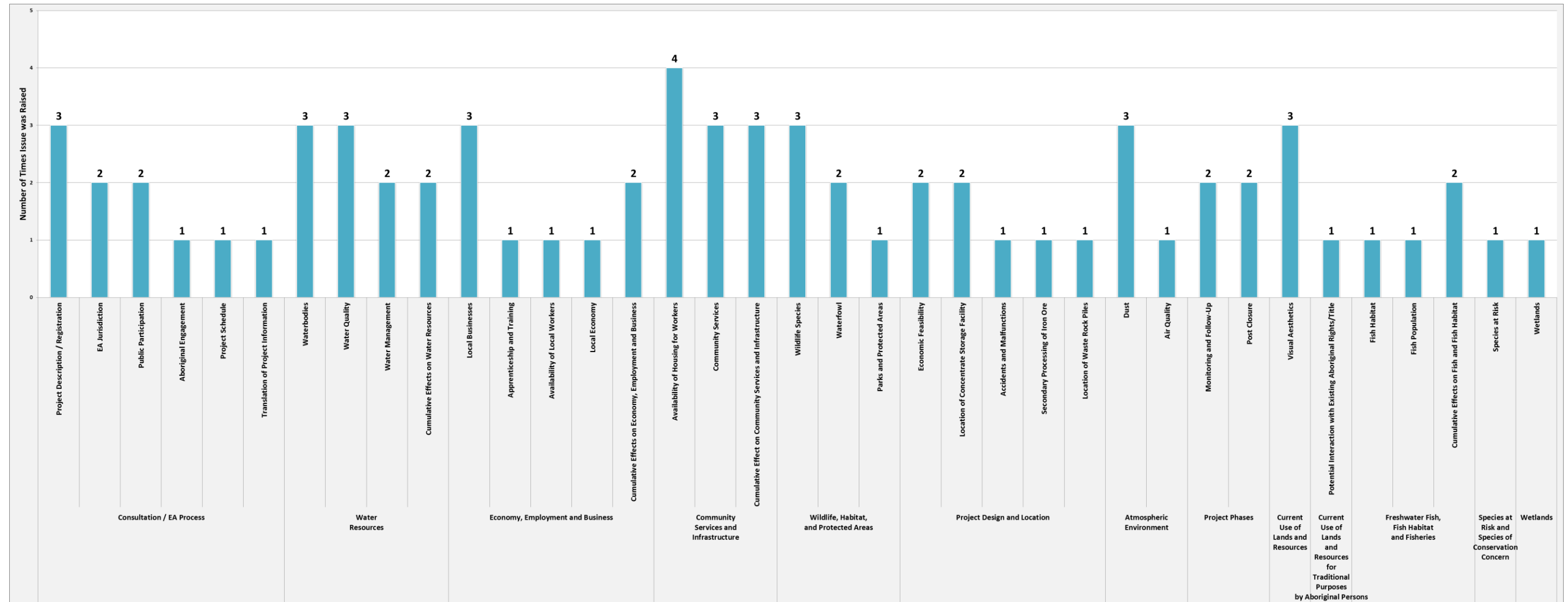
Regulatory Consultation

Alderon's approach to regulatory consultation is to establish and maintain transparent dialogue with federal and provincial regulators throughout development of the EIS. Consultation activities include ongoing information updates and meetings, including sharing stakeholder and Aboriginal issues as they arise. In addition, Alderon met with reviewing agencies during the development of the EIS to present baseline studies, study methodology and effects assessment for each component chapter.

Post-EIS Submission Consultation

Following submission of the EIS, Alderon will continue Aboriginal engagement, and public and stakeholder consultation activities. In addition, the EIS and Plain Language Summary will be made available for public review and comment.

Figure E.2 Frequency of Issues Identified during Public Consultation Activities



Avoidance and Mitigation Measures

Alderon has taken measures from the outset of project planning to avoid and mitigate effects. Wherever possible, the Kami Terminal has been planned and designed to avoid adverse environmental effects through the careful configuration of Kami Terminal components and by the use of economically and technically feasible control technologies. In particular:

- The Kami Terminal conveyor system was selected to minimize noise and will be enclosed to minimize dust generation;
- Where economically and technically possible, the Kami Terminal was designed to avoid water bodies;
- The rail line was located close to the future Consolidated Thompson rail loop to minimize the combined footprint of both infrastructures;
- The retention pond was located within the proposed rail loop; a highly disturbed area. Water treatment will ensure that effluent release respects environmental standards; and,
- Railway design will follow the prescribed standards for track construction as set out by the American Railway Engineering and Maintenance-of-Way Association (AREMA) and Québec North Shore & Labrador (QNS&L) Railway track standards. Standard subgrade construction techniques will be applied.

Where avoidance was not possible, mitigation measures have been incorporated into the design of the Kami Terminal. Specific examples of mitigation by design are provided below:

- Erosion and sedimentation controls, such as installation of ditch blocks, and silt fences to protect streams;
- Dust suppression, such as watering roads and limiting certain earth-disturbing activities on especially dry and windy days;
- Enclosed conveyors to reduce fugitive dust emissions;
- Proper muffler installation;
- Comprehensive maintenance program for vehicles and other equipment;
- Blasting will be conducted in accordance with the *Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters* (Wright and Hopky 1998);
- Guidance of Fisheries and Oceans Canada regarding culvert installation will be followed;
- Storage tanks for petroleum or other hazardous materials will have secondary containment;
- Applicable design codes and standards will be followed in the design and construction of Kami Terminal components;
- Emergency response plans (ERPs) (contingency plans), will be developed for the Kami Terminal and training will be conducted to ensure Kami Terminal employees and contractors are familiar with response measures;

- Orientation for new employees will include environmental policies and familiarization with protection measures as detailed in the Environmental Protection Plan (EPP); and,
- Kami Terminal employees and contractors will undergo regular training and refreshers to ensure they are familiar with potential environmental issues associated with the Kami Terminal.

In addition, standard mitigation measures and practices demonstrated to be effective on similar projects will be implemented on the Kami Terminal. Orientation for new employees will include environmental policies and familiarization with protection measures as detailed in the EPP for the Kami Terminal.

Management Planning

A variety of Environmental Management Plans (EMPs) will be developed for the Kami Terminal in consultation with Aboriginal groups, regulatory agencies, and public stakeholders including:

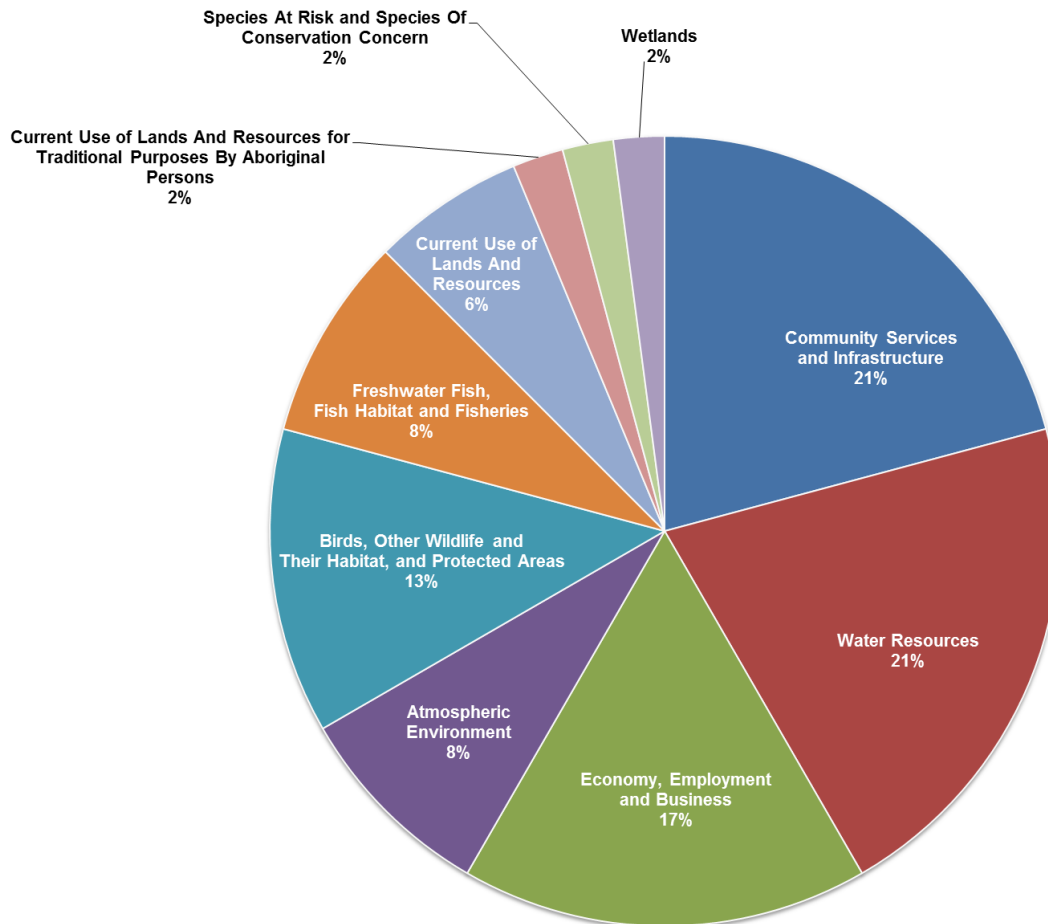
- A Clean-up and Transfer Plan;
- An Emergency Spill Prevention and Response Plan (Contingency Plan);
- A Waste Management Plan (WMP); and,
- An EPP.

In addition to the EMPs, a Healthy and Safety Program will be developed, Hazard Identification and Risk Assessments will be undertaken, and Mutual Aid Agreements will be sought with the City of Sept-Îles.

Environmental Assessment Overview

The EIS focuses on issues raised during regulatory consultation, Aboriginal engagement and public stakeholder consultation. The proportion of issues identified during Aboriginal engagement and public consultation activities is shown in Figure E.3. In accordance with standard practice and the EIS Guidelines, the environmental effects of the Kami Terminal were assessed for Valued Ecosystem Components (VECs) which are components or attributes of the environment that are important for ecological, legal, scientific, cultural, economic, or aesthetic reasons.

Figure E.3 Proportion of Issues Identified During Aboriginal Engagement and Public Consultation Activities



The biophysical VECs are:

- Atmospheric Environment;
- Landforms, Soils, Snow and Ice;
- Water Resources;
- Wetlands;
- Freshwater Fish, Fish Habitat, and Fisheries;
- Birds, Other Wildlife and their Habitats, and Protected Areas; and,
- Species at Risk and Species of Conservation Concern.

The socio-economic VECs are:

- Historic and Cultural Resources;
- Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons;
- Other Current Use of Lands and Resources;
- Community Services and Infrastructure;
- Health and Community Health; and,
- Economy, Employment, and Business.

The interactions between the Kami Terminal and the VECs identified above have been analyzed to identify mitigation and effects management measures, and to determine the significance of residual adverse environmental effects. A complete assessment of Kami Terminal effects, cumulative effects and effects resulting from accidents and malfunctions is presented in Chapters 14 through 26 of this EIS (a summary is provided in Chapter 13).

The Kami Terminal will not result in likely significant adverse residual effects in isolation or cumulatively with other projects and activities. In the case of Economy, Employment, and Business, the residual effects of the Kami Terminal will be positive. Accidents and malfunctions, should they occur, may result in significant effects for some VECs. However, these are not likely to occur given the planning that has been undertaken (e.g., forest fire prevention and response plan, rail inspection and maintenance) and the standards that have been prescribed.

Environmental factors which could potentially affect the Kami Terminal's design, construction and operation include local conditions and natural hazards, such as severe and extreme weather conditions and external events (e.g., flooding, tidal storm sea surges, ice jams, rock slides, landslides, fire, outflow conditions and seismic events). Planning and design of the Kami Terminal has and will continue to consider extreme climatic, hydrologic, and geohazard criteria. The elevations above sea level, of the equipment and structures will prevent possible damage due to tidal storm surge sea water level changes. In addition, the equipment location and harbor barrier islands protection will minimize the potential for damage due to wind driven on-shore ice flows. In the event of significant seismic activity, there is a possibility that potentially loose material or trees from the hillside south of the Alderon concentrate storage yard could slide down the hill into the yard, necessitating later clean-up and removal.

Benefits of the EA to Canadians

EA, as a planning tool, is being used by Alderon to integrate issues and concerns raised by Aboriginal groups and stakeholders into Project planning and design. The EA process for the Project benefits Canadians in the following ways:

- Increased environmental benefits;
- Incorporation of sustainable development principles;
- Public participation;
- Application of technological innovations, where required;

- Increased scientific knowledge; and,
- Community and social benefits.

Careful design and planning of the Kami Terminal has resulted in the minimization of adverse environmental effects and the maximization of positive environmental effects. Examples of this include the following:

- The Kami Terminal conveyor systems are enclosed to minimize dust generation as well as noise;
- The rail loop was located adjacent to the future Cliffs Québec Iron Mining Limited (formerly Consolidated Thompson) rail loop in order to minimize the combined footprint of both infrastructure; and,
- The length of the rail loop was minimized and located almost entirely on highly artificialized port land.

Follow-up and Monitoring

A follow-up and monitoring program will be designed and conducted, as appropriate, during all phases of the Kami Terminal. The purpose of the follow-up program is to verify the accuracy of the predictions made in the environmental assessment as well as the effectiveness of the mitigation measures. Compliance and inspection monitoring will also be conducted. The EPP for the Kami Terminal will also serve as standards against which compliance monitoring will be conducted.

Emissions from blasting will be monitored as well as noise. Water quality of the stormwater retention pond discharge will be monitored to ensure compliance with the *ministère du Développement durable, de l'Environnement, et des Parcs* (MDDEP) *Directive 019 for the mining industry*, Canadian Council of Ministers of the Environment (CCME) *Canadian Water Quality Guidelines for the Protection of Aquatic Life*, and Québec *Surface Water Criteria for the Protection of Aquatic Life* for the protection of aquatic life.

The Kami Terminal will ensure on-site compliance with the EPP.

Subsequent Kami Terminal construction and operations phases will be subject to an EPP to direct actions in the event of a fortuitous discovery of archaeological resources.

Any follow-up and monitoring program that have been identified and proposed for other VECs (particularly for the biophysical environment) will be indirectly applicable to land and resource use. Specific measures to manage socio-economic components include monitoring local housing indicators (vacancy rates, rental prices, sales prices), promoting opportunities for local and Aboriginal businesses and workers as well as regional subcontracting for materials and services.

Concordance with Guidelines

The EIS Guidelines require that the Executive Summary include a Table of Concordance that describes where each information requirement of the EIS Guidelines has been addressed in the EIS. Table E.1 lists the information requirements of the EIS Guidelines and gives the section(s) of the EIS in which the required information is presented.

Table E.1 Detailed Table of Concordance in Compliance with the EIS Guidelines

Information Requirement of EIS Guidelines	Section of EIS
1.0 INTRODUCTION	
1.1 Purpose of EIS Guidelines	Information; Proponent has noted
1.2 Guiding Principles	4.3
1.2.1 Environmental Assessment as a Planning Tool	4.3.1
1.2.2 Community Knowledge and Aboriginal Traditional Knowledge	4.3.2
1.2.3 Sustainable Development	4.3.3
1.2.4 Precautionary Approach	4.3.4
2.0 THE ENVIRONMENTAL ASSESSMENT PROCESS	
2.1 Contacts for the Environmental Assessment	1.1
2.2 Environmental Assessment Requirements	1.3
2.2.1 Canadian Environmental Assessment Act	1.3
2.2.2 Newfoundland and Labrador Environmental Protection Act	Volume 1
2.2.3 Québec	1.3
2.2.4 Delegated EIS Preparation	Information; Proponent has noted
2.3 Federal-Provincial Cooperation	Information; Proponent has noted
2.4 Public Consultation	1.5 and Chapter 10
3.0 SCOPE OF PROJECT, FACTORS TO BE CONSIDERED AND SCOPE OF THE FACTORS	
3.1 Scope of Project	1.2
3.1.1 Labrador	1.2
3.1.2 Québec	1.2
3.2 Factors to be Considered	4.1
3.3 Scope of the Factors to be Considered	4.2
4.0 PREPARATION OF THE EIS	
PART I: CONTENT OF THE EIS	
4.1 Executive Summary	Executive Summary
4.2 Plain Language Summary	Plain Language Summary
4.3 Project Introduction	1.0
4.3.1 The Proponent	1.1
4.3.2 Project Overview	1.2
4.3.3 Regulatory Framework and the Role of Government	1.3

Information Requirement of EIS Guidelines	Section of EIS
4.3.4 Non-Government Participants in the Environmental Assessment	1.5
4.3.5 Land Claims Agreements and Interim Agreements	1.6
4.3.6 Other Registrations	1.7
4.4 Project Description	2.0
4.4.1 Purpose of and Need for the Project	2.2
4.4.2 Alternatives to the Project	2.3
4.4.3 Project Location	2.4
4.4.4 Project Description	2.0
4.4.4.1 Facilities and Components	2.5
4.4.4.2 Activities	2.6
4.4.4.3 Labour Force Requirements	2.7
4.4.5 Alternative Means of Carrying out the Project	2.8
4.5 Description of the Existing Environment	3.0
4.6 Effects Assessment	4.0
4.6.1 Accidents and Malfunctions	4.5
4.6.2 Capacity of Renewable Resources	4.6 and 13.0
4.7 Avoidance and Mitigation Measures	5.0
4.8 Cumulative Effects Assessment	6.0
4.9 Effects of the Environment on the Project	7.0
4.10 Environmental Management	8.0
4.10.1 Planning	8.1 and 8.2
4.10.2 Follow-Up Program	8.3
4.11 Significance of Residual Adverse Environmental Effects	9.0
4.12 Consultation	10.0
4.12.1 Aboriginal Consultation	10.2
4.12.2 Public Consultation	10.4
4.13 Economic and Social Benefits of the Project	11.0
4.14 Benefits of the EA to Canadians	12.0
4.15 Assessment Summary and Conclusions	13.0
PART II: DETAILED GUIDANCE ON SELECT ENVIRONMENTAL COMPONENTS	
4.16 Atmospheric Environment	14.0
4.16.1 VEC Definition and Rationale for Selection	14.1
4.16.2 Potential Project-VEC Interactions	14.4
4.16.3 Existing Environment	14.5
4.16.4 Effects Assessment and Mitigation	14.6 to 14.10
4.17 Landforms, Soils, Snow and Ice	15.0
4.17.1 VEC Definition and Rationale for Selection	15.1
4.17.2 Potential Project-VEC interactions	Volume 1

Information Requirement of EIS Guidelines	Section of EIS
4.17.3 Existing Environment	15.1
4.17.3.1 Acid Rock Drainage and Metal Leaching	Volume 1
4.17.4 Effects Assessment and Mitigation	16.6 to 16.10
4.17.4.1 Acid Rock Drainage and Metal Leaching	16.6 to 16.10
4.18 Water Resources	16.0
4.18.1 VEC Definition and Rationale for Selection	16.1
4.18.2 Potential Project-VEC Interactions	16.4
4.18.3 Existing Environment	16.5
4.18.3.1 Groundwater	16.5
4.18.3.2 Surface Water	16.5
4.18.4 Effects Assessment and Mitigation	16.6 to 16.10
4.18.4.1 Groundwater	Volume 1
4.18.4.2 Surface Water	16.6 to 16.10
4.19 Wetlands	17.0
4.19.1 VEC Definition and Rationale for Selection	17.1
4.19.2 Potential Project-VEC Interactions	Volume 1
4.19.3 Existing Environment	Volume 1
4.19.4 Effects Assessment and Mitigation	Volume 1
4.20 Freshwater Fish, Fish Habitat and Fisheries	18.0
4.20.1 VEC Definition and Rationale for Selection	18.1
4.20.2 Potential Project-VEC Interactions	Volume 1
4.20.3 Existing Environment	Volume 1
4.20.4 Effects Assessment and Mitigation	Volume 1
4.21 Birds, Other Wildlife and Their Habitats, and Protected Areas	19.0
4.21.1 VEC Definition and Rationale for Selection	19.1
4.21.2 Potential Project-VEC Interactions	19.4
4.21.3 Existing Environment	19.5
4.21.3.1 Migratory Birds	19.5.2
4.21.3.2 Other Wildlife	19.5.3
4.21.3.3 Protected Areas	19.5.4
4.21.4 Effects Assessment and Mitigation	19.6 to 19.10
4.22 Species at Risk and Species of Conservation Concern	20.0
4.22.1 VEC Definition and Rationale for Selection	20.1
4.22.2 Potential Project-VEC Interactions	20.4
4.22.3 Existing Environment	20.5
4.22.4 Effects Assessment and Mitigation	20.6 to 20.10
4.23 Historic and Cultural Resources	21.0
4.23.1 VEC Definition and Rationale for Selection	21.1

Information Requirement of EIS Guidelines	Section of EIS
4.23.2 Potential Project-VEC Interactions	21.4
4.23.3 Existing Environment	21.5
4.23.4 Effects Assessment and Mitigation	21.6
4.24 Current Use of Lands and Resources for Traditional Purposes by Aboriginal Persons	22.0
4.24.1 VEC Definition and Rationale for Selection	22.1
4.24.2 Potential Project-VEC Interactions	22.4
4.24.3 Existing Environment	22.5
4.24.4 Effects Assessment and Mitigation	22.6 to 22.10
4.25 Other Current Use of Lands and Resources	23.0
4.25.1 VEC Definition and Rationale for Selection	23.1
4.25.2 Potential Project-VEC Interactions	23.4
4.25.3 Existing Environment	23.5
4.25.4 Effects Assessment and Mitigation	23.6 to 23.10
4.26 Community Services and Infrastructure	24.0
4.26.1 VEC Definition and Rationale for Selection	24.1
4.26.2 Potential Project-VEC Interactions	24.4
4.26.3 Existing Environment	24.5
4.26.4 Effects Assessment and Mitigation	24.6 to 24.10
4.27 Health and Community Health	25.0
4.27.1 VEC Definition and Rationale for Selection	Volume 1
4.27.2 Potential Project-VEC Interactions	Volume 1
4.27.3 Existing Environment	Volume 1
4.27.4 Effects Assessment and Mitigation	Volume 1
4.28 Economy, Employment and Business	26.0
4.28.1 VEC Definition and Rationale for Selection	26.1
4.28.2 Potential Project-VEC Interactions	26.4
4.28.3 Existing Environment	26.5
4.28.4 Effects Assessment and Mitigation	26.6 to 26.10
4.29 Commitments made in the EIS	27.0
4.30 Baseline Studies	Appendices E to H

Table of Contents

1.0	INTRODUCTION	1-1
1.1	Proponent	1-1
1.1.1	Policies	1-3
1.1.2	Environmental Management	1-7
1.1.3	Environmental Impact Statement Team	1-7
1.2	Project Overview	1-8
1.2.1	Project Location and Surrounding Land Uses and Infrastructure	1-8
1.3	Regulatory Framework and the Role of Government	1-10
1.3.1	Environmental Assessment Regulatory Framework	1-10
1.4	Purpose of the Environmental Impact Statement	1-12
1.4.1	Other Approvals and Authorizations	1-13
1.4.2	Government Environmental Policies, Resource Management, Planning, or Study Initiatives	1-13
1.4.3	Policies and Guidelines of Aboriginal Groups	1-13
1.4.4	Land Tenure	1-14
1.4.5	Objectives, Standards and Guidelines	1-14
1.5	Non-Government Participants in the Environmental Assessment	1-15
1.6	Land Claims Agreements and Interim Agreements	1-18
1.7	Other Registrations	1-24
2.0	PROJECT DESCRIPTION	2-1
2.1	Issues	2-1
2.2	Purpose of and Need for the Project	2-3
2.3	Alternatives to the Project	2-5
2.4	Project Location	2-6
2.5	Facilities and Components	2-8
2.5.1	Concentrate Unloading, Stacking, Storage and Reclaiming Facility	2-10
2.5.2	Rail Loop	2-12
2.5.3	Water and Dust Management	2-14
2.6	Project Activities and Schedule	2-15
2.6.1	Construction	2-15
2.6.2	Operation and Maintenance	2-20
2.6.3	Closure and Decommissioning	2-24
2.6.4	Potential Project Modifications	2-24
2.7	Labour Force Requirements	2-25
2.7.1	Construction Workforce	2-25
2.7.2	Operations Workforce	2-30
2.8	Alternative Means of Carrying Out the Project	2-31
2.8.1	Concentrate Unloading, Stacking, Storage and Reclaiming Facility	2-32
2.8.2	Rail Loop	2-32

3.0	DESCRIPTION OF THE EXISTING ENVIRONMENT	3-1
4.0	ENVIRONMENTAL ASSESSMENT METHODS.....	4-3
4.1	Factors to be Considered.....	4-3
4.2	Scope of the Factors to be Considered.....	4-5
4.2.1	Identification of Valued Ecosystem Components	4-5
4.3	Guiding Principles	4-6
4.3.1	Environmental Assessment as a Planning Tool	4-6
4.3.2	Local Knowledge and Aboriginal Traditional Knowledge.....	4-6
4.3.3	Sustainable Development	4-7
4.3.4	Precautionary Approach.....	4-7
4.4	Methods for Assessing Environmental Effects.....	4-8
4.4.1	Valued Ecosystem Component Definition and Rationale for Selection	4-8
4.4.2	Environmental Assessment Boundaries.....	4-9
4.4.3	Establishing Standards or Thresholds for Determining the Significance of Environmental Effects	4-11
4.4.4	Potential Project-Valued Ecosystem Component Interactions	4-11
4.4.5	Existing Environment.....	4-13
4.4.6	Assessment of Project-Related Environmental Effects	4-13
4.4.7	Determination of Significance of Residual Adverse Environmental Effects.....	4-17
4.4.8	Follow-up and Monitoring	4-17
4.5	Accidents and Malfunctions	4-17
4.5.1	Description of Potential Accidents and Malfunctions.....	4-17
4.5.2	Approach to Assessing Effects resulting from Accidents and Malfunctions	4-20
4.6	Capacity of Renewable Resources	4-23
5.0	AVOIDANCE AND MITIGATION MEASURES	5-1
5.1	Avoidance and Mitigation by Design	5-1
5.2	VEC-Specific Mitigation.....	5-3
5.3	Overview of the Environmental Protection Plan.....	5-5
6.0	CUMULATIVE EFFECTS ASSESSMENT	6-1
6.1	Issues.....	6-1
6.2	Approach.....	6-2
6.2.1	Methods.....	6-2
6.3	Other Projects and Activities	6-5
6.4	Results of Cumulative Effects Assessment.....	6-8
6.5	Management of Cumulative Effects	6-8
7.0	EFFECTS OF THE ENVIRONMENT ON THE PROJECT	7-1
7.1	Study Area	7-1
7.2	Environmental Factors Considered.....	7-1
7.3	Current and Anticipated Environmental Conditions	7-4
7.3.1	Climate	7-4
7.3.2	Long Term Climate Change	7-7

7.3.3	Seismicity	7-7
7.4	Mitigation.....	7-9
7.4.1	Concentrate Unloading, Stacking, Storage, and Reclaiming Facilities.....	7-10
7.4.2	Rail Loop	7-10
7.4.3	Buildings, Conveyor Systems and Associated Facilities	7-11
7.4.4	Definition of Significant Effects	7-12
7.5	Summary of Residual Effects	7-13
8.0	ENVIRONMENTAL MANAGEMENT	8-1
8.1	Planning	8-1
8.1.1	Emissions, Discharges and Waste Management	8-2
8.1.2	Water Management.....	8-3
8.1.3	Site Drainage.....	8-3
8.1.4	Rock fill Management and Ore Concentrate Management	8-3
8.1.5	Solid Waste	8-3
8.1.6	Hazardous Waste	8-4
8.1.7	Sewerage	8-4
8.1.8	Hazardous Materials	8-4
8.1.9	Dust and Air Quality	8-4
8.1.10	Noise	8-5
8.1.11	Clean-up and Transfer Plan	8-5
8.2	Environmental Management Plans	8-5
8.3	Follow-up and Monitoring Program	8-7
9.0	SIGNIFICANCE OF RESIDUAL ADVERSE ENVIRONMENTAL EFFECTS	9-1
10.0	CONSULTATION	10-1
10.1	Introduction	10-1
10.1.1	Objectives.....	10-1
10.1.2	Approach	10-1
10.1.3	Issues Identification.....	10-2
10.2	Aboriginal Consultation	10-3
10.2.1	Aboriginal Issues Identification and Responses	10-4
10.2.2	Aboriginal Communities and Organizations	10-4
10.2.3	Aboriginal Engagement Activities	10-8
10.3	Aboriginal Engagement and Issue Scoping	10-9
10.3.1	Innu Nation	10-10
10.3.2	NunatuKavut Community Council.....	10-16
10.3.3	Innu of Uashat mak Mani-Utenam.....	10-22
10.3.4	Innu of Matimekush-Lac John	10-29
10.3.5	Naskapi Nation of Kawawachikamach	10-33
10.4	Public Consultation	10-38
10.4.1	Public Stakeholders.....	10-38
10.4.2	Public Consultation Issues Identification and Responses	10-41
10.4.3	Public Consultation Activities	10-42
10.5	Public Consultation and Issue Scoping.....	10-44

10.5.1	City of Sept-Îles	10-44
10.5.2	Town of Labrador City	10-49
10.5.3	Town of Wabush	10-53
10.5.4	Town of Fermont	10-58
10.5.5	Non-Governmental Organizations and Special Interest Groups	10-63
10.5.6	Canadian Environmental Assessment Agency and Newfoundland and Labrador Department of Environment and Conservation Public Participation Activities	10-66
10.6	Regulatory Consultation.....	10-73
10.7	Consultation and Engagement Approach Post Environmental Impact Statement Submission and Post Environmental Assessment Approval.....	10-78
10.8	Comments and Responses Tables	10-78
11.0	ECONOMIC AND SOCIAL BENEFITS OF THE PROJECT (KAMI TERMINAL)	11-1
11.1	Introduction	11-1
11.2	Economic Conditions	11-1
11.3	Economic Benefits from the Kami Terminal	11-3
11.4	Social Benefits from the Kami Terminal	11-5
12.0	BENEFITS OF THE EA TO CANADIANS	12-1
12.1	Maximized Environmental Benefits	12-1
12.2	Supporting Sustainable Development.....	12-1
12.3	Public Participation.....	12-2
12.4	Technological Innovations	12-2
12.5	Increases in Scientific Knowledge.....	12-2
12.6	Community and Social Benefits	12-3
13.0	ASSESSMENT SUMMARY AND CONCLUSIONS	13-1
13.1	Atmospheric Environment.....	13-3
13.2	Landforms, Soils, Snow, and Ice.....	13-15
13.3	Water Resources	13-15
13.4	Wetlands	13-25
13.5	Freshwater Fish, Fish Habitat, and Fisheries.....	13-25
13.6	Birds, Other Wildlife and Their Habitats, and Protected Areas	13-26
13.7	Species at Risk and Species of Conservation Concern.....	13-35
13.8	Historic and Cultural Resources.....	13-44
13.9	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons.....	13-51
13.10	Other Current Use of Lands and Resources.....	13-59
13.11	Community Services and Infrastructure	13-66
13.12	Health and Community Health	13-71
13.13	Economy, Employment, and Business.....	13-71
13.14	Conclusion	13-78

List of Tables

Table 1.1	Canadian Environmental Assessment Act Law List Regulations Triggers and their Relevance to the Project	1-11
Table 1.2	Environmental Assessment Committee.....	1-12
Table 1.3	Potential Permits, Approvals, and Authorizations—Québec	1-13
Table 1.4	Standards, Policies or Guidelines	1-14
Table 1.5	Non-governmental Participants in the Environmental Assessment.....	1-15
Table 2.1	Issues Raised by Stakeholders	2-1
Table 2.2	Summary of Estimated Construction Employment.....	2-26
Table 2.3	Summary of Estimated Construction Employment by Occupation	2-27
Table 2.4	Summary of Estimated Operations Employment.....	2-30
Table 4.1	Potential Environmental Effects of Kami Terminal to (Valued Ecosystem Component): [Example].....	4-12
Table 4.2	Summary of Residual Environmental Effects of Kami Terminal: [Example]	4-15
Table 4.3	Summary of Residual Environmental Effects for Valued Environmental Components – Accidents and Malfunctions: [Example]	4-21
Table 6.1	Summary of Potential Cumulative Effects: [Example]	6-4
Table 7.1	Climate Normals for Sept-Îles Airport, 1971-2000.....	7-5
Table 8.1	Environmental Management Plans.....	8-6
Table 8.2	Summary of Follow-up and Monitoring Program	8-7
Table 10.1	Uashat mak Mani-Utenam Population and Selected Demographics.....	10-5
Table 10.2	Innu of Matimekush – Lac John Population and Selected Demographics	10-7
Table 10.3	Summary of Engagement Activities with Innu Nation.....	10-13
Table 10.4	Summary of Engagement Activities with the NunatuKavut Community Council	10-19
Table 10.5	Summary of Engagement Activities with the Innu of Uashat mak Mani-Utenam.....	10-25
Table 10.6	Summary of Engagement Activities with the Innu of Matimekush-Lac John ..	10-31
Table 10.7	Summary of Engagement Activities with Naskapi Nation of Kawawachikamach.....	10-36
Table 10.8	Stakeholders Identified for Environmental Impact Statement Consultation Program.....	10-40
Table 10.9	Summary of Consultation Activities with the City of Sept-Îles	10-45
Table 10.10	Summary of Consultation Activities Held with the Town of Labrador City.....	10-50
Table 10.11	Summary of Consultation Activities with the Town of Wabush.....	10-54
Table 10.12	Summary of Consultation Activities with the Town of Fermont	10-59
Table 10.13	Summary of Consultation Activities with Non-Governmental Organizations and Special Interest Groups.....	10-64
Table 10.14	Summary of Comments Received on the Draft Environmental Impact Statement Guidelines	10-67
Table 10.15	Summary of Consultation Activities with Regulatory Agencies	10-74
Table 10.16	Issues Raised by Stakeholders Relating to Atmospheric Environment.....	10-78
Table 10.17	Issues Raised by Stakeholders Relating to Wetlands	10-79

Table 10.18	Issues Raised by Stakeholders Relating to Freshwater Fish, Fish Habitat, and Fisheries	10-79
Table 10.19	Issues Raised by Aboriginal Groups and Stakeholders Relating to Birds, Other Wildlife and Their Habitat, and Protected Areas.....	10-80
Table 10.20	Issues Raised by Aboriginal Groups and Stakeholders Relating to Species at Risk and Species of Conservation Concern	10-81
Table 10.21	Issues Raised by Stakeholders Relating to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	10-81
Table 10.22	Issues Raised by Aboriginal Groups and Stakeholders Relating to Other Current Use of Lands and Resources	10-81
Table 10.23	Issues Raised by Stakeholders Relating to Community Services and Infrastructure	10-82
Table 10.24	Issues Raised by Stakeholders Relating to Economy, Employment, and Business	10.84
Table 13.1	Summary of the Findings of the Environmental Impact Statement – Atmospheric Environment	13-13
Table 13.2	Summary of the Findings of the Environmental Impact Statement - Water Resources	13-24
Table 13.3	Summary of the Findings of the Environmental Impact Statement – Birds, Other Wildlife and Their Habitats, and Protected Areas.....	13-34
Table 13.4	Summary of the Findings of the Environmental Impact Statement - Species at Risk and Species of Conservation Concern	13-43
Table 13.5	Summary of the Findings of the Environmental Impact Statement – Historic and Cultural Resources	13-50
Table 13.6	Summary of the Findings of the Environmental Impact Statement – Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	13-58
Table 13.7	Summary of the Findings of the Environmental Impact Statement – Other Current Use of Lands and Resources	13-65
Table 13.8	Summary of the Findings of the Environmental Impact Statement – Community Services and Infrastructure	13-70
Table 13.9	Summary of the Findings of the Environmental Impact Statement – Economy, Employment, and Business	13-77

List of Figures

Figure 1.1	Location of the Project.....	1-2
Figure 1.2	The Kami Terminal within the Pointe-Noire Terminal.....	1-9
Figure 1.3	Frequency of Issues Identified During Public Consultation Activities.....	1-17
Figure 1.4	Labrador Innu – Tshash Petapen Land Selection.....	1-19
Figure 1.5	NunatuKavut Community Council Asserted Land Claim Area.....	1-20
Figure 1.6	Naskapi Nation of Kawawachikamach Treaty Area and Outstanding Labrador Land Claim.....	1-21
Figure 1.7	Traditional Territory of the Innu of Uashat mak Mani-Utenam and Innu Nation of Matimekush-Lac John.....	1-23
Figure 2.1	Frequency of Issue Type related to the Project Description.....	2-2
Figure 2.2	Historical Pricing of Iron Ore.....	2-3
Figure 2.3	Project Location.....	2-7
Figure 2.4	Kami Terminal Components and Layout.....	2-9
Figure 2.5	High-Level Project Schedule (Kami Terminal).....	2-15
Figure 2.6	Kami Terminal Alternatives that were Identified and Evaluated in Project Planning.....	2-34
Figure 3.1	Municipality of Sept-Îles.....	3-1
Figure 3.2	Pointe-Noire Industrial Area.....	3-1
Figure 3.3	Habitat Types.....	3-2
Figure 3.4	Ancestral Territory of Innu of Uashat mak Mani-Utenam and Innu of Matimekosh-Lac John.....	3-2
Figure 4.1	Project Development Area for the Kami Terminal.....	4-10
Figure 6.1	Frequency of Issues Raised Pertaining to Cumulative Effects.....	6-1
Figure 6.2	Location of Other Projects and Activities.....	6-6
Figure 7.1	Study Area for Effects of the Environment on the Kami Terminal.....	7-2
Figure 7.2	Wind Rose and Wind Class Frequency Distribution, Sept-Îles Airport, 2005 to 2011.....	7-6
Figure 7.3	Wind Rose and Wind Class Frequency Distribution, Pointe-Noire, 2005 to 2011.....	7-7
Figure 7.4	Historical Seismicity.....	7-8
Figure 7.5	Seismic Hazard Map for Canada.....	7-9
Figure 10.1	Timeline for Consultation and Engagement Program.....	10-2
Figure 10.2	Frequency of Issues Related to Consultation and EA Process.....	10-3
Figure 10.3	Labrador Innu Tshash Petapen Land Selection.....	10-12
Figure 10.4	NunatuKavut Community Council Asserted Land Claim Area.....	10-17
Figure 10.5	Traditional Territory of the Innu of Uashat mak Mani-Utenam and the Innu of Matimekush-Lac John.....	10-23
Figure 10.6	Naskapi Nation of Kawawachikamach Land Claim - Labrador.....	10-34
Figure 10.7	Outreach Area for Public Consultation.....	10-39
Figure 10.8	Frequency of Issues Identified During Public Consultation Activities.....	10-43
Figure 10.9	Frequency of Issues Identified by Participants from Sept-Îles.....	10-47
Figure 10.10	Labrador City Responses to “How useful was the information presented explaining the proposed Kami Iron Ore Mine?”.....	10-52

Figure 10.11	Labrador City Responses to “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?”	10-53
Figure 10.12	Wabush Responses to “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?”	10-57
Figure 10.13	Wabush Responses to “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?	10-58
Figure 10.14	Fermont Responses to “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?”	10-62
Figure 10.15	Fermont Responses to “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?	10-63
Figure 13.1	Proportion of Issues Identified During Aboriginal Engagement and Public Consultation Activities	13-2
Figure 13.2	Frequency of Issues Raised Related to the Atmospheric Environment	13-4
Figure 13.3	Local Study Area for Atmospheric Environment and Regional Study Area for Noise, Light, and Vibrations	13-6
Figure 13.4	Regional Study Area for Air Quality and GHG Emissions	13-7
Figure 13.5	Frequency of Issues Raised Related to Water Resources	13-16
Figure 13.6	Water Resources Local Study Area	13-17
Figure 13.7	Water Resources Regional Study Area	13-18
Figure 13.8	Frequency of Issues Raised Related to Freshwater Fish, Fish Habitat, and Fisheries	13-26
Figure 13.9	Frequency of Issues Raised Related to Birds, Other Wildlife and Their Habitats, and Protected Areas	13-27
Figure 13.10	Birds, Other Wildlife and Their Habitats, and Protected Areas Local Study Area	13-28
Figure 13.11	Birds, Other Wildlife and Their Habitats, and Protected Areas Regional Study Area	13-29
Figure 13.12	Species at Risk and Species of Conservation Concern Local Study Area	13-36
Figure 13.13	Species at Risk and Species of Conservation Concern Regional Study Area	13-37
Figure 13.14	Historic and Cultural Resources Local Study Area	13-46
Figure 13.15	Historic and Cultural Resources Regional Study Area	13-47
Figure 13.16	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons Local and Regional Study Areas	13-53
Figure 13.17	Other Current Use of Lands and Resources Local and Regional Study Areas	13-60
Figure 13.18	Frequency of Issues Raised Related to Community Services and Infrastructure	13-66
Figure 13.19	Community Services and Infrastructure Local Study Area and Regional Study Area	13-67
Figure 13.20	Frequency of Issues Raised Related to the Economy, Employment, and Business	13-72
Figure 13.21	Economy, Employment, and Business Study Areas	13-73

1.0 INTRODUCTION

Alderon Iron Ore Corp. (Alderon) is proposing to develop an iron ore mine in western Labrador, and build associated infrastructure at the Port of Sept-Îles, Québec (the Project). The mine Property is located south of the towns of Wabush and Labrador City in Newfoundland and Labrador and east of Fermont, Québec (Figure 1.1). The Kami Iron Ore Mine and Rail Infrastructure (the Kami Mine) is located entirely within Labrador, and includes construction, operation, and rehabilitation and closure of an open pit, waste rock disposal areas, processing infrastructure, a tailings management facility (TMF), ancillary infrastructure to support the mine and process plant, and a rail transportation component. The Kami Mine will produce a nominal capacity of 16 million metric tonnes of iron ore concentrate per year. Concentrate will be transported by existing rail to the Pointe-Noire Terminal, here components related to the Kami Concentrate Storage and Load-out Facility (the Kami Terminal) will be located on land within the jurisdiction of the Sept-Îles Port Authority.

Volume 1 of the Environmental Impact Statement (EIS) presents the components located within the Province of Newfoundland and Labrador: an open pit, waste rock disposal areas, tailings management, processing and ancillary infrastructure, and a rail line and loop. Volume 2 of the EIS presents, in a separate document, the components located within the province of Québec. Each Volume is divided into two parts: Part I of each Volume presents the overall findings of the assessment with sufficient detail to allow the reader to understand the issues, effects and the proposed mitigation measures; Part II of each Volume presents the details of the assessment on a Valued Ecosystem Component (VEC) basis. Supporting baseline studies are attached as appendices.

1.1 Proponent

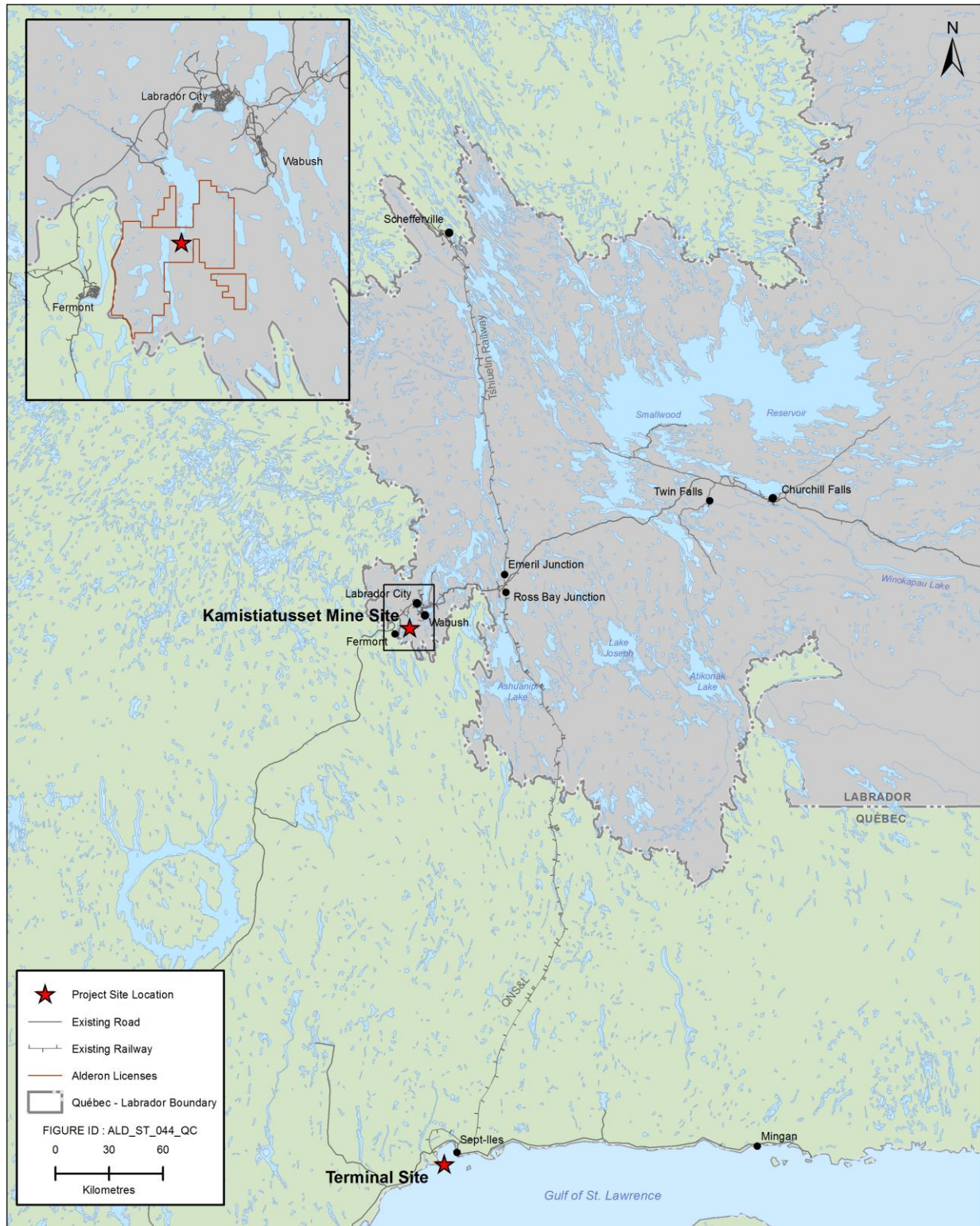
Alderon will develop, manage, and operate the Project. Alderon is a company whose common shares trade on the Toronto Stock Exchange (ADV) and on the NYSE MKT (AXX). Alderon has offices located in Montréal, Labrador City, St. John's, Vancouver, and Toronto. Alderon is a corporation incorporated under the laws of British Columbia and was registered as an extra-provincial corporation in the Province of Newfoundland and Labrador on April 1, 2010. Alderon's sole mineral property is the Project. The Executive Chairman of the Board of Directors is Mr. Mark Morabito. The President and Chief Executive Officer is Mr. Tayfun Eldem. The contact for the Environmental Assessment (EA) is:

Proponent Contact: Todd Burlingame
Executive Vice President Environment and Aboriginal Affairs
Alderon Iron Ore Corp.

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8th Floor, Baine Johnston Centre
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Figure 1.1 Location of the Project



Alderon's Board of Directors has the overall responsibility for the management of its business and affairs. In general, the Board of Directors delegates the authority to manage Alderon's business and affairs to its executive officers. The hierarchy of Alderon's management structure is as follows: (i) Accounting and Finance; (ii) Project Exploration, Engineering, and Execution (iii) Human Resources; (iv) Environment and Aboriginal Affairs; (v) Vice Presidents; (vi) General Managers/Senior Managers; (vii) Managers; and (viii) other employees and consultants. Below the President and Chief Executive Officer level, Alderon currently divides its management team into the following areas: (i) Accounting and Finance; (ii) Project Execution and Engineering; (iii) Project Exploration; (iv) Environment and Aboriginal Affairs; (v) Government and Community Affairs; (vi) Legal; and (vii) Corporate Development and Investor Relations. Each area is headed by a Senior Officer who reports directly to the President and Chief Executive Officer.

In terms of insurance and liability management, Alderon currently maintains adequate insurance coverage for its stage of development. Alderon's insurance coverage includes worker's compensation insurance, automobile liability insurance, general commercial liability insurance and directors and officer's liability insurance. As the Project moves into the construction and operation and maintenance phases, Alderon will acquire additional insurance coverage in scope and amount that is commensurate with industry best practices.

1.1.1 Policies

Alderon will integrate appropriate elements of its corporate policies into tender documents for services and supplies. Contractors and suppliers will be required to demonstrate they can address Alderon requirements within the proposal documents, and successful contractors and suppliers will be required to demonstrate compliance through regular reporting.

Environmental Policy

Alderon is committed to developing the Project in an environmentally sustainable manner as is reflected in the environmental policy.

Alderon engages in the exploration discovery, development, production and distribution of iron ore and its associated products.

Alderon believes that our opportunities to contribute to and thrive in the economies in which we operate must be earned through a demonstrated commitment to sustainable development.

Accordingly Alderon's actions must demonstrate a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our communities of interest. Our actions must reflect a broad spectrum of values that we share with our employees and communities of interest and they must underscore our ongoing efforts to protect our employees, contractors, communities, customers and the natural environment.

Alderon is committed to continually improve its environmental performance through monitoring and adaptive management. In order to achieve this, we will

establish, document and maintain environmental management systems which will be integrated into all aspects of our activities. Contractors and suppliers will be required to demonstrate they adhere to our environmental policy and practices as part of our selection process and throughout Project activities. Alderon gives high priority to minimizing the impact of activities on the environment. Reclamation of disturbed areas as a result of exploration, development or operation activities is ongoing. Alderon will ensure the establishment of a sustainable ecosystem which supports wildlife after mine closure.

In addition, Alderon has committed to the following guiding principles for development of the Project:

- *Provision of a safe and healthy work place;*
- *Minimize water crossings, and impact to rivers and lakes;*
- *Minimum footprint for all infrastructure;*
- *Minimize water consumption;*
- *Implement progressive reclamation; and,*
- *Provide opportunities for training and employment of area residents.*

One demonstration of Alderon's commitment to sustainable development is its participation in the Restoration of Labrador Exploration Sites (ROLES) Project, which involves the clean-up and restoration of abandoned mineral exploration sites. The ROLES Project, which is a collaboration between industry partners, government and aboriginal communities, was initiated in 2012. The main objective of this initiative is to clean eighteen priority abandoned exploration sites in Labrador.

Health and Safety Policy Statement

Alderon Iron Ore Corporation is committed to preventing the accidental loss of any of its resources, including employees, regular or contractors, and physical assets.

In fulfilling this commitment to protect both people and property, management will provide and maintain a safe and healthy work environment, in accordance with industry standards and in compliance with legislative requirements, and will strive to eliminate any foreseeable hazards which may result in personal injury/illness, accidents, or property damage.

We recognize that the responsibility for health and safety are shared. All employees will be equally responsible for minimizing accidents within our facilities and on our work sites. Safe work practices and job procedures will be clearly defined in the company's Health and Safety Manual for all employees to follow.

Accidental loss can be controlled through good management in combination with active employee involvement. Safety is the direct responsibility of all managers, supervisors, employees, and contractors.

All management activities will comply with company safety requirements as they relate to planning, operation and maintenance of facilities and equipment. All employees will perform their jobs properly in accordance with established procedures and safe work practices.

Benefits Policy

Alderon understands the importance of the Project's contribution to economic development to the people of Newfoundland and Labrador and is committed to the delivery of employment, business and other benefits to Labrador and the Province as a whole.

Alderon is committed to the following guiding principles for the delivery of benefits over the life of the Project:

- *Meeting benefits commitments while maintaining the highest levels of safety, environmental performance and operational efficiency and integrity;*
- *Providing first priority for Project employment to qualified residents of Labrador, with second priority going to qualified residents of other parts of the Province of Newfoundland and Labrador;*
- *Providing first priority re the procurement of Project goods and services to businesses located in Labrador, and second priority to businesses located other parts of the Province of Newfoundland and Labrador, provided such goods and services meet the required specifications and can be acquired on a commercially reasonable and timely basis;*
- *Facilitating the delivery of Project employment and business to women, Aboriginal people and other under-represented groups, and businesses that they own or operate; and,*
- *Working collaboratively with provincial and municipal government, industry, training institutions, community groups and other stakeholders for the effective delivery of benefits and sustainable economic development.*

Alderon will implement these principles, and ensure that all Project contractors respect them, through the wide range of initiatives described in the Kami Project Benefits Plan and Diversity Plan. Alderon will also be a party to other benefits mechanisms required by any benefits agreement.

Aboriginal Relations Policy

Alderon recognizes the importance of building relationships, based on mutual trust and respect, with those Aboriginal groups who have recognized legal rights or whose traditional land and resource use activities in the Project area may be affected by the Kami Project. Alderon is committed to working collaboratively and constructively with Aboriginal groups in proximity to the Kami Project to achieve mutually beneficial outcomes. To achieve this objective, Alderon has adopted the following principles:

- *Respect for the legal and constitutional rights of Aboriginal peoples;*
- *Respect for the unique history, diverse culture, values and beliefs of aboriginal peoples and their historic attachment to the land;*
- *Recognition of the need to pursue meaningful engagement with aboriginal groups; and,*
- *Recognition of the importance of collaboration with aboriginal groups to identify and respond to issues and concerns.*

To implement these principles, Alderon will:

- *Acknowledge potential or established Aboriginal or treaty rights and comply with the requirements of any applicable treaties, laws, regulatory measures and governmental policies.*
- *Provide opportunities for Aboriginal groups to share traditional knowledge and information on traditional land and resource use in the Project area:*
 - *Offer to provide resources to assist the collection of traditional knowledge and land and resource use;*
 - *Use land and resource use information to identify and assess Project effects;*
 - *Integrate relevant information into the Project decision-making process as appropriate; and,*
 - *Protect cultural and heritage sites.*
- *Develop an effective, respectful and meaningful engagement process:*
 - *Commence good faith, culturally appropriate engagement efforts at the earliest possible opportunity;*
 - *Provide accurate and relevant Project information in a timely manner;*
 - *Provide meaningful opportunities to identify issues and concerns, give serious consideration to the views of Aboriginal groups and, where appropriate, take such views into account in Project decision-making; and,*

- *Attempt to address resource constraints through offers of capacity funding and other technical support as necessary.*
- *Work cooperatively and collaboratively with Aboriginal groups to identify Project effects and develop and implement appropriate mitigation measures, including, where appropriate, the negotiation of agreements to address adverse effects and provide access to benefits.*

Communities Relations Policy

Alderon is committed to operating within a sustainable development framework. This includes a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our stakeholders. Alderon's goal is to build and maintain positive, long term and mutually beneficial relationships with stakeholders of the proposed Kami Project.

Alderon is committed to the following guiding principles for engaging with stakeholders:

- *Engage stakeholders through meaningful, transparent, and respectful communication and consultation;*
- *Value, acknowledge and give consideration to the cultural diversity, unique traditions and the various needs and aspirations of local people, communities, and other stakeholders;*
- *Develop relationships with local community leaders and provide timely responses to their communications;*
- *Understand, acknowledge, and respond to the concerns of local people, communities and other stakeholders;*
- *Provide Project information and updates on a regular basis to stakeholders; and,*
- *Act responsibly at all times.*

1.1.2 Environmental Management

The key elements of the environmental management system are planning, development of Environmental Management Plans, preparation of site-specific Environmental Protection Plans, the presence of an on-site monitor, and regular reporting to government and stakeholders. Chapter 5: Avoidance and Mitigation, and Chapter 8: Environmental Management.

1.1.3 Environmental Impact Statement Team

The EIS and its supporting studies were prepared by Alderon, Stassinu Stantec and Stantec Consulting Ltd., AMEC and Golder. The qualifications of personnel conducting surveys for migratory birds and species at risk and species of conservation concern is provided in Appendix A.

1.2 Project Overview

The Kami Terminal (Figure 1.2) includes concentrate unloading, stacking, storage, and reclaiming facilities located wholly within Sept-Îles Port Authority lands as well as associated railway infrastructure (referred to as the rail loop).

The Kami Terminal will be designed and constructed to receive, store and then transport the iron ore concentrate for eventual shipment to markets. The storage yard will be designed to accommodate up to 1,100,000 tonnes of concentrate. Ancillary infrastructures to support the concentrate unloading, stacking, storage, and reclaiming facilities include notably a storage train positioner and rail car dumper; a substation; a stacker-reclaimer; transfer houses; supply conveyors; and maintenance facilities.

In order to receive and empty the trains of iron ore concentrate at the port site, the Kami Terminal will include the construction and operation of a rail loop track at the Port of Sept-Îles. Approximately 3.5 km of new track will be required, the majority of which will be located on land owned by the Port Authority with a short rail access segment (approximately 300 m) located on land owned by Cliffs Resources. Chemin de Fer Arnaud (CFA) will operate the rail the portion of new rail on Cliffs property.

On July 16, 2012, Alderon secured access to the new multi-user deep water dock facility that the Port is constructing. The agreement between Alderon and the Sept-Îles Port Authority ensures access to international iron ore markets.

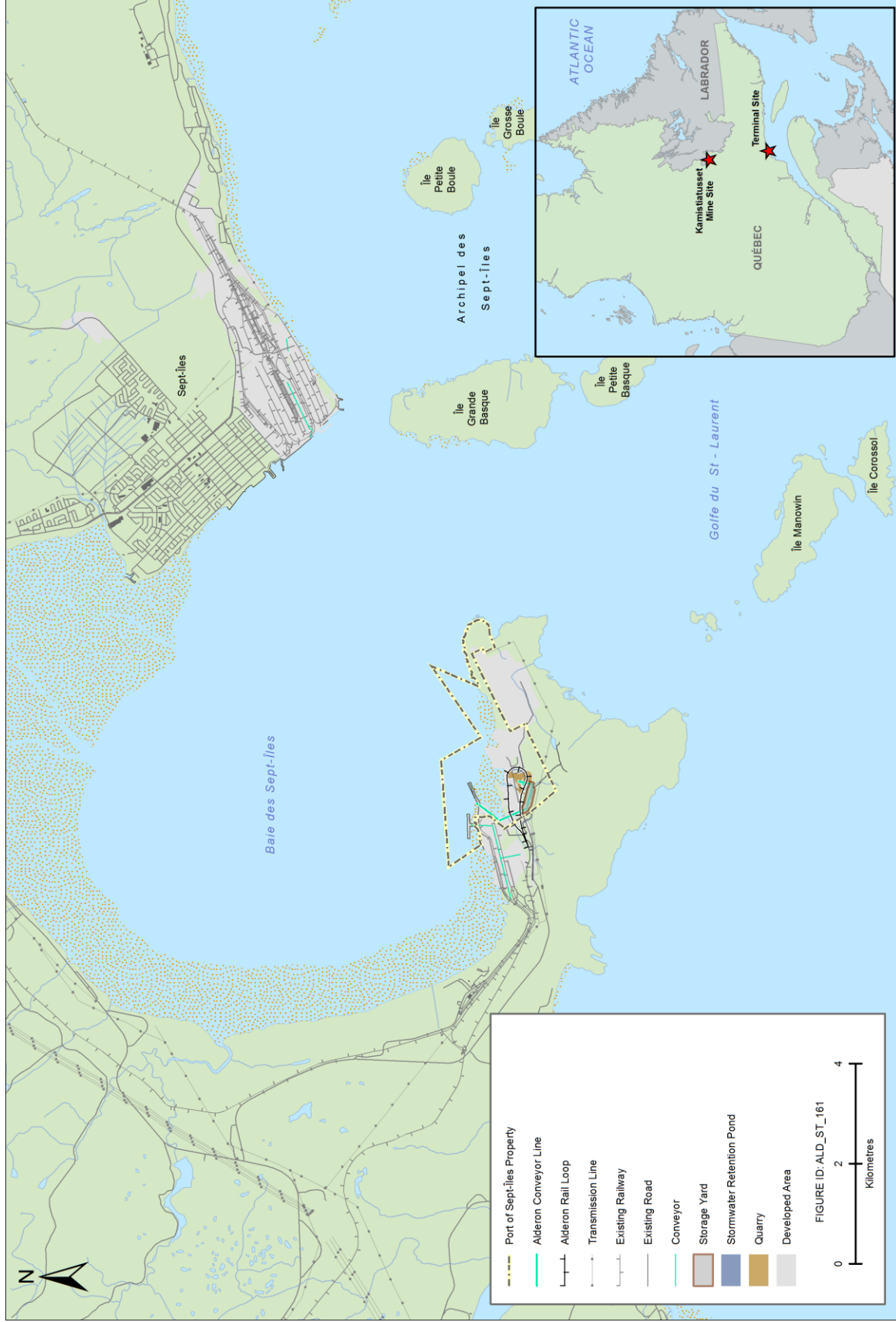
No Kami Terminal activities are proposed within the marine environment. All components in Québec will be permitted, constructed, operated and decommissioned in accordance with governing federal, Québec, and industry regulations and standards.

1.2.1 Project Location and Surrounding Land Uses and Infrastructure

The Kami Terminal is entirely located in the regional county municipality of Sept-Rivières, and more specifically in the City of Sept-Îles. The Kami Terminal infrastructures will be mainly located on the Pointe-Noire Terminal on the Port of Sept-Îles property.

Municipal amalgamation in 2003 led to an expansion of the boundaries of the City of Sept-Îles to include the agglomerations of Sept-Îles, Gallix and Moisie. The City of Sept-Îles covers an area greater than 2,000 km². The municipality is responsible for maintenance, construction and operation of streets and sidewalks, snow and ice removal, integrated solid waste management, potable water treatment and distribution, sanitary sewer collection and distribution and storm water management and control. The control, supervision and monitoring of construction projects are also under municipal responsibilities. Land use within the City of Sept-Îles include residential, commercial and services, commercial/industrial, industrial, public and institutional, recreation, agriculture, forestry and conservation (Ville de Sept-Îles 2012).

Figure 1.2 The Kami Terminal within the Pointe-Noire Terminal



Pointe-Noire Terminal is located in an industrial area of the municipality of approximately 3,420 ha, which is designated for heavy industry. This deep water marine installation contains a large basin with a depth of 80 m and is open to navigation year-round. The Port of Sept-Îles is the most important center for the shipment of iron ore in North America, serving the Québec and Labrador mining industry. The Pointe-Noire Terminal facilities are currently used by mining companies such as Cliffs Natural Resources and Alouette.

Sept-Îles is connected by rail through the CFA and the Québec North Shore and Labrador (QNS&L) railways. QNS&L links the city to Labrador City, while CFA links the Pointe-Noire Terminal to the QNS&L.

1.3 Regulatory Framework and the Role of Government

The Kami Terminal will require federal approvals, which trigger the requirement for a federal EA under the *Canadian Environment Assessment Act* (CEAA), at the comprehensive study level. In accordance with the transitional provisions of the 2012 amendments to CEAA, the provisions respecting comprehensive studies in force immediately prior to the 2012 amendments will continue to apply to the Kami Terminal. Reference to CEAA throughout this comprehensive study refers to the CEAA in force immediately prior to the 2012 amendments.

Alderon engaged with the *Ministère du Développement durable, de l'Environnement et des Parcs* (MDDEP) to provide Kami Terminal information. In November 2011, the MDDEP informed Alderon that the Kami Terminal does not trigger the provincial EA process under article 31 of the Québec *Environmental Quality Act* (QEQA).

The Major Projects Management Office (MPMO) was established for the purpose of overseeing and tracking the federal review, which includes the EA, regulatory reviews, and Aboriginal consultation activities for major resource projects such as the Kami Terminal. The MPMO issued a Project Agreement on April 23, 2012 that articulates the roles and responsibilities of each participant federal department and agency and timeline-based targets for the achievement of process milestones.

1.3.1 Environmental Assessment Regulatory Framework

Federal

Federal environmental assessment is regulated under CEAA. While the Kami Terminal was commenced under CEAA (see process described below) that Act has been repealed and replaced by CEAA, 2012. The transition provisions in CEAA provide that the review already commenced under CEAA will be continued under CEAA, 2012. We expect that the timeline and decision-making requirements under CEAA, 2012 will now apply to the Kami Terminal.

A federal environmental assessment is required pursuant to Section 5(1) of CEAA if a federal authority (department or agency):

- a) carries out a project;
- b) provides financial assistance to enable a project to be carried out;

- c) sells leases or otherwise transfers control or administration of land to enable a project to be undertaken; or,
- d) permits, approves or takes any other action specified in the Law List Regulations to enable a project to be carried out.

These four types of federal decisions are commonly referred to as “triggers”. The federal government is not a proponent of the Kami Terminal, nor is there intent to provide financial assistance. Therefore, the first and second triggers ((a) and (b)) above do not apply to the Kami Terminal as proposed. The third trigger (c) does not apply in Labrador since federal lands are not required, but does apply in Québec because Kami Terminal components will be located on federal land within the jurisdiction of the Sept-Îles Port Authority, for which a lease or other form of access may be required. An environmental assessment is required under the *Canada Port Authority Environmental Assessment Regulations*, and the MPMO is coordinating participation by the SIPA in this environmental assessment process pursuant to the MPMO Project Agreement. Triggers under the *Law List Regulations*, as shown in Table 1.1, will also apply. Federal authorities, whose decisions are required to enable the Kami Terminal to proceed and are, therefore, required to ensure that a federal EA is carried out, are referred to as Responsible Authorities, or RAs.

Table 1.1 Canadian Environmental Assessment Act Law List Regulations Triggers and their Relevance to the Project

Triggers	Nature of Authorization	Relevance to Project	Relevant Federal Authority
<i>Fisheries Act</i>			
Section 32	Unauthorized destruction of fish (mortality) by means other than fishing.	Applicable due to interference with water bodies.	Fisheries and Oceans Canada
Section 35(2)	Harmful alteration, disruption or destruction (HADD) of fish habitat.	Applicable due to interference with fish habitat.	Fisheries and Oceans Canada
<i>Navigable Waters Protection Act</i>			
Part 1, Section 5	If the Minister considers that the work would substantially interfere with navigation.	Applicable due to potential interference with the navigability of water bodies.	Transport Canada
<i>Explosives Act</i>			
Section 7(1)(a)	Issuance of a license for explosives factories and magazines.	Potentially applicable due to storage of explosives on site.	Natural Resources Canada
<i>Canada Transportation Act</i>			
Section 98	Authorization to construct a railway.	May be applicable depending on results of land ownership search.	Canadian Transportation Agency

The CEAA *Comprehensive Study List Regulations* identify those projects and classes of projects for which a comprehensive study is required. The *Comprehensive Study Regulations*, Section 3, Part V, Mineral and Mineral Processing, Subsection 16(a), states “a metal mine, other than a gold mine, with an ore production capacity of 3,000 t/d or more”. The mine will be

producing more than 3,000 t/d; therefore, a comprehensive study with respect to production capacity is required. For purposes of this EA, the term EIS refers as well to the comprehensive study.

Québec

Alderon engaged with the Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) to provide Project information. Because the mine will be located entirely within Newfoundland and Labrador, and the facilities at the Port of Sept-Îles will be located on federal lands, the Kami Terminal is not subject to environmental assessment under the laws of the Province of Québec, as confirmed by the MDDEP.

Environmental Assessment Committee

The representatives of interested federal government departments and agencies have been appointed to an Environmental Assessment Committee (EA Committee). The agencies represented in the EA Committee are presented in Table 1.2.

Table 1.2 Environmental Assessment Committee

Government	Government Department
Government of Canada	Canadian Environmental Assessment Agency
	Environment Canada
	Fisheries and Oceans Canada
	Transport Canada
	Canadian Transportation Agency
	Health Canada

1.4 Purpose of the Environmental Impact Statement

The submission of the EIS is an important step in the environmental assessment review process. This EIS addresses the Guidelines and issues raised by the public through Alderon's public and Aboriginal consultation process. The EIS Guidelines are provided in Appendix B. The EIS will be reviewed by the EA Committee and is available for public review. Review comments of the EA Committee and the public will be considered when a determination is made on whether the EIS adequately addressed the Guidelines. A determination of the environmental implications of the Kami Terminal will be made by the federal and provincial governments.

The EIS is a careful and detailed consideration of how the undertaking could affect the residents, communities and natural environment surrounding the Kami Terminal site. The EIS consists of a Plain Language Summary, an Executive Summary, Volume 1 (Kami Iron Ore Mine and Rail Infrastructure), Volume 2 (Kami Concentrate Storage and Load-out Facility), five baseline studies for Volume 1 and four baseline studies for Volume 2. A table of concordance between the EIS and the EIS Guidelines is provided in the Executive Summary. Each Volume is divided into two parts: Part I of each Volume presents the overall findings of the assessment with sufficient detail to allow the reader to understand the issues, Project effects and the proposed mitigation measures; Part II of each Volume presents the details of the assessment on a VEC basis. Supporting baseline studies are attached as appendices.

1.4.1 Other Approvals and Authorizations

Following release from the provincial environmental assessment process, the Kami Mine will require a number of approvals, permits and authorizations prior to project initiation. In addition, throughout construction and operation and maintenance, compliance with various standards contained in federal and provincial legislation, regulations and guidelines will be required. Alderon will also be required to comply with any other terms and conditions associated with the release. Table 1.3 summarizes potential permits, approvals and authorizations that may be required for the Kami Terminal only.

Table 1.3 Potential Permits, Approvals, and Authorizations—Québec

Permit, Approval or Authorization Activity	Issuing Agency
Provincial	
Certificate of Authorization under Section 22 of the <i>Environment Quality Act</i>	MDDEP – Regional Office
Certificate of Authorization under Section 48 of the <i>Environment Quality Act</i>	MDDEP – Regional Office
Authorization under Section 128.7 of Act Respecting the Conservation and Development of Wildlife	MRNF – Regional Office
Federal	
Licence to Store, Manufacture or Handle Explosives	Natural Resources Canada
Approval to Construct a Railway	Canadian Transportation Agency
Municipal	
Building Permit Authorization to Divert Pointe-Noire Road Authorization for Aqueduct Connection	City of Sept-Îles

1.4.2 Government Environmental Policies, Resource Management, Planning, or Study Initiatives

In January 2010, the Sept-Îles Port Authority published, as part of its environmental policy, its practices and procedures. This document sets out environmental protection measures regarding soil, water and air quality, fauna and flora, noise levels and communication and planning. As well, the Sept-Îles Port Authority (2000) published its Land-Use Plan based on objectives and policies pertaining to the physical layout of buildings under its responsibility and that takes under consideration applicable social, economic and environmental factors as well as zoning regulations pertaining to surrounding lands.

The Kami Terminal is aligned or improves on the practices and procedures adopted by the Sept-Îles Port Authority.

1.4.3 Policies and Guidelines of Aboriginal Groups

The policies and guidelines of Aboriginal groups are not publicly available and have not been provided to Alderon.

1.4.4 Land Tenure

The Terminal site located mainly within Sept-Îles Port Authority lands and all operations will take place on lands zoned as industrial in the municipality of Sept-Iles.

1.4.5 Objectives, Standards and Guidelines

Standards, policies and guidelines used in the EIS to assist in the evaluation of predicted environmental effects are provided in Table 1.4.

Table 1.4 Standards, Policies or Guidelines

Standard / Guideline	Applicable VEC Chapter of the EIS
<ul style="list-style-type: none"> • CEAA Guidance • Cumulative Effects Practitioners Guide (1999) • Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners (2003) • Reference Guide: Addressing Cumulative Effects (1994) • Reference Guide: Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects (1994) • Addressing Cumulative Environmental effects under CEAA (2007) • Addressing “Need for”, “Purpose of”, “Alternatives to” and “Alternative Means” under CEAA (2007) • Considering Aboriginal traditional knowledge in environmental assessments conducted under the CEAA 	<p>Chapters 14 to 26</p>
Water Canadian Council of Ministers of the Environment (CCME)	Chapter 16
Health Canada Noise limits	Chapter 14
COSEWIC management and recovery plans	Chapter 20
Species Status Advisory Committee (SSAC)	Chapter 20
Atlantic Canada Conservation Data Centre Status Rankings	Chapter 20
Wright and Hopky. 1 998.Guidelines for the Use of Explosives in or near Canadian Fisheries Waters. Department of Fisheries and Oceans	Chapter 16
Health Canada - Information for Environmental Assessments	Chapter 14
ISO 9613-1 and 9613-2 Acoustics	Chapter 14
Commission Internationale de L'Eclairage (CIE). 2003. Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations.	Chapter 14
Note d'instructions 98-01 sur le bruit (2006). Développement durable, Environnement et Parcs.	Chapter 14

1.5 Non-Government Participants in the Environmental Assessment

A comprehensive description of participants and issues is provided in Chapter 10. Alderon has analyzed the issues and concerns raised by non-government stakeholders and as presented in the EIS Guidelines, and has addressed the issues and concerns in this EIS. A Key Subject Index is provided in Appendix C.

Alderon is committed to engaging stakeholders, Aboriginal groups, municipalities, and the public in all aspects of the Kami Terminal, and will continue to do so throughout the EA process and the Kami Terminal. The consultation and engagement process for the Kami Terminal is described in more detail in Section 10. In accordance with Section 4.3.4 of the EIS Guidelines, non-governmental participants in the environmental assessment include Aboriginal groups, community groups, environmental organizations, and other stakeholders. Participants are identified as communities, organizations or stakeholders who are potentially affected by, or interested in, the Kami Terminal. These participants form the outreach area for Alderon’s consultation and engagement program for the EIS.

A summary of these organizations and groups for Québec is included in Table 1.5.

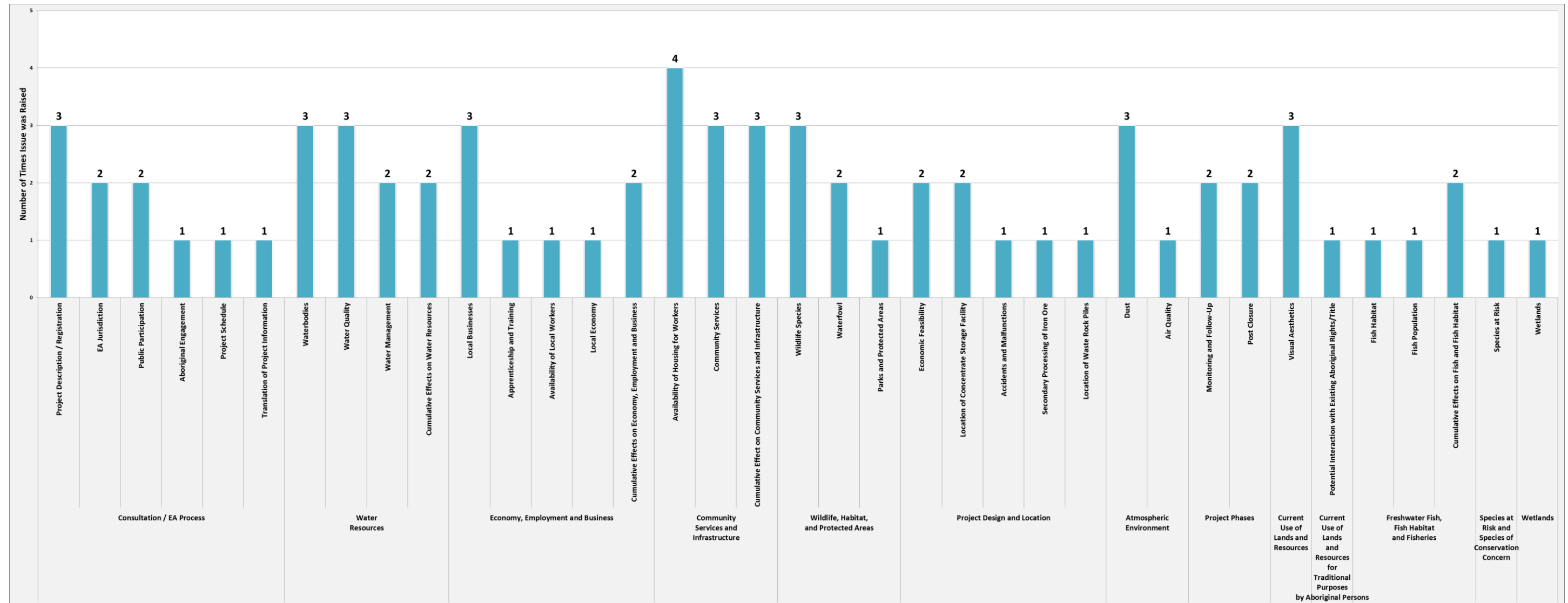
Table 1.5 Non-governmental Participants in the Environmental Assessment

Category	Sub-Category	Stakeholder group
Aboriginal Groups	Newfoundland and Labrador Groups	<ul style="list-style-type: none"> Innu Nation NunatuKavut Community Council (NCC)
	Québec Groups	<ul style="list-style-type: none"> Uashat mak Mani-Utenam Matimekush-Lac John Naskapi Nation of Kawawachikamach (NNK)
Municipal	Newfoundland and Labrador Municipal	<ul style="list-style-type: none"> Town of Wabush Town of Labrador City
	Québec Municipal	<ul style="list-style-type: none"> Town of Fermont Town of Sept-Îles
Community Groups	Environment	<ul style="list-style-type: none"> Conseil régional de l'environnement de la Côte-Nord Corporation de protection de l'environnement de Sept-Îles Le Mouvement citoyen de Fermont
	Economic Development	<ul style="list-style-type: none"> Centre local de développement (CLD) Caniaspicau Conseil de développement économique d’Uashat mak Mani-Utenam Hyron Regional Economic Development Board Innu Business Development Centre Labrador West Chamber of Commerce Labrador West Employment Corporation Labrador West Tourism Corporation Newfoundland and Labrador Organization of Women Entrepreneurs Town of Labrador City Economic Development Department Women in Resource Development Corporation
	Outfitters and	<ul style="list-style-type: none"> Cabin Owners

Category	Sub-Category	Stakeholder group
	Recreation	<ul style="list-style-type: none"> • Newfoundland and Labrador Outfitters Association • White Wolf Snowmobile Club
	Education, Social Services, and Health	<ul style="list-style-type: none"> • College of the North Atlantic • Centre de services de santé et sociaux (CSSS) de L'Hematite • Labrador Grenfell Health • Labrador Institute Memorial University, Labrador West Campus • Labrador West Status of Women • Labrador West Aboriginal Friendship Association • Labrador School Board • Newfoundland and Labrador Housing Corporation • Provincial Advisory Council on the Status of Women • Royal Newfoundland Constabulary

A record of EIS consultation and engagement activities, including a full list of participants and a discussion of the issues and concerns that were raised, is provided in Chapter 10 of the EIS. The number of times each issue was raised is presented in Figure 1.3.

Figure 1.3 Frequency of Issues Identified During Public Consultation Activities



1.6 Land Claims Agreements and Interim Agreements

A number of Labrador and Québec Aboriginal communities and organizations claim rights and title to areas of Labrador and Québec, including lands within the proposed Kami Mine area. These groups are:

- Innu Nation
- NunatuKavut Community Council (NCC)
- Uashat mak Mani-Utenam First Nation
- Matimekush-Lac John First Nation
- Naskapi Nation of Kawawachikamach (NNK)

The claims of these groups are at varying stages of progress and are discussed in EIS Volume 1, Section 1.6.

Currently no Aboriginal group has a settled land claim which includes the Kami Terminal site. The lands, which are the subject of the Agreement-in-Principle (AIP) between Innu Nation, Canada and Newfoundland, are depicted on Figure 1.4 and do not extend into Québec. While NCC's land claim area appears to extend into Québec, it does not include lands in proximity to the Kami Terminal (Figure 1.5). The NNK is a party to the *Northeastern Quebec Agreement* and has ceded its Aboriginal rights in Québec in exchange for treaty rights. The southern boundary of the Naskapi Sector, which is depicted in Schedule 4 to the *Northeastern Quebec Agreement*, is approximately 300 km (approximately 800 by car) from the Kami Terminal site (Figure 1.6).

There are, however, there are two Aboriginal groups in Québec whose shared asserted traditional territory includes lands in proximity to the Kami Terminal: Uashat mak Mani-Utenam and Matimekush-Lac John.

Alderon is engaged in ongoing consultation with these two groups in order to determine their contemporary use of land and resources in the Kami Terminal area and to assess the potential effects of the Kami Terminal upon such land and resource usage. A full description of Alderon's approach to engagement efforts with each of these groups is provided in Chapter 10.

Figure 1.4 Labrador Innu – Tshash Petapen Land Selection

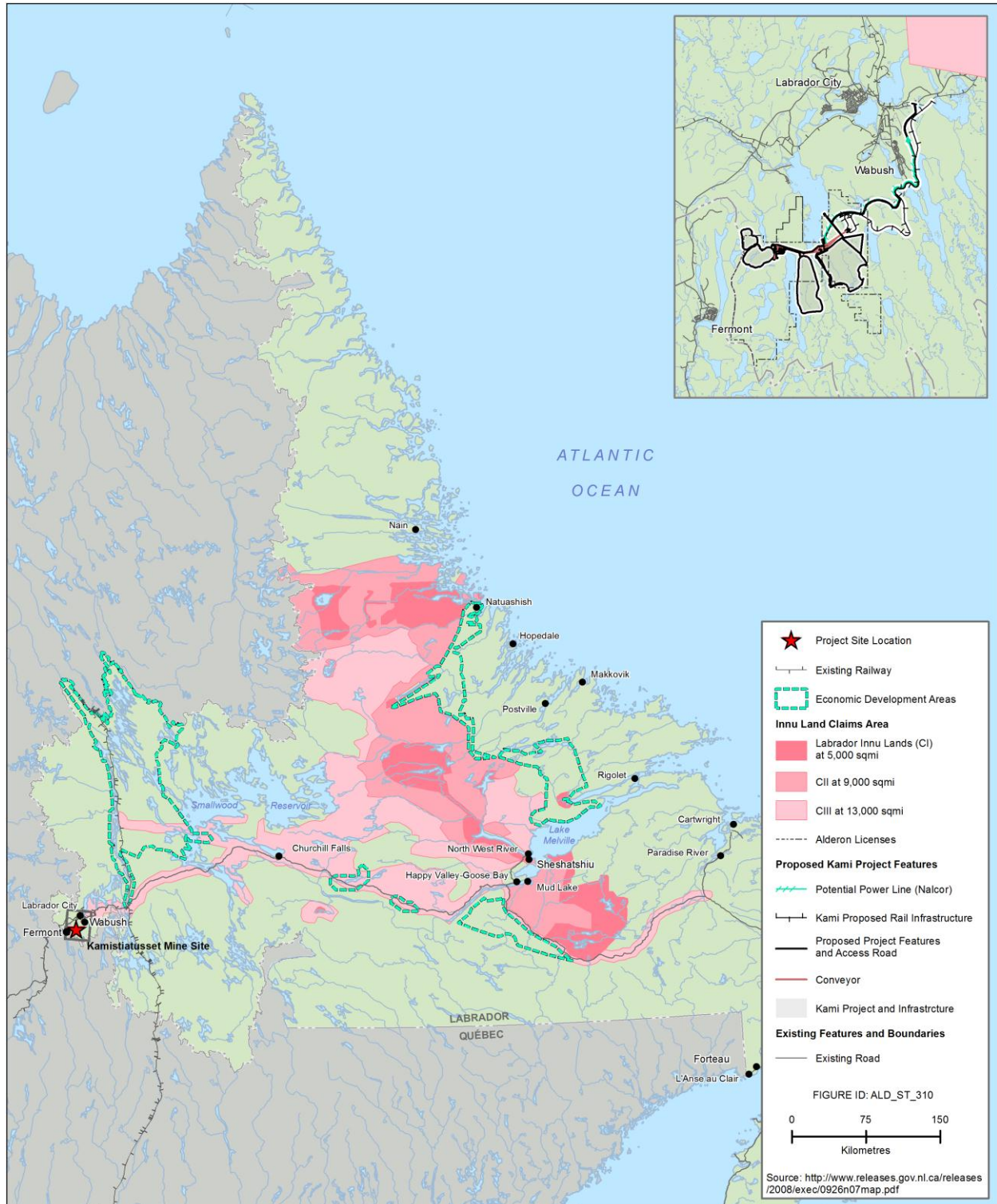
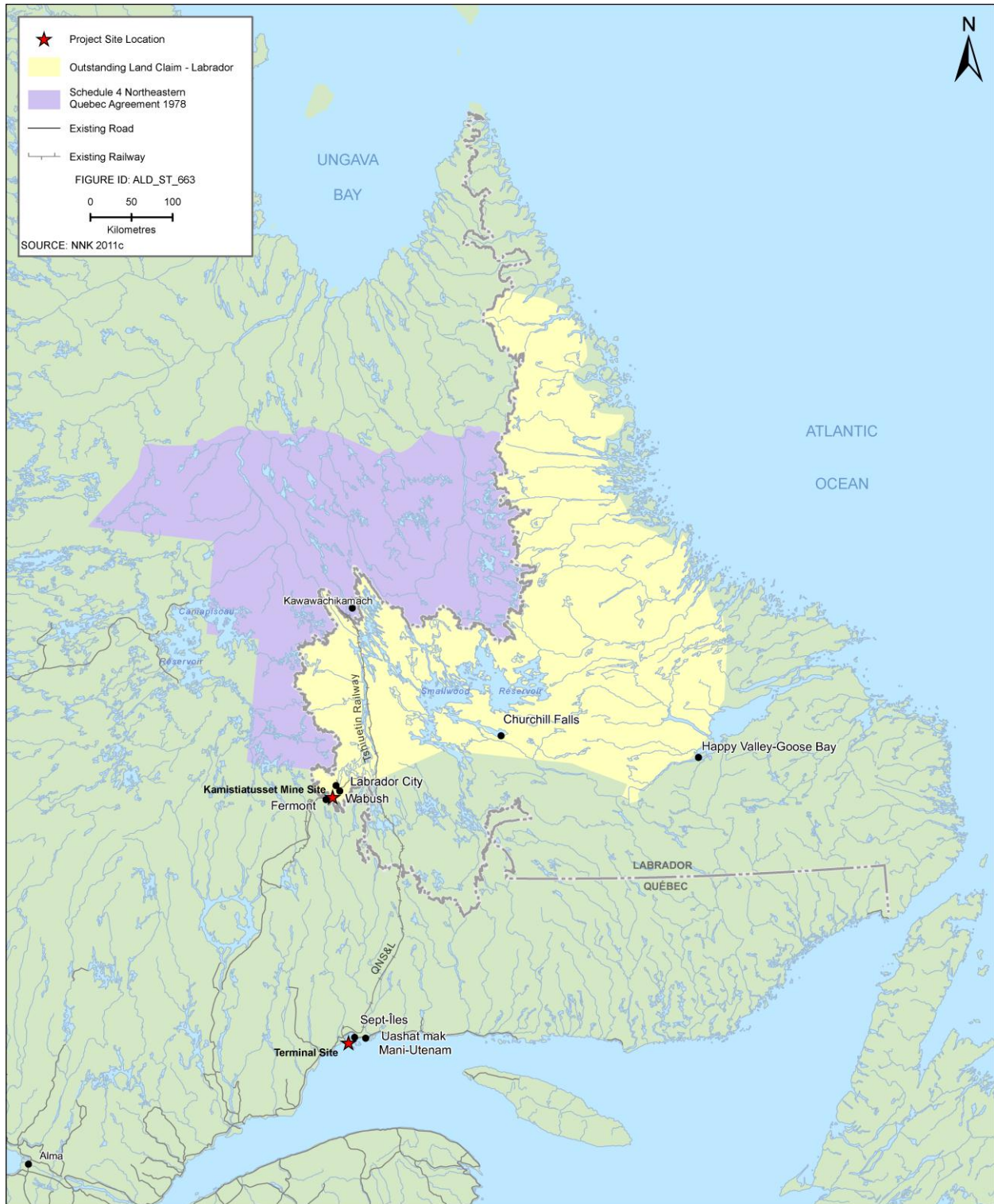


Figure 1.5 NunatuKavut Community Council Asserted Land Claim Area



Figure 1.6 Naskapi Nation of Kawawachikamach Treaty Area and Outstanding Labrador Land Claim



Innu Uashat mak Mani-Utenam

Uashat mak Mani-Utenam (Uashat mak Mani-Utenam) consists of two reserves— Uashat in Sept-Îles and Maliotenam approximately 16 km east of Sept-Îles. The traditional territory of the Innu of Uashat mak Mani-Utenam is shared with the Innu of Matimekush-Lac John and encompasses much of eastern Québec and western Labrador, including the Kami Iron Ore Mine and Rail Infrastructure Project area and lands surrounding the Kami Terminal Site (Figure 1.7). No treaty addressing the claims of the Innu of Uashat mak Mani-Utenam in Québec has been concluded by Canada and the government of Québec.

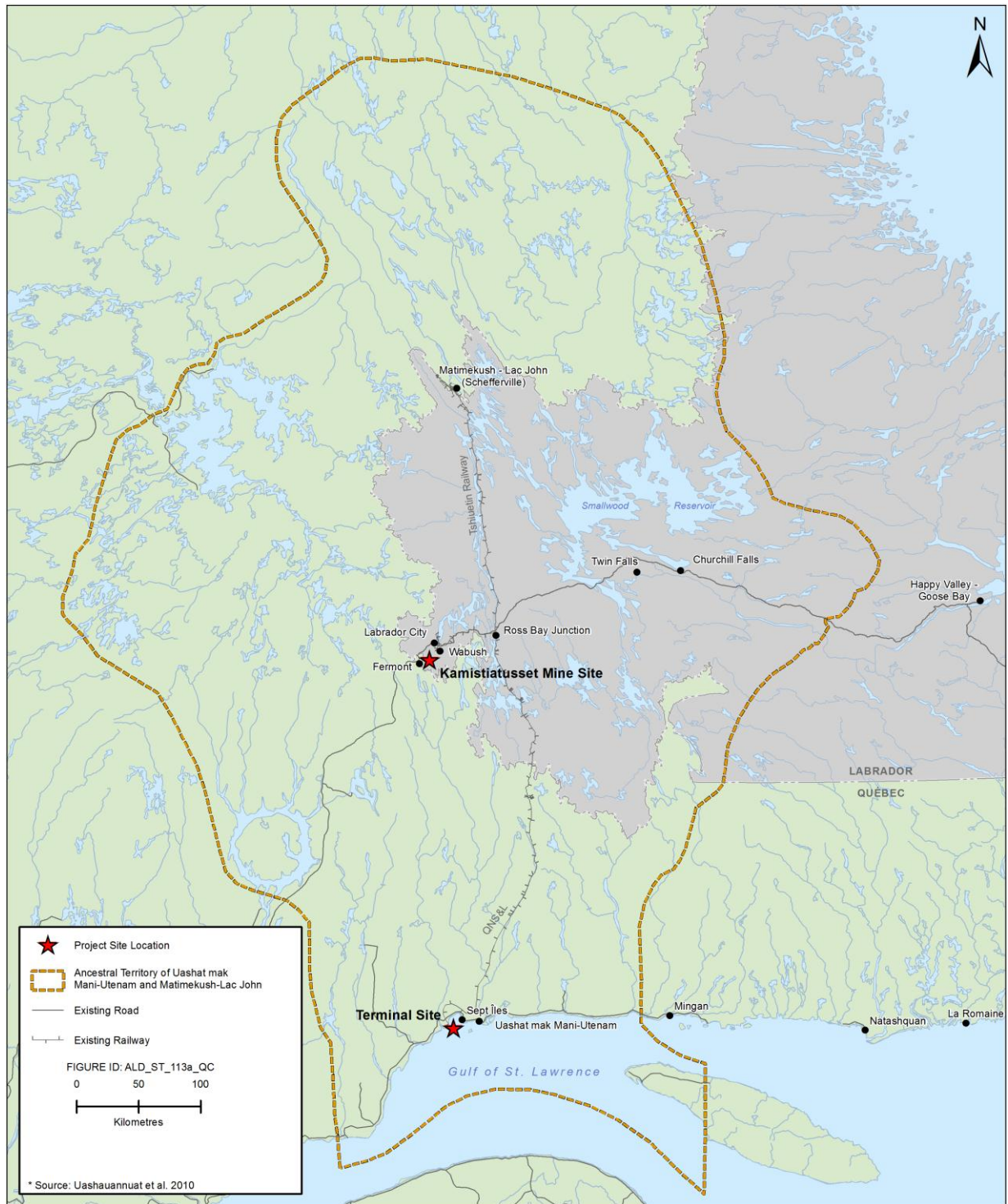
In 1975, the Innu and Atikamekw Nations created the *Conseil des Atikamekw et des Montagnais* (CAM) to represent the Innu and Atikamekw in comprehensive land claims negotiations and in 1979, CAM submitted a comprehensive land claim on behalf of its membership to a large portion of Québec and Labrador. Uashat mak Mani-Utenam joined CAM in 1977 and was represented by the Mamuitun Tribal Council in tripartite land claims negotiations with Canada and Québec until 1998. In 1998, the group withdrew from land claims negotiations and, like Matimekush-Lac John, was not a party to the Agreement-in-Principle concluded with Canada and Québec in 2004. Subsequently, in 2005, Uashat mak Mani-Utenam and Matimekush-Lac John formed the Ashuanipi Corporation to represent both groups in land claims negotiations with Canada and Québec. Negotiations recommenced in 2006 but were suspended in 2008 and the Corporation Ashuanipi has been dissolved. While the Québec portion of the land claim is still active, negotiations have not resumed.

Innu of Matimekush-Lac John

Matimekush-Lac John (Matimekush-Lac John) consists of two reserves— Matimekush and Lac John — both of which are close to Schefferville, approximately 500 km north of the Kami Terminal site. The asserted traditional territory of the Innu of Matimekush-Lac John is shared with the Innu of Uashat mak Mani-Utenam (Figure 1.7). No treaty addressing the claims of the Innu of Matimekush-Lac John in Québec has been concluded by Canada or the government of Québec.

The history and status of Matimekush-Lac John's land claims in Québec parallels that of Uashat mak Mani-Utenam. In 1975, the Innu and Atikamekw Nations created the CAM to represent the Innu and Atikamekw in comprehensive land claims negotiations and in 1979, CAM submitted a comprehensive land claim on behalf of its membership to a large portion of Québec and Labrador. The claim was accepted by both Canada (1979) and Québec (1980) and a framework agreement establishing a negotiation process with respect to the Québec portion of the land claim was concluded in 1988. Matimekush was represented by the Mamuitun Tribal Council in subsequent negotiations but withdrew from negotiations in 1998 and was thus not a party to the Agreement-in-Principle concluded by Mamuitun Tribal Council, Québec and Canada in 2004. In 2005, Matimekush-Lac John and Uashat mak Mani-Utenam formed the Ashuanipi Corporation to represent their interests in land claims negotiations with Canada and Québec. Negotiations recommenced in 2006 but were suspended in 2008 and the Corporation Ashuanipi has been dissolved. While the Québec portion of the claim is still active, negotiations with Canada and Québec have not resumed.

Figure 1.7 Traditional Territory of the Innu of Uashat mak Mani-Utenam and Innu Nation of Matimekush-Lac John



1.7 Other Registrations

The Project registration submitted in October 2011 included both the Kami Mine in Labrador and the Kami Terminal at the Port of Sept-Îles, Québec. The proposed Project is the sole project being proposed by Alderon, and is not part of a larger sequence of projects.

2.0 PROJECT DESCRIPTION

Alderon Iron Ore Corp (Alderon) is proposing to construct and operate the Kami Iron Ore Project (the Project), which will consist of the Kami Mine) in Labrador West and the Kami Terminal at the Port of Sept-Îles, Québec.

The components and activities of the Kami Terminal will include the construction and operation of the following key elements:

- A concentrate unloading, stacking, storage and reclaiming facility; and,
- Associated rail infrastructure (rail loop).

From the Kami Terminal, the iron ore concentrate will be reclaimed and directed to a common conveyor and ship loading facility owned and operated by the Port of Sept-Îles.

This chapter provides an overview and description of the Kami Terminal, including their overall location and layout, main facilities and components, associated construction and operational processes and activities, schedule and anticipated workforce requirements.

A description of the components and activities associated with the Kami Mine is provided in Volume 1 of this EIS.

2.1 Issues

An overview of the various questions and issues related to the Project Description that have been raised in Alderon’s Aboriginal and stakeholder engagement activities to date is provided in Table 2.1, including where and how these have been addressed in the EIS.

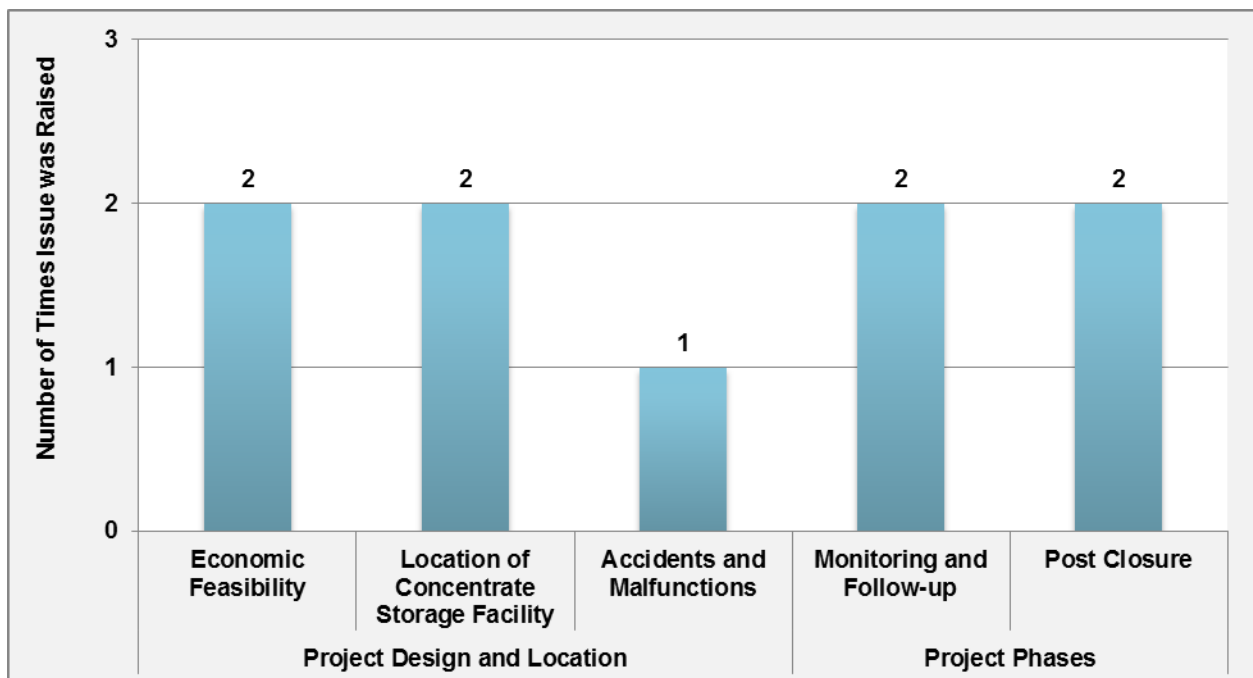
Table 2.1 Issues Raised by Stakeholders

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Economic feasibility	Sept-Îles	The global economic climate and all the other mine projects in Québec, Ukraine, Brazil, Chile, Australia, South Africa. Financing. Manganese. Issuance of stocks this fall. Make efforts to reduce the costs of construction and operation.	Section 2.2 outlines some of the key economic considerations and conditions which are relevant to the Kami Terminal.
	CIM Conference	When you say Alderon is going to replicate to some extent the Consolidated approach, what do you mean vs. a standard approach? Do you believe you are going to replicate the Consolidated financial success?	Chapters 11 and 26 outline the economic aspects and benefits of the Kami Terminal. Chapter 2 of EIS Volume 1 describes the proposed mineral processing procedures and infrastructure.

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Accidents and Malfunctions	Sept-Îles	The operators may anger engineers in the event of overflow and during clean-up afterwards (no use of water)	Sections 2.6 describe the various components and activities associated with the Kami Terminal, including relevant operational procedures.
Location of Unloading, Stacking, Storage, and Reclaiming Facilities	Sept-Îles	Were alternatives for the location of the stockpile considered? There is a site at the Arnaud junction that should be considered as it is a better option both environmentally and socially.	Alternative locations for the various Kami Terminal components are identified and evaluated in Section 2.8 .
Engineering and Kami Terminal Design	Sept-Îles	Resident asked what will be done with rock cut.	Section 2.6.1 describes the construction of the Québec components of the Kami Terminal, including associated cut and fill requirements and procedures.

Figure 2.1 summarizes the frequency with which various issues and questions have been raised.

Figure 2.1 Frequency of Issue Type related to the Project Description



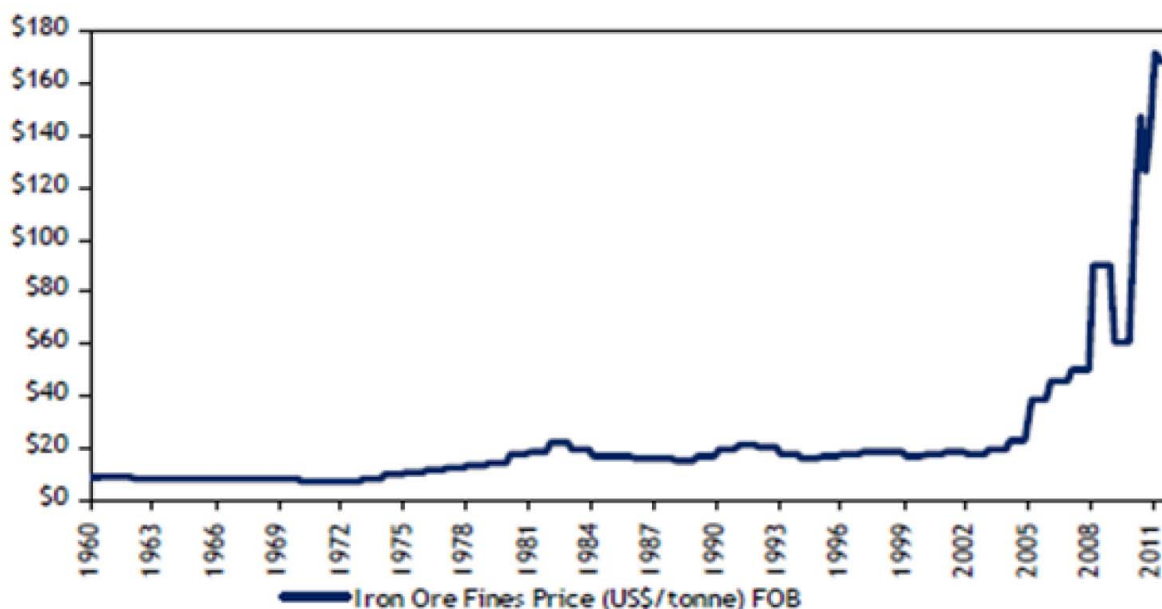
2.2 Purpose of and Need for the Project

The following section outlines the purpose of and need for the Project, both in terms of its underlying rationale and objectives, as well as its likely socioeconomic benefits.

The purpose of the Project is to develop the Rose Pit iron ore deposit located at the Kami Mine Property, and in doing so, to produce iron ore concentrate suitable for sale to international markets. The proposed Kami Terminal, as described in this chapter, is required to allow for the transportation of the Project's iron ore products to market, and are therefore vital to the overall technical and economic viability of the Project.

There is currently a high level of demand for iron ore and steel worldwide, which is creating and maintaining relatively strong markets (and thus prices) for iron and steel (Figure 2.2).

Figure 2.2 Historical Pricing of Iron Ore



Source: CRU Analysis

Iron ore remains a highly sought after material worldwide, and the market fundamentals for this Project therefore remain strong in the long-term, driven strongly by continued demand in key global markets, such as China. These factors and principles are reflected in the following (sample) excerpts from recent media and analyst coverage (as cited by Alderon 2012):

...With global steel production continuing to recover, we expect prices to continue to grind higher over coming quarters, with a price above US\$150/t needed to induce marginal Chinese production back to the market. (Source: Credit Suisse (Canada) Commodity Forecast update April 12, 2012)

....The outlook for commodities is more a function of Chinese growth, which to date seems firm, as well as a lack of new supply entering the market to fill

demand needs to meet urbanization expectations. This has not changed. (Source: Cormark Base Metals, May 23, 2012)

While price cycles will continue to be driven by the directional need for domestic Chinese iron ore production, we believe the ongoing high volume requirements of the market reinforce our price profile above US\$150/t Cfr China (62% basis) on average through 2016. We still consider the iron ore bulk commodity most undervalued by the market. (Source: Macquarie Equities Research (Canadian Bulk Developers), May 16, 2012)

In addition to providing revenue and profits for Alderon and its shareholders, the proposed Project will result in significant socioeconomic benefits at the local, regional, provincial and national levels throughout its various phases. Construction of the Kami Terminal will occur over approximately two years, during which significant direct employment in a wide variety of occupations will be created. During Kami Terminal operations, further, long-term positions will be created. In addition, the requirement for goods and services during Kami Terminal construction and operations will provide significant business opportunities. These direct economic benefits will be supplemented by indirect and induced employment and business opportunities through, for example, spending by Kami Terminal employees and contractors.

Kami Terminal activities related to construction and operation and associated labour requirements are described in further detail later in this Chapter. The likely nature, magnitude and distribution of the Kami Terminal's economic and employment and business benefits are also assessed and described in detail in Chapters 11 and 26 of this EIS.

In terms of current and forecasted iron ore demands, markets and potential risks, including market prices and schedule delays, which may be relevant to the decision to proceed with the Project, the most significant such factor would likely be related to future changes in the market price of iron ore. Much of Alderon's financial analysis and planning work to date has been based on the assumption of a constant commodity price of approximately US\$115 / t of iron ore concentrate (of grading at 65.5 percent iron). The price of this commodity has fluctuated in recent years (Figure 2.2) and is affected by factors beyond the control of Alderon, including, but not limited to: international economic and political trends, changes in industrial demand, currency exchange fluctuations, economic inflation and expectations for the level of economic inflation in the consuming economies, interest rates, global and local economic health and trends, speculative activities, the availability and costs of substitutes and changes in the supply of this commodity due to new mine developments and mine closures.

Any or all of these factors, which are impossible to predict with absolute certainty, may affect the viability of, and/or the economic benefits associated with, the proposed Project. As indicated above, however, based on current and anticipated iron ore market conditions and other considerations, Alderon is very interested in proceeding with the development and operation of the Project, within the general timeframes and overall schedule presented in this EIS. Timing is, however, a critical factor in proceeding with the Project in a situation of appropriate market conditions and reasonable certainty regarding same, and any material delays to Project start-up and timing may affect Alderon decisions related to Project sanction or others.

Alderon is a key participant in the development and support of regional infrastructure. On July 16, 2012, Alderon signed an agreement with the Sept-Îles Port Authority to finance a portion of the cost of the new multi-user dock facility.

2.3 Alternatives to the Project

In the context of an environmental assessment review, "alternatives to" a project are defined as functionally different ways of meeting the project's need and of achieving the project purpose (CEA Agency 2007).

The identified need for and purpose of this Project are as described above, namely, to develop the Rose Pit iron ore deposits located at the Kami Mine Property, and to produce iron ore concentrate suitable for sale to international markets. The Project is intended to help meet the significant and growing global demand for iron ore, and in doing so, to provide economic returns to Alderon and its shareholders, as well as associated socioeconomic benefits to residents of Newfoundland and Labrador, Québec, and Canada.

Addressing the overall, global requirement for iron ore could conceivably be addressed through other development projects or initiatives, which may also provide associated economic benefits to the regions and jurisdictions in which they are developed. With the exception of this proposed Project, however, no other such alternatives are within the ability and responsibility of Alderon. The only alternative to Alderon's construction and operation of the Project is therefore that it decide to not sanction and proceed with this development – the "no-go" decision.

As illustrated above and throughout this EIS, the proposed Project concept and design provide a technically feasible, economically viable and attractive, and environmentally and socially responsible means of addressing the identified need for and purpose of the development, and one which can and will be planned and implemented in a manner that avoids or reduces potential adverse environmental effects and optimizes socioeconomic benefits. The Project is being proposed and planned in accordance with the principle of sustainable development, which has been referenced and defined from an EA context and from the perspective of the mining industry (e.g., NRCan 1998) as follows:

Sustainable development seeks to meet the needs of present generations without compromising the ability of future generations to meet their own needs.

The objectives of sustainable development are: 1) the preservation of ecosystem integrity, including the capability of natural systems to maintain their structures and functions and to support biological diversity; 2) respect for the right of future generations to the sustainable use of renewable and non-renewable resources; and 3) the attainment of durable and equitable social and economic benefits.

These concepts have formed the basis of the Project's previous and on-going planning and design activities, and will guide its future implementation. As demonstrated throughout this EIS, this has included planning approaches and specific mitigation measures to avoid or reduce adverse environmental and socioeconomic effects, as well as various policies and procedures to create and optimize local and regional economic benefits over the near and long-term.

Alderon is also committed to ensuring that relevant Aboriginal communities and stakeholder groups are appropriately engaged on this Project. The proponent has proposed, and where possible implemented, engagement processes with these groups, which have been designed to share information on the Project and seek to address any questions, issues or concerns with regard to the Project and its potential effects. These Aboriginal and stakeholder engagement processes are on-going, and have been a vital and integral input to Project planning and design, as well as contributing greatly to the nature, focus and findings of this EA.

2.4 Project Location

The proposed Kami Terminal will be located within the region known as the Québec North Shore, along the Gulf of St. Lawrence. Concentrate from the Kami Mine will travel along an existing rail from Labrador West to the Port of Sept-Îles, and once at the Port, will travel on a newly constructed rail loop of approximately 3.5 km in length (Figure 2.3).

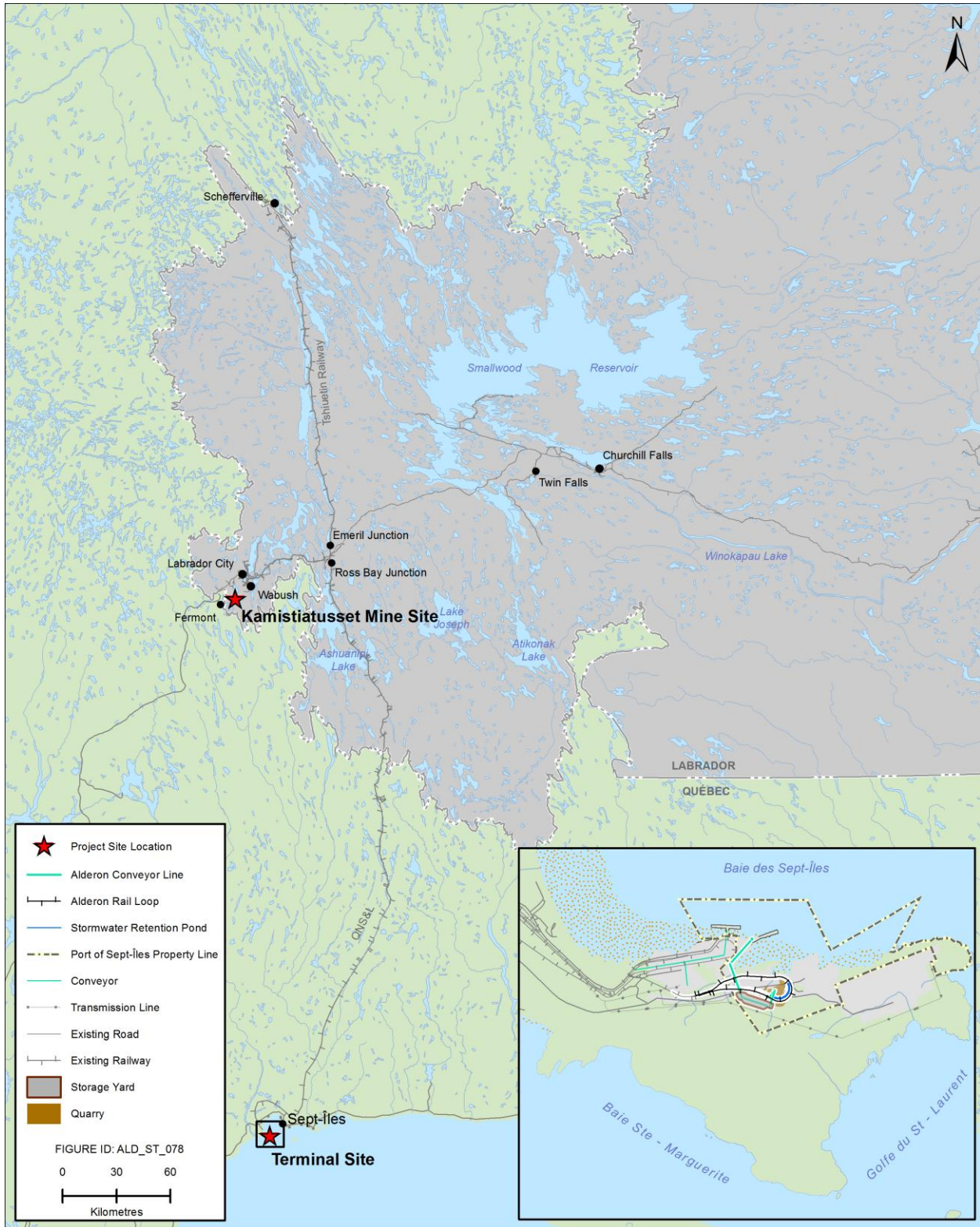
The area upon which Alderon's proposed Kami Terminal at the Port of Sept-Îles will be constructed and operated has been the site of on-going industrial activity for several decades. The proposed port infrastructure will be located wholly on the Port of Sept-Îles lands, located in the Sept-Rivières Regional County and within the municipality of Sept-Îles, Québec. The Kami Terminal site is located in an industrial zone designated for large-scale industry, which covers the entire Marconi Peninsula and which is used extensively for these purposes at present.

The proposed Kami Terminal will be located on the available land area that has been allocated to Alderon by the Port Authority, immediately within and adjacent to a number of existing industrial facilities and on-going activities. Currently, for example, Cliffs Natural Resources (Wabush Mines and Bloom Lake Mine) have operational rail lines as well as port facilities in the Sept-Îles area. Most of the proposed rail loop will be located on lands owned by the Port Authority, with a portion of rail (approximately 300 m) being located on lands owned by Cliffs. No Kami Terminal components or construction activities are proposed to occur within the marine environment.

As a result of this significant and long-standing industrial activity in the area, there are few if any identified environmentally sensitive or significant areas located immediately within or adjacent to the proposed Kami Terminal components and activities. Some examples of relevant environmental features in the overall region which are identified and have been considered (and mapped) throughout the EIS include:

- Ruisseau à la Baleine and an unnamed stream, two watercourses that run through the Kami Terminal site and which will require several crossings (Figure 2.4);
- Waterfowl habitats along the shorelines of and/or within baie des Sept-Îles and elsewhere in the region (Chapter 19); and,
- Although fairly distant from the proposed Kami Terminal components, adjacent land uses, residential and other community areas and infrastructure in the Sept-Îles area including both Aboriginal and non-Aboriginal communities (Chapters 22 to 24).

Figure 2.3 Project Location



An overview of the environmental (biophysical and socioeconomic) setting and context for the Kami Terminal is provided in Chapter 3 of this EIS, with additional detail provided throughout the various “existing environment” sections for each VEC being considered in the EA. This includes information and mapping related to relevant aspects of the terrestrial, freshwater and marine environments (physical and biological), as well as adjacent land uses, local communities and other aspects of the socioeconomic environment.

2.5 Facilities and Components

The Kami Terminal’s components and activities will include the construction and operation of the following key elements, which collectively comprise Alderon’s proposed Kami Terminal:

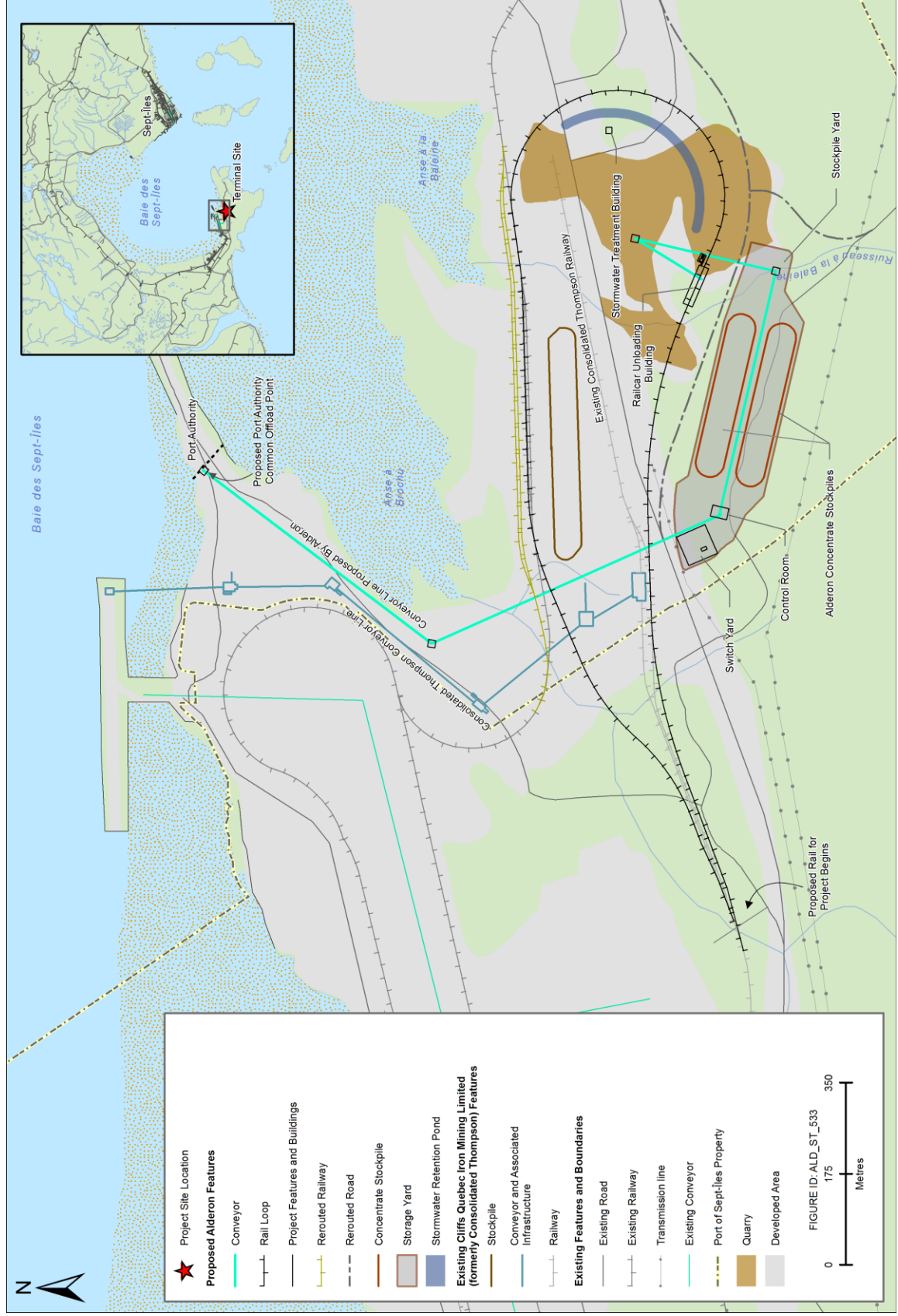
- A concentrate unloading, stacking, storage and reclaiming facility; and
- Associated rail infrastructure (rail loop)

An overall Kami Terminal Site Plan is provided in Figure 2.4. This plan has been developed during the course of the early engineering studies, and offers a good and reasonable representation of the planned site infrastructure based on the information available and developed to date, and reflecting the current stage of Kami Terminal planning and design.

As is common with any large proposed development project, it is anticipated that the Kami Terminal conceptual plan may, during the course of future detailed engineering, be subject to some degree of change and evolution based on technical, economic, environmental and social considerations, including the eventual findings and outcomes of the EA process and associated and on-going consultation activities by Alderon. Any such modifications are not expected to affect or to materially change the scope of the Kami Terminal from how it is described in this document, or specifically, result in any new or increased adverse environmental effects.

The following sections provide a more detailed description of the Kami Terminal, as well as the associated construction and operations phases and activities.

Figure 2.4 Kami Terminal Components and Layout



2.5.1 Concentrate Unloading, Stacking, Storage and Reclaiming Facility

The proposed Kami Terminal will be designed and constructed to receive, store and then transport the iron ore concentrate from the Kami Mine for eventual shipment to markets. The main elements and infrastructure associated with this facility will include the following:

- Rail car dumper;
- Concentrate storage yard;
- Stacker-reclaimer;
- Transfer houses;
- Conveyors;
- Maintenance facilities;
- Access roads;
- Security fencing and gate;
- Power supply and substation;
- Water supply;
- Office and storage buildings;
- Water management systems; and,
- Dust collection and management systems.

All components of the proposed Concentrate Unloading, Stacking, Storage and Reclaiming Facility will be located on Port Authority land at Sept-Îles. The endpoint of the conveyor is the common loading facility, operated by the Port.

The concentrate storage yard will be established in the southern portion of the Port of Sept-Îles property. The yard will be approximately 160 m by 340 m in size, for a total area of approximately 54,400 m². This outdoor (uncovered) storage yard will be designed to accommodate 800,000 tonnes of concentrate (or potentially, up to a total of 1,110,000 tonnes) in two piles running generally parallel to the stacker-reclaimer units. The bottom portion of the yard will contain a liner that will act as barrier to ensure that any runoff water is collected and treated.

Runoff water will be collected and will flow by gravity to a retention pond for treatment prior to discharge. It is anticipated that rain and snow melt will contact the open air concentrate storage piles and pick up iron and possibly other compounds. “Red water” is the term used for water which contains fine precipitated iron oxide / hydroxide. A system will be installed at the facility to treat the runoff water collected from the storage yard in order to prevent “red water” issues and provide water quality that meets Québec Directive 019, prior to release to the bay. Treatment for removal of precipitated ferric iron compounds which manifest as red water is often achieved by control of pH, dissolved oxygen concentration, addition of polymers to aggregate precipitates into larger floc and by settling. Separation of the precipitated ferric iron particles from red water

may be accomplished by simple gravity sedimentation, enhanced coagulation and settling, filtration, and by other potential separation techniques.

The planned water treatment system will include a retention pond to receive and store the water volume that would be generated during a 100-year design storm event, with an associated mechanical treatment system designed to treat the accumulated water over an approximately three day period. The retention pond for the facility drainage will be designed to contain the design storm drainage volume, but during dry weather it will have no significant inflow. The runoff water treatment system will include the following major components:

- Retention / sedimentation pond, as outlined above, with a total storage volume capacity of approximately 25,000 m³;
- Decant pumping station to transfer the pond's effluent to an enhanced treatment system; with a firm pumping capacity of 8,300 m³/d (5.8 m³/min);
- An enhanced coagulation / settling treatment system, designed for a flow rate of 8,300 m³/d (5.8 m³/min), which would activate with partial or complete filling of the retention pond. The system will include: pH adjustment, feed of sand as a ballasted settling substrate, and polymer, as well as an inclined plate settling chamber, ongoing removal of settled sludge, and cyclone separation of sludge to recover sand. Achievable settling rates are estimated at approximately 20 times the rate of simple gravity settling systems such as standard sedimentation ponds;
- Gravity pipe discharge to an outfall point in ruisseau à la Baleine;
- A small building to shelter the treatment chemical storage and control components; and,
- A lined landfill, with a liner base and cover, for final disposal of removed treatment sludge.

A stacker-reclaimer will be established at the facility which will have a capacity matching the yard and ship loading requirements. This equipment will include a tripper, programmable logic controller (PLC), fail safe control logic and emergency stop. Five transfer houses will also be constructed and will include transfer hoppers, diversion gates, vibrators, and plugged chute indicators.

Belt conveyors will be constructed in the yard in order to feed concentrate from the rail car dumper to the stacker-reclaimer. The concentrate will then be conveyed from the yard transfer house to either the yard for storage or to the Port of Sept-Îles shiploader. The conveyors will be controlled by a PLC system linking to the stacker-reclaimer and car dumper inputs. The belt conveyors will be enclosed in galleries that provide wind protection during operations as well as maintenance and clean-up access on both sides on the conveyor. The conveyor structure will be supported from the top of the gallery to allow unrestricted access for cleaning below the return belt. Chutes and dumpsters are planned at each support bent location to receive concentrate from floor clean-up activities. All belt conveyors will be approximately 72 inches wide, will utilize 35 degree idlers and will operate at approximately 3 m/s. Belt loadings are conservative to allow for up to 50 percent surge capacity. Conveyor motors will be driven by electronic soft starters to allow smooth acceleration under all operation conditions. Although belt

cleaning devices will be installed at the head pulleys, gravity belt take-ups will be enclosed at each transfer tower, in order to contain any concentrate that may accumulate at these points. At every transfer location, where concentrate will drop from one belt to another, enclosed chute work and insertable dust filter-collectors will be utilized to prevent fugitive dust emissions.

Maintenance facilities will also be established at the facility, including a small building and associated infrastructure to store equipment, spare parts and supplies to maintain the stacker-reclaimer and conveyor systems, as well as associated offices and administrative areas. On-site buildings will be constructed of structural steel framing with concrete foundations and metal cladding. A short gravel access road will be constructed from the existing site road network to and within the facility.

During operations, the port terminal will require 10 MW or more of electrical power. The facility will receive power from Hydro-Québec. Hydro-Québec will establish and connect the line extension to a new substation that will be established on-site by Alderon. Power will be distributed at 25 kV and routed primarily in cable trays inside the conveyor galleries. Outdoor pad-mount transformers will be installed at each transfer house to step down the distribution voltage to 600 V or 4160 V to power process equipment. Each transfer house will be equipped with electrical rooms housing switchgear, motor control centers and process control equipment.

The water supply for the facility will be provided through an interconnection with the existing port water supply, which is supplied through the municipality of Sept-Îles system.

Due to the non-combustible nature of the iron ore concentrate as well as the building construction, fire protection will consist of smoke and heat detectors throughout the process buildings and conveyor galleries that will communicate back to a central fire alarm panel to be located in the main control room. Wet or dry sprinkler systems are not currently planned, although appropriate manual fire extinguishers will be located at strategic points in the various structures and conveyor galleries.

The facility will be surrounded by a galvanized chain link fence (approximately 3 m high) to restrict access to authorized personnel only. Road access will be via card actuated gates in high traffic areas, and swing gates for maintenance access. Buildings and structures that are not protected by fencing will generally be locked to restrict access.

2.5.2 Rail Loop

In order to receive and empty the trains of iron ore concentrate at the port site, the Kami Terminal will include the construction and operation of a rail loop track, which will be built at the Port of Sept-Îles.

Approximately 3.5 km of new (single) track will be required to complete the rail loop component, the majority of which will be located on land owned by the Port Authority, with a short rail access segment (approximately 300 m) located on land owned by Cliffs Resources. CFA will operate the rail and the portion of new rail on Cliffs property.

The proposed rail loop will connect with the existing CFA railway track at a point located several hundred meters southwest of the proposed Kami Terminal, at the existing west turnout for the Cliffs (Bloom Lake) run around track. From there it will extend east to form a loop that encircles the existing and future expansion area currently utilized by the Cliffs train unloading and concentrate stockpile area. A train entering the track will proceed to the car dumper, execute the unloading process and then follow the loop so that the train can return directly to the CFA. As the new track forms a complete loop, there will be no requirement for additional tracks or switches to permit locomotives to run around trains that have been delivered for unloading. The layout of the loop track will also allow for any potential future expansion of rail or stockpile facilities used by the Cliffs (Bloom Lake) operation.

The rail loop will be designed to accommodate a minimum of 120 full iron ore concentrate cars. The car dumper will be located at approximately the halfway point of the loop. This will allow 120 cars to be delivered to the dumper for unloading and processing without the need to block operations on the CFA or access to the existing Cliffs (Bloom Lake) unloading tracks. The new rail loop will be utilized exclusively for the unloading of trains handling Alderon iron ore concentrate.

The facility will include one train positioner and rail car dumper and hopper, complete with grizzly, vibrators, plugged chute, and feeder conveyor with electronic weigh scale for discrete load and total load indication. These components will receive the rail car with the ore, which is then guided by the train positioner to the rail car dumper. The dumping unit unloads the car depositing its contents in the hopper. An apron feeder below the hopper collects and directs the ore concentrate to conveyors that will either stack or load on to a waiting vessel. A railcar unloader building will enclose the rotary car dumper and car indexer. A description of the various operating procedures and activities that will be associated with the proposed rail loop is provided in a subsequent section.

The proposed rail loop will cross two watercourses. Precast culvert box structures will be installed at the crossings of the ruisseau à la Baleine on each side of the loop. These structures will be necessary to provide adequate structural strength for the combination of railway loading and subgrade fill load at these stream crossings. Culvert design is based on a 1 in 100 year probability event, over 15 minutes duration, allowing appropriate runoff coefficients for the various areas.

Water crossing modifications will also be required where the existing CFA tracks to the Cliffs (Bloom Lake) dumper shed cross an unnamed stream west of the dumper. The existing fill will need to be widened to the south to accommodate the new Alderon loop track, requiring the existing corrugated steel pipe (CSP) culvert to be extended southward. The existing culvert is estimated to measure approximately 60 m in length, and the embankment widening to accommodate the new track will require an extension of the existing culvert by at least 6 m. The unnamed stream will also intersect with the empty train return side of the rail loop approximately 50 m north of the existing CFA crossing described above. A new water crossing structure will be required at the site that is similar to the design of the adjacent CFA culvert. The rail roadbed and culvert at the crossing must be wide enough to accommodate the Alderon loop track and a future Cliffs loop track. A single CSP culvert will provide the necessary

structure and flow path at the crossing. Given the width of the roadbed and elevation differential between top-of-rail and the water it is estimated that this new culvert will be approximately 60 m in length.

The construction of the rail loop will also require the relocation of approximately 1 km of existing track leading to the Port of Sept-Îles railcar ferry apron / lead. The track to be relocated is owned by the Port of Sept-Îles and extends between the Wabush Mines loop and the rail ferry dock. The proposed Alderon track will be located in the path of the existing track but at an elevation of approximately 21 m (the existing track is at an elevation of 8 m). To accommodate the loop track, the Port track must be relocated northward by approximately 15 m for a distance of approximately 1 km.

A retaining wall will also be constructed adjacent to the loop track and ferry lead, in order to address the difference in elevation between the two tracks, minimize the distance that the Port track must be shifted to the north, and to avoid using a conventional fill slope that would result in reconstruction of the ferry lead near the shore of baie des Sept-Îles. The retaining wall location will be accessed from the existing industrial land of the Cliffs (Bloom Lake) operation and from the new ferry lead track. As the wall is constructed the area behind it will be backfilled to form the subgrade for this portion of the loop track.

2.5.3 Water and Dust Management

As indicated, the bottom portion of the yard will contain a liner that will act as barrier to ensure that any runoff water is collected and treated. Runoff water will be collected and will flow by gravity to a retention pond for treatment prior to discharge. The water retention pond was sized to receive runoff water that may have been in contact with the iron ore concentrate, although its 25,000 m³ volume is based on a 24-hour collection period. Areas draining to the retention pond include the concentrate storage yard, maintenance yard, as well as adjacent road and rail areas. This pond would normally be maintained at low levels, in order to accept the volumes of severe storm events.

Construction of the facility will require realignment of the ruisseau à la Baleine from its current location, including location and profile, along with culvert additions to allow storm water to continue to flow down the mountain side, to the bay. This water will not be collected in the retention pond for treatment, since it will bypass the storage yard.

Airborne dust generation will be controlled at each source. During rail car dumping operations, a negative air filter collector, sized at 2,200 m³/min, will collect dust generated by the rotary car dumper, as well as maintain continuous airflow into the car dumper building through all openings. The stacker-reclaimer will be operated so that during stack-out, the discharge conveyor will be as close to the pile as possible. The belt conveyors will be enclosed in galleries and at all locations where the concentrate handling belt conveyors transfer from one to another, insertable type dust filter collectors, sized at 230 m³/min at each location, will contain dust within the conveyor transfer chute work.

2.6 Project Activities and Schedule

The Kami Terminal will involve the construction and operation of each of the components and facilities described above. An overall schedule for the various phases and associated activities for the Kami Terminal is provided in Figure 2.5.

Figure 2.5 High-Level Project Schedule (Kami Terminal)

Phase/Activity	2012				2013				2014				2015				2016				2017				2018				2019				2020				2032				2033				2034															
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																				
Feasibility and Detailed Engineering	█				█																																																							
EA and Permitting	█				█																																																							
Construction									█				█				█				█				█				█				█				█				█				█				█											
Operations																																																												

2.6.1 Construction

Subsequent to release from the EA process, and the receipt of formal corporate approval and all other required regulatory approvals and permits, construction activity for the Kami Terminal would commence in late 2013 or early 2014 and would be completed in late 2015.

Construction activities for the Kami Terminal will include the following:

- Movement of equipment, materials and personnel to, within and from the site;
- Mobilization and installation of any required construction infrastructure;
- Site preparation (including vegetation clearing, grubbing and excavation as required);
- Establishing site buildings and other components and facilities;
- Installation of associated systems, equipment and utilities; and,
- Kami Terminal commissioning.

The following presents an initial and general overview of the currently anticipated timeframes for various key phases of Kami Terminal construction work:

- Land clearing: December 2013 – February 2014
- Road Work: January 2014 – August 2014
- Storage Yard Preparation: April 2014 – March 2015
- Underground Pipe Work: May 2014 – October 2014
- Stacker Foundations: May 2014 – August 2014
- Belt Conveyors: September 2014 – August 2015
- Stacker-reclaimer: September 2014 – August 2015

- Rail Loop: September 2014 – October 2015
- Train Car Dumper / Building: October 2014 – July 2015
- Transfer Buildings: October 2014 – September 2015
- Electrical Power and Controls: November 2014 – October 2015
- Storage Yard Grading: April 2015 – August 2015

Standard and relatively routine methods and techniques will be used during the construction phase of the Kami Terminal, which will be carried out in accordance with applicable environmental regulations, permits and standards.

Concentrate Unloading, Stacking, Storage and Reclaiming Facility

The main tasks and general sequencing of the construction phase will include, initially, the transportation of equipment and construction materials to and within the site, and the development of lay down areas. Construction lay down areas will be established at strategic locations near the proposed conveyors, rail loop and elsewhere within the Kami Terminal area / footprint.

Clearing and site grading will be required to prepare the site, including the clearing of trees and organic matter and grading for the facility itself as well as the associated infrastructure such as the power substation, supply conveyors, transfer houses, maintenance facilities, and other storage and office buildings. Vegetation clearing and other ground disturbance activities will be confined to only those areas where it is necessary for Kami Terminal development. Limits of clearing will be defined in advance, and only designated areas will be cleared. Standard procedures for the removal of trees and brush will be employed. Trees and shrubs will be cleared with chain saws or other hand-held equipment. Mechanical clearing methods may be used in areas where terrain disturbance will not cause topsoil loss or sedimentation of watercourses and waterbodies. All such clearing will be completed in compliance with relevant permits and regulations, and any merchantable timber will be salvaged. Organic soils will be stripped and stockpiled for eventual reuse. Excavated materials will be reused as borrow materials if possible, and if not deemed practical for use it will be disposed of appropriately.

Access road construction will include tree clearing and brush removal along the proposed route and the movement and placement of materials to establish the road bed and its gravel surface. Vegetation clearing and grubbing activities will be undertaken as described above. Materials for building the new access road will be obtained from waste material generated during site preparation activity, with additional material being sourced from off-property quarries. Existing sites and sources will be used wherever possible and practical, and any new quarries or borrow areas will be established and operated in compliance with relevant permits and guidelines.

Sedimentation and erosion control measures, including drainage infrastructure, will be implemented where necessary. Following grading and general site preparation activities within the facility, the liner and associated layers of rock and other materials will be installed on the ground within the footprint of the storage yard.

Standard construction techniques will also be used for the development of site buildings and infrastructure, which will include associated clearing, grubbing and cut and fill activities, followed by the laying of foundations, assembly and erection of buildings, installation of electrical systems and other utilities, and the receipt and installation of equipment and instrumentation. Building structures will be made of steel with pre-painted steel cladding. Concrete foundations will likely consist of spread footings, although a more detailed geotechnical survey will determine if piling will be required in some areas. Waterlines will be installed to connect the facility to the existing water supply system of the port and community. Construction of the power supply substation at the site would include site clearing and leveling, excavation, installation of foundations and supporting structures, and the installation and testing of the electrical equipment, followed by eventual interconnection to the Hydro-Québec system.

Following required site preparation activities, the various supply conveyors would be routed and framed, followed by belt and PLC installation and testing. The conveyors will be constructed in the yard feeding from the car dumper to the transfer house and from there to the stacker-reclaimer, followed by the installation of associated instrumentation. The stacker-reclaimer components will also be constructed with nominal reclaim rates and stacking rates to match yard and ship loading requirements complete with tripper, PLC controls, fail safe control logic and emergency stop.

Rail Loop

The Kami Terminal will involve the construction of approximately 3.5 km of new subgrade and track in Québec. Railway design and construction will follow the standards for track construction as set out by the American Railway Engineering and Maintenance of Way Association (AREMA).

The new rail loop will be constructed primarily on Port of Sept-Îles land that is currently used for industrial purposes, with a short segment of track to complete the loop on the west end being constructed on Cliffs land, primarily on the existing CFA right-of-way, in an industrial area. As indicated, approximately half of the land required to construct the loop has already been cleared in conjunction with the development of the Cliffs (Bloom Lake) iron ore stockyard construction. The other portion of land is primarily used for rock quarry operations. The remainder is currently undeveloped and must be cleared for construction.

The construction of the rail loop will require the relocation of approximately 1 km of existing track leading to the Port of Sept-Îles railcar ferry apron / lead. The existing chemin de la Pointe Noire and power / water lines running within the road right-of-way will also require relocation further into the hillside prior to commencement of railway construction activities.

The anticipated sequence of construction activities for the rail loop includes:

- Clearing of trees and organic matter to the south of the existing road.
- Construction of new road, power line and waterline south of the limits of the rail loop.
- Installation of required culvert structures to permit the loop to cross the ruisseau à la Baleine.

- Relocation of approximately 1 km of the existing ferry lead northwards approximately 50 m (also road and power line).
- Construction of retaining wall structure where loop track and ferry lead are adjacent.
- Construction of subgrade for loop track.
- Construction of sub ballast layer for loop track.
- Installing of new turnouts in CFA track.
- Construction of track structure and place initial ballast layer.
- Adding ballast and aligning track structure for vertical and horizontal tolerance compliance.
- Finalization of ballasting and alignment.
- Restoration of exposed slopes and non-industrial land areas with organic material stripped from the site during clearing operations.

Again, standard procedures for clearing of trees and brush will be employed. Plant material will be mulched and saved for re-use during restoration of exposed land once the overall construction is complete. For the required watercourse crossings, precast culvert box structures will be installed at the crossings of the ruisseau à la Baleine on each side of the loop, which are necessary to provide adequate structural strength for the combination of railway loading and subgrade fill load at these stream crossings. The crossings can be reached from either side of the stream by using nearby road crossings or the Cliffs (Bloom Lake) structure.

For the required relocation of the existing ferry lead, the construction of this track shift can be accomplished by widening of the north embankment of the existing track. On-track and highway-railway vehicles will be capable of placing the necessary subgrade fill and then placing track on the new subgrade. The retaining wall will be built in the segment where the loop track and ferry lead are adjacent, and is necessary to address the difference in elevation between the two tracks and the desire to avoid using a conventional fill slope that will result in reconstruction of the ferry lead near the shore of baie des Sept-Îles. The retaining wall site can be accessed from the existing industrial land of the Cliffs (Bloom Lake) operation and from the new ferry lead track. As the wall is constructed the area behind it will be backfilled to form the subgrade for this portion of the loop track.

The rest of the rail loop track subgrade will require both cut and fill work, primarily in rock, which may require blasting in certain areas. Rock that is excavated for cutting, along the south side of the loop, will be used for subgrade fill on the north and west portions of the loop. The existing rock crushing equipment on site may be used (subject to agreement with Port of Sept-Îles) to avoid the need to bring additional rock crushing equipment on site from elsewhere. Rock drills and excavators will be used to carry out the cut work, and haul trucks will move the excavated rock away for crushing and eventual fill placement. Tracked bulldozers will place the fill material and compacting rollers will provide the required compaction. In constructing the railway sub ballast layer, crushed granular material will be placed on the finished subgrade by dump trucks.

Road graders will be used to spread and adjust final grade of the sub ballast accordingly. Any compaction required will be completed by drum roller.

Two new turnouts will be necessary to connect each end of the loop track to the existing CFA track at the west end of the project. Turnout panels will either be pre-constructed on already cleared land near the proposed turnout locations or shipped in on railcars. The existing CFA track will be cut and the turnouts installed in place of the removed straight track. Excavators already on site may be utilized to place the turnouts into position. On track ballast regulator and tamper machinery will secure the new turnouts within the track ballast and bring the turnouts into line with the existing track. The ties will be spaced out on the sub ballast in accordance with AREMA practice. The rail will then be strung into the tie plates on the ties and secured with rail clips and anchors. Specialized highway-railway cranes will perform most of the positioning and securing work.

Ballast will be added to the track structure using specialized railcars or by dump truck. Specialized on-track equipment consisting of a ballast regulator and tamper will position the ballast and compact it below the track structure in order to obtain the proper horizontal and vertical alignment. The final layer of ballast will be placed and tamped to obtain the tolerances required for yard track by AREMA. Those areas cleared for the railway construction, and newly created fill slopes, will be restored using the reclaimed organic material from the earlier clearing operation. This will help to prevent erosion of the granular fill material and provide environmental remediation of the disturbed areas that are not required for the rail and port operation. Material will be distributed by dump trucks and excavators, and placed with tracked bulldozers. In association with the rail loop construction, the dumper building and apparatus will be established at approximately the halfway point in the loop track.

It is anticipated that all site construction fill and crushed rock will be generated from rock cuts carried out to achieve the required site terrain layout. This will include requirements for roadways, rail beds and ballast. Although the cut / fill balances for the site civil works are close to being balanced, it is anticipated that an excess of rock will be available as a result of the “bulking” that occurs as rock is blasted into smaller pieces. The expected volume, at 250,000 m³ is such that there is available space to store the excess rock within the rail loop, at a reasonable height. It would then be available for use as needed for other projects.

Construction activities will be planned and executed in a manner to minimize any effects due to site runoff. Silt fencing will be employed at the limits of the work zone to reduce the carriage of silt and fines in any water runoff from the area. Machinery on site will be limited to the quantity necessary to carry out the work and after hours storage of machines and equipment will be contained within a specific parking area where spill containment can be provided.

Summary of Construction Emissions and Discharges

Some of the main potential sources of emissions and discharges which may be associated with planned Kami Terminal construction activities, and which are particularly relevant for EA purposes, include:

- Air emissions, including the release of particulate matter (dust) during activities such as clearing, excavation, blasting, etc (as modeled in Chapter 14, including information on existing and potential air sampling / monitoring stations);
- GHG emissions resulting from the fuel consumption and exhausts of heavy equipment and vehicles used during construction;
- Noise from the use of heavy machinery and blasting (modeled for operations, see later sections);
- Vibrations from the use of heavy equipment and blasting during construction (not likely to be perceptible outside of a few tens of meters from the work sites, see Chapter 14);
- Light emissions (glare and vertically directed illumination) from construction equipment and temporary site lighting;
- Possible sedimentation of watercourses or waterbodies during any in- or near-water construction activities; and,
- The generation (and required disposal) of waste materials throughout the construction phase of the Kami Terminal.

Each of these potential construction-related emissions and discharges are described (and where possible and relevant, quantified and modeled) in later sections of this EIS (particularly Chapters 14 and 16, and others).

2.6.2 Operation and Maintenance

Once the construction phase of the Kami Terminal is completed and its various components have been commissioned, the operations phase will begin. The current project schedule indicates that this phase of the Kami Terminal will commence in late 2015 (pre-production) and extend to approximately 2033.

Rail Loop

Alderon is planning to engage CFA to provide train operations services on the rail loop. The CFA is experienced in executing train unloading procedures, having operated the nearby Cliffs (Wabush Mines) unloading loop since 1965 and the adjacent Cliffs (Bloom Lake) concentrate unloading tracks since 2010. CFA will require three high horsepower, AC-traction motor equipped locomotives to move Alderon trains. It currently utilizes a fleet of General Electric model AC4400CW locomotives to move the Cliffs (Bloom Lake) trains to and from the unloading facilities. It is likely that locomotives from the existing CFA fleet will also be used to handle the Alderon traffic.

Operation of the rail loop will be conducted under the provisions of the Canadian Rail Operating Rules (CROR) (Transport Canada document TC O 0-93) and the track will specifically be classified as non-main track. As such, the track will be operated as a yard with train speed limited to a maximum of 25 km/h. Most train movement is expected to be undertaken at speeds less than 25 km/h, as trains will be required to stop at the dumper, perform train positioning at the dumper and execute the dumping procedure in a start-and-stop manner. By definition in the

CROR, trains on non-main track must proceed at reduced speed, which is a speed that will permit stopping within one-half the range of vision of equipment. This rule affords the minimum protection necessary to control train movements on non-main track. Movements will also be further controlled by direction of the car dumper operator, who will only be able to allow one train at a time into the dumping facility. Further, there will be no need for two trains to simultaneously occupy the loop track.

The iron ore concentrate will be shipped in open top gondola cars equipped for rotary dumping, with each gondola car expected to carry approximately 100 tonnes of concentrate. The gondola cars will not have opening doors in their floors.

The general operating procedure for the proposed rail loop will be as summarized below:

- A complete 240-car train will be operated by CFA from the QNS&L interchange at Sept-Îles Junction to the port staging yard near Pointe-Noire.
- The train will stop in a track in the staging yard. The locomotives and first 120 cars will uncouple and proceed via the existing track connecting the staging yard to the loop track.
- The locomotives and 120 cars will operate on the loop track to the dumper building. Upon receiving permission from the dumper operator, the crew will position the first car in the dumper. The string of cars will be engaged to the indexing machinery and then the locomotives will uncouple and exit the dumper building and operate around the rest of the loop track and exit onto the CFA trackage.
- The first 120 car string will be unloaded, without uncoupling, at a rate of approximately 1 car every 60 seconds (Should a tandem car dumper be installed to service other future users, the dumping rate would increase to about 2 cars every 80 seconds). As the ore is dumped from the cars, the car string is pushed around the rail car storage loop by the car dumper indexing system.
- Once the 120 cars are emptied the locomotives and crew will return and couple onto the cars. At this point the cars will be inspected for physical condition / any defects and braking condition. Any cars requiring repairs will be identified for removal from the trainset upon return to the staging yard. The locomotives will haul the 120 cars off the loop track.
- Upon return, the locomotives will uncouple from the empty cars, couple onto the second group of 120 loaded cars, and move them to the loop track.
- Once the second group of 120 cars are emptied as per the above procedures and returned to the staging yard, the full train of 240 cars will be reassembled, inspected and depart for the return trip to the Kami Mine.

During the initial years of planned iron ore production (at the 8 Mtpa rate), Alderon will ship a minimum of 309 train loads of concentrate per year, or approximately 1 train per day. Once production is doubled to the 16 Mtpa rate, the procedure will be executed twice daily, with two loaded trains arriving at the staging area each day.

As noted in the above operating procedure, it will not be necessary for the locomotives to remain with the cars as they are unloaded on the loop track. This will help to avoid any issues concerning noise and emissions from idling locomotives on the port site during the unloading process. No railway rolling stock maintenance activities are planned to be executed on the proposed loop track.

The rail loop itself will be designed for heavy haul operations using AREMA specifications, which will help to reduce the frequency and magnitude of maintenance of the track over the lifetime of the ore haulage operation. Maintenance activities can be categorized into three groups: 1) inspection, 2) light and incidental repairs, and 3) major component replacement. The most frequent activity will be track inspection, the requirements for which are prescribed by the Track Safety Rules (TSR) (Transport Canada document TC E-54). Under the TSR, the loop track will be designated as a yard track “category 1”, for heavily used yard trackage. This category requires inspection activity as follows: visual inspection (track and switches) – twice monthly; electronic geometry inspection – once yearly; and rail flaw inspection – once yearly. Visual inspections can be conducted either on foot or by a light highway-railway vehicle. Electronic and rail flaw inspections are conducted using highway-railway vehicles. These activities will be carried out when the loop track is not occupied by ore trains.

Culvert and drainage inspections will be carried out at least annually, during periods of low flow. As part of the visual track inspection process, observation will be made of the approaches to culverts to identify any potential issues such as water ponding or obstruction by debris. Appropriate repair activities will be undertaken if issues are identified with culverts and drainage.

Light or incidental repairs would be carried out when track defects are identified during the inspection process or when train crews or others discover track problems. Typical work activities would include replacing broken track ties or rail fasteners such as joint bars, clips, spikes, repairing a broken rail, or repacking ballast around ties. These activities will require the use of small or medium size highway-railway vehicles and a group of 3 to 5 employees to complete, and typically take from two to eight hours to perform. An adequate supply of spare components for minor repairs will be stored in a secure location at the site.

Major component replacement is undertaken when significant elements of the track structure have reached the end of their service life and must be completely replaced. These may include, for example, replacement of rail or track ties or ballast cleaning / undercutting and replacement. The replacement frequency for rail is primarily related to the accumulated tonnage that has passed over the track, while the tie and ballast replacement cycles are related to the years of accumulated service since installation. The expected accumulated tonnage and years of service over the 20 year life of the iron ore shipments will not likely be great enough to require major replacement activities to be undertaken as part of this Kami Terminal.

Concentrate Unloading, Stacking, Storage and Reclaiming Facility

After the concentrate is removed from the rail cars by the rotary car dumper, it falls into a large underground bin. Concentrate is removed from the car dumper bin by an apron feeder, which sends the concentrate at a controlled rate to 72 inch belt conveyors that travels to the storage yard conveyor, which has multiple uses: 1) it is used to send ore to the stacker-reclaimer, via a

moving tripper section when unloading rail cars, 2) it is used to receive ore from the stacker-reclaimer during ship loading operations, and 3) it can be used to bypass the stacker-reclaimer, if it becomes necessary to load directly from the incoming rail cars to a ship in Port.

The stacker-reclaimer is a large machine that operates on rails to either stack out the concentrate in long triangular piles on both sides, or reclaim the concentrate using a bucket wheel type excavator to the storage yard conveyor. The storage yard conveyor feeds the concentrate into a surge bin in order to smooth out the stacker-reclaimer operation, and provide a uniform flow of concentrate at a design rate of 8,000 tonnes / hour to the Port of Sept-Îles ship loaders.

From here, the iron ore concentrate will be reclaimed and directed to a common conveyor and ship loading facility owned and operated by the Port of Sept-Îles. Large, enclosed 72 inch conveyor galleries and transfer towers convey the concentrate above grade to the Port de Sept-Îles Transfer Tower, which directs the concentrate to the appropriate ship loader.

Based on the use of 230,000 DWT vessels, the annual shipping requirements for the Alderon concentrate would be approximately 35 ships per year initially; increasing to 70 ships per year after production has doubled.

Summary of Operational Emissions and Discharges

Some of the main potential sources of emissions and discharges which may be associated with planned Kami Terminal operations and maintenance activities, and which are particularly relevant for EA purposes, include:

- Air emissions, including the generation and dispersion of fugitive dust during operational activities such as the receipt, movement, storage and eventual retrieval and transportation of concentrate (as modeled in Chapter 14);
- GHG emissions resulting from the fuel consumption and engine exhausts of Kami Terminal equipment and vehicles (as quantified in Chapter 14);
- Noise emissions resulting from operational components and activities such as rail traffic, concentrate transfer and storage, and its eventual movement to ships (as modeled in Chapter 14);
- Vibrations and ground-borne noise from rail traffic and other activities (calculated and described in Chapter 14);
- Light emissions from required on-site lighting;
- Runoff water from the concentrate storage yard, and possible associated “red-water” issues in the adjacent aquatic environment; and,
- The generation (and required disposal) of waste materials throughout the operational life of the Kami Terminal.

Each of these potential operational emissions and discharges are described (and where possible and relevant, quantified and modeled) in later sections of this EIS (particularly Chapters 14 and 16, and others).

Potential sources of nonhazardous or solid wastes generated by the Kami Terminal include domestic waste (e.g., office and lunchroom wastes) and construction wastes. These wastes will be segregated as recyclable and non-recyclable, with recyclable material collected and transported to a licensed recycling facility using authorized local services in compliance with the applicable regulations. Efforts will be made to minimize the amount of waste generated by application of 4-R principals (reduce, reuse, recycle and recover) to the extent practical. Non-recyclable wastes will be transported offsite to an existing and approved landfill.

An integrated Waste Management Plan (WMP) will also be developed and implemented throughout the Kami Terminal. It will identify the types of waste materials produced by the Kami Terminal, provide general direction in dealing with the handling, storage, transport, treatment and disposal of waste materials, and incorporate the basic waste management principles of reduce, reuse, recycle, recover and residual disposal.

A used oil storage tank will be established at the facility. Used oil will be collected for recycling or reuse and stored, transported, and managed according to federal and provincial waste disposal regulations.

2.6.3 Closure and Decommissioning

There is currently no intention to close or decommission the proposed Kami Terminal given the clear value and utility of this infrastructure for future port operations and its likely adaptability to other existing or future users. It is therefore planned that, upon conclusion of Alderon operations, this infrastructure will be transferred to another owner and operator.

The facility will be subject to regular maintenance, as required, and it is assumed that it would be operated on a permanent basis. As such, formal and separate plans for decommissioning have not been developed. Should decommissioning be required for all or a part of the facility, a detailed decommissioning plan would be developed and implemented in accordance with acceptable standards of the day by the then owner / operator of the facility, and in consultation with relevant regulatory agencies.

2.6.4 Potential Project Modifications

The Kami Terminal description provided in the preceding sections provides an overview of proposed Kami Terminal components and activities, based on the information available and developed to date, and reflecting the current stage of Kami Terminal planning and design. Again, as is common and standard with any proposed development project, it is anticipated that the Kami Terminal conceptual design will, during the course of future detailed engineering, be subject to some degree of change and evolution based on technical, economic, environmental and social considerations, including the eventual findings and outcomes of the EA process and associated and on-going consultation activities by Alderon. This is in keeping with the important role of EAs as a planning tool, which must therefore be applied at a relatively early stage of

Kami Terminal design, so that it is able to help inform and influence planning and decision-making related to proposed development projects.

It is therefore not possible at this stage to provide a detailed and comprehensive description of possible future changes or modifications to the Kami Terminal description, which may result from on-going and future planning. One possible future evolution and adjustment to the Kami Terminal concept would, for example, see the overall layout of the Kami Terminal changed to have the proposed concentrate unloading, stacking, storage and reclaiming facility located closer to, or potentially entirely within, the rail loop itself. Further investigation and evaluation of this option is required, including with consideration of land availability, overall layouts and locations, and associated procedures and logistics during construction and operation. In addition to possible technical and economic benefits (such as those resulting from shorter distances for concentrate transfer), any such modified configuration(s) would also likely reduce the overall footprint of the Kami Terminal. Again, however, this possible modification to the Kami Terminal layout requires considerable additional analysis, and at this time the Kami Terminal design that is presented in this chapter remains that which is being proposed by Alderon.

Any other such modifications are also not expected to affect or to materially change the nature and scope of the Kami Terminal from how it is described in this document, or specifically, will not likely result in any new or increased adverse environmental effects.

It is also important to note that many Kami Terminal components and activities will require specific environmental permits and/or other provincial, federal and municipal authorizations. The post-EA permitting process will provide the opportunity for relevant regulatory departments and agencies to receive and review these detailed designs, and to establish specific terms and conditions to further avoid or reduce environmental effects. Alderon and/or its contractors will identify, apply for and adhere to all require permits and other authorizations that are required for Kami Terminal construction and/or operations.

2.7 Labour Force Requirements

The Kami Terminal's construction and operations phases will generate substantial employment and associated socioeconomic benefits, as described elsewhere in this EIS. The following sections provide an overview of the estimated labour force requirements that will be associated with each phase of the Québec components of the development.

2.7.1 Construction Workforce

The construction phase of the Kami Terminal will take place over an approximately two-year period, and will generate substantial employment benefits.

Tables 2.2 and 2.3 provides a summary of the estimated construction workforce (2014 and 2015), which, as illustrated, will include a wide and varied range of occupations. An indication of the number and temporal distribution of each of these workforce occupations and activities throughout the construction phase of the Kami Terminal is provided in Appendix D.

Projected construction staff numbers will range from approximately 30 to nearly 300 workers at the peak periods. Staffing will include construction management, engineering, labourers, millwrights, iron workers, carpenters, heavy equipment operators, electricians, masons and other trades as necessary to carry out the construction tasks. Most if not all of these positions will be full-time in nature.

Table 2.2 Summary of Estimated Construction Employment

Description	Person -Hours	Task Duration (Months)	Crew Size	Person - Months	2014				2015			
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Land Clearing	4200	3	9	26	9							
Storage Yard Preparation	78650	12	41	492		41	41	41	41			
Storage Yard Grading	20500	5	26	128						26	26	
Roadwork	28800	8	23	180		23	23	23				
Underground Pipe Relocation	15600	6	16	98			16					
Rail Loop	54400	14	24	340		24	24	24	24			
Other rail infrastructure (CFA)	116000	14	52	725		52	52	52	52			
Stacker-Reclaimer	75000	12	39	469					39	39	39	39
Stacker Foundations	9750	4	15	61				15				
Belt Conveyors	70695	12	37	442			37	37	37	37		
Train car Dumper / Building	54000	10	34	338				34	34	34		
Transfer Buildings	20000	12	10	125			10	10	10	10		
Electrical Power & Controls	60775	12	32	380					32	32	32	32
Miscellaneous	80000	24	21	500	21	21	21	21	21	21	21	21
Totals	688370			4302	30	160	224	257	290	198	117	92

Table 2.3 Summary of Estimated Construction Employment by Occupation

Discipline	Position	NOC Code	Time Period On-site (months)	Estimated Person-Hours	Average Number of Persons per Month on Site
Land Clearing	Heavy Equipment Operator	7521	3	4,200	9
	Labourer	7611			
	Chain Saw and Skidder Operator	8421			
	Logging Machinery Operator	8241			
	Foreman/woman	8211			
Storage Yard Preparation	Heavy Equipment Operator	7521	12	78,650	41
	Civil engineering technologists and technicians	2231			
	Land Surveyor	2154			
	Labourer	7611			
	Foreman/woman	7302			
Storage Yard Grading	Heavy Equipment Operator	7521	5	20,500	26
	Labourer	7611			
	Drillers/blasters	7372			
	Land Surveyor	2154			
	Civil Engineer	2131			
	Civil engineering technologists and technicians	2231			
	Foreman/woman	7302			
Roadwork	Heavy Equipment Operator	7521	8	28800	23
	Civil Engineer	2131			
	Civil engineering technologists and technicians	2231			
	Labourer	7611			
	Foreman/woman	7302			
Underground Pipe Relocation	Heavy Equipment Operator	7521	6	15600	16
	Pipe fitter	7252			
	Welder	7237			
	Labourer	7611			
	Foreman/woman	7203			
Rail Loop	Equipment Operator	7521	14	54400	24
	Civil Engineer	2131			
	Iron worker	7236			
	Industrial engineering and manufacturing technologists and technicians	2233			

Discipline	Position	NOC Code	Time Period On-site (months)	Estimated Person-Hours	Average Number of Persons per Month on Site
	Labourer	7611			
	Foreman/woman	7201			
Other Rail Infrastructure (CFA)	Heavy Equipment Operator	7521	14	116000	52
	Industrial engineering and manufacturing technologists and technicians	2233			
	Iron worker	7236			
	Civil engineering technologists and technicians	2231			
	Labourer	7611			
	Foreman/woman	7201			
Stacker-Reclaimer	Heavy Equipment Operator	7521	12	75000	39
	Crane Operator	7371			
	Welder	7237			
	Millwright	7311			
	Electrician	7241			
	Vendor Representative	6221			
	Electrical Engineer	2133			
	Mechanical Engineer	2132			
	Labourer	7611			
	Foreman / woman	9226			
Stacker Foundations	Equipment Operator	7521	4	9750	15
	Welder	7237			
	Iron worker	7236			
	Civil Engineer	2131			
	Labourer	7611			
	Foreman / woman	7201			
Belt Conveyors	Electrician	7242	12	70695	37
	Labourer	7611			
	Industrial engineering and manufacturing technologists and technicians	2233			
	Electrical Engineer	2133			
	Mechanical Engineer	2132			
	Foreman/woman	7201			
Train Car Dumper/ Building	Millwright	7311	10	54000	34
	Welder	7237			

Discipline	Position	NOC Code	Time Period On-site (months)	Estimated Person-Hours	Average Number of Persons per Month on Site
	Iron worker	7236			
	Electrician	7242			
	Labourer	7611			
	Foreman/woman	7201			
Transfer Buildings	Sheet Metal Worker	7233	12	20000	10
	Architect	2151			
	Civil Engineer	2131			
	Iron worker	7236			
	Roofer	7291			
	Electrician	7241			
	Equipment Operator	7521			
	Labourer	7611			
	Foreman/woman	7205			
Electrical Power & Controls	Line Man	7244	12	60775	32
	Power System Electrician	7243			
	Industrial Electrician	7241			
	Electrical power line and cable workers	7244			
	Telecommunications line and cable workers	7245			
	Telecommunications installation and repair workers	7246			
	Electrical Engineer	2133			
	Mechanical Engineer	2132			
	Labourer	7611			
	Foreman/woman	7202			
Miscellaneous	Administrator	1211	24	80000	21
	Accountant	1311			
	Human Resource Professional	1121			
	Human resources and recruitment officers	1223			
	Contract Administrator	1225			
	Receptionist	1414			
	Clerk	1411			
	Nurse	3012			
	Security Guard	6541			
	Security Manager	6316			

Discipline	Position	NOC Code	Time Period On-site (months)	Estimated Person-Hours	Average Number of Persons per Month on Site
	Health & Safety Officer	2263			
	Inspector	2263			
	Environmental Manager	2263			

Accommodations and transportation arrangements for the construction workforce would normally be made on an individual basis. Bus or ferry based transportation between Sept-Îles and Pointe-Noire Terminal may be initiated either privately or by the contracting firms if required and economically viable. Otherwise, private vehicle would be the normal transportation method to the construction site. As necessary, Alderon will engage with the municipality to address Kami Terminal issues related to accommodation and transportation.

Human resources planning, including the development of associated employment equity, apprenticeship and other strategies and plans, is in progress for the Kami Terminal, through which Alderon is consulting and working with a variety of government departments and agencies, educational institutions, labour organizations and others. The preceding section and tables have provided a general indication (current estimate) of the likely numbers and range of occupations that will be required for Kami Terminal construction, based on the current stage of planning and design. For the most part, the nature and composition of the Kami Terminal's workforce, including with regard to the associated entry requirements, skill levels and compositions, and the ratio of journeypersons and apprentices, will likely be very similar to other similar, recent development projects elsewhere. Information on the general duties and training and experience requirements for each of the occupations listed above can be found at HRSDC (2011).

2.7.2 Operations Workforce

The operations phase of the Kami Terminal will commence upon completion of construction and associated commissioning, and is expected to extend from approximately late 2015 (pre-production) to 2033. Table 2.4 provides a summary of the estimated operations workforce. As illustrated, the operations workforce will also include a range of occupations, most if not all of which will be full-time employees.

Table 2.4 Summary of Estimated Operations Employment

Position	NOC Code	Shifts /Day	Staff
Train Operations	7622 / 7361	2	2
Rail Car Dumping Operations	7521	1	2
Storage Yard	7521 / 7611	1	2
Ship Loading	7521 / 7622	1	2
System Control	7521	1	2

Position	NOC Code	Shifts /Day	Staff
Maintenance	6733 / 7312	1	3
Administration	1221 / 1241	1	2
Rail Maintenance Staff	7314	1	2
Total			17

Again, accommodations and transportation arrangements for the operations workforce would normally be made on an individual basis. It is expected that most if not all of the operational labour force will reside within commuting distance of Pointe-Noire. Bus or ferry based transportation between Sept-Îles and the Pointe-Noire Terminal may be initiated either privately or by the contracting firms, if required and economically viable. Otherwise, private vehicle would be the normal transportation method to the Kami Terminal site throughout the operation of the facility.

2.8 Alternative Means of Carrying Out the Project

As an important and valuable project planning tool, EA is intended to help inform and influence project design, and in doing so, to help address the potential environmental outcomes of proposed development projects. The EA process therefore allows for the identification, analysis and evaluation of potential alternative project concepts and approaches, in order to help directly incorporate environmental considerations into project planning at an early stage. As such, and as required under the provincial and federal EA legislation and the EIS Guidelines issued for the Kami Terminal and EA, the EIS therefore also considers possible alternative means of carrying out the project that are technically and economically feasible, and the potential environmental effects of any such alternative means.

Alternatives to developing and operating the Kami Terminal could include transporting the iron ore concentrate from the Kami Mine to one or more other port sites in Québec, Labrador or elsewhere, through the use of existing road networks and/or through the development of new road and/or railway infrastructure to one or more different such sites. The proposed Kami Terminal, as currently planned and proposed, involves the use of existing, long-standing and well established railway systems and the existing Port of Sept-Îles, which have been used to transport iron ore from existing Labrador West mining operations for over five decades, and which is to be used by a number of upcoming operations in the region. The availability and use of these existing facilities and systems, and the associated distances, processes and costs involved, are key aspects of the economic viability and attractiveness, and environmental soundness, of the Kami Terminal. Alternatives such as the use of existing road transportation to other port site(s) (such as Happy Valley – Goose Bay or others) or the development of new railway infrastructure to these other locations are not considered to be economically feasible (or environmentally preferable) alternatives to the current Kami Terminal concept.

As part of Kami Terminal planning and design, alternatives were identified and evaluated for the following elements:

- 1) Alternative locations for the proposed concentrate unloading, stacking, storage and reclaiming facility; and,

2) Alternative locations and routes for the proposed rail loop.

A summary of these various alternative means of carrying out the project and the key technical, economic and environmental factors that led to the selection of the preferred alternatives that are being proposed and assessed in this EIS is provided below. These evaluations were completed early in the Kami Terminal planning stages to allow for a focused and thorough environmental assessment of a feasible Kami Terminal.

2.8.1 Concentrate Unloading, Stacking, Storage and Reclaiming Facility

In terms of the location of the proposed concentrate unloading, stacking, storage and reclaiming facilities at the Port of Sept-Îles, the proposed Kami Terminal will be taking place within an existing and very active port site. The facility has been in operation for decades and currently supports the activities of multiple industrial users, resulting in very limited land availability, and therefore, important siting and logistical considerations.

Following an extensive land search to find potentially suitable land for the concentrate unloading, stacking, storage and reclaiming facilities, three potential locations were identified (Figure 2.6). Options 1 and 2 are blocks of land on Pointe-Noire that were proposed by the Port of Sept-Îles, both of which are located within reasonable proximity to the shiploader location and are therefore quite similar overall. Option 1 is preferred (and proposed), however, as it would involve lower overall installed costs, shorter conveyor lengths and is therefore considered to be beneficial from a technical and economic perspective. Option 3 is located on lands currently held by the Seven Islands Development Corporation east of Sept-Îles, near the mouth of the rivière Moisie. Even though Option 3 has land suitable for the concentrate storage and rail access, there is no access to the shore. The land ownership between the site and the shore is controlled by the municipality of Sept-Îles. This option would also involve the construction of a 2 km trestle to reach water of adequate depth, a wharf, berthing dolphins, and a shiploader. As it would involve different and greater degrees of construction activity, including works in the marine environment, this option was considered to be less preferable from a technical, economic and environmental perspective.

2.8.2 Rail Loop

In terms of meeting the Kami Terminal's transportation requirements, the existing rail and car dumper infrastructure that serves the Cliffs Bloom Lake operation is inadequate for the future volumes of traffic planned by both Alderon and Cliffs. The existing dead-end rail spur operation requires the current Bloom Lake trains of 160 cars to be broken into three strings for unloading. Trains of 240 cars will require separation into at least four strings to be dumped at the facility. This type of operation is considered to be relatively less efficient in terms of locomotive fuel use, emissions release and potential noise issues. For example, arrival of one Cliffs train and one Alderon train each day in this scenario would require eight round trips between the staging yard and the dumper each day. The complicated rail operations scenario was considered impractical for consistent long term product delivery to the port.

The adjacent Wabush Mines unloading facility was also eliminated as a possible option as it does not feature a rotary car dumping system and the facility is located completely on the

grounds of Cliffs Resources. Further, projects under development by others have identified this rail infrastructure as a link to port facilities which may lead to capacity issues. Also, the required construction of the necessary unloading equipment and consistent / reliable rail access on Cliffs Wabush Mines property was considered excessive given the timeframe available to develop the Alderon Kami Terminal.

The overall location for, and specific routing of, the Kami Terminal's proposed rail loop component was influenced strongly by the need for an appropriate location for an iron concentrate stockyard and associated infrastructure. Three alternative routing options (Figure 2.6) were identified and considered for the rail loop:

- 1) *Option 1:* Establishing a new rail unloading loop using the existing Cliffs Bloom Lake car dumper and portions of existing track in the vicinity, in cooperation with Cliffs Bloom Lake expansion;
- 2) *Option 2:* Constructing a new unloading loop that would circle around the outside of the planned Cliffs Bloom Lake rail loop; and,
- 3) *Option 3:* Constructing a new unloading loop to be located west of the Pointe-Noire Road including grade separation of the road and the rail loop.

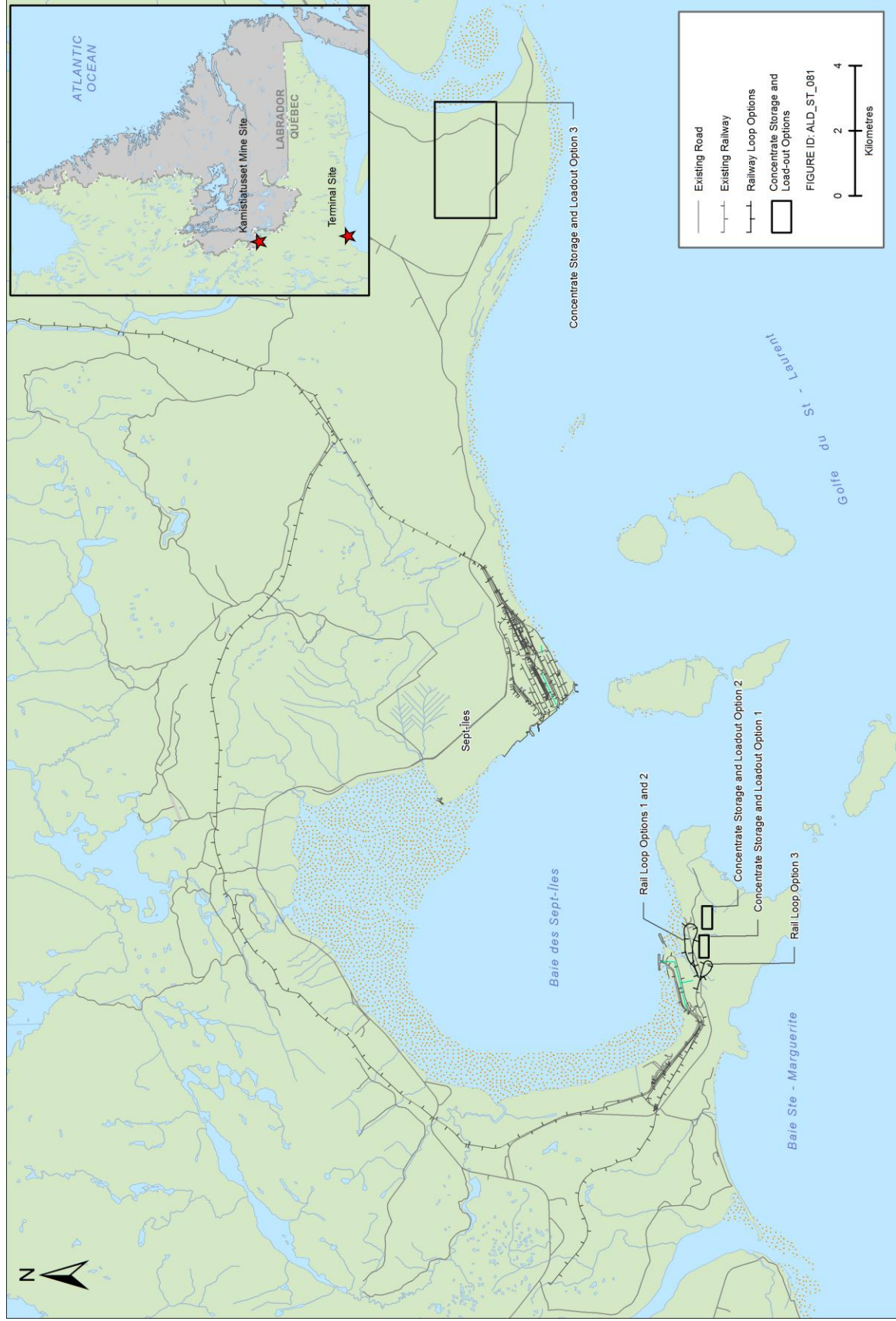
The preferred – and therefore proposed – alternative for the rail loop is Option 2, and it is this alternative that is subject to detailed assessment in this EIS.

Option 1 has the potential to save a limited amount of track construction work but carries a relatively high level of economic and operational risk. Arrangements and agreements would be necessary regarding use of the common user dumper, currently owned by Cliffs, to ensure equal access for both shippers. Option 1 offers no substantial environmental benefit versus Option 2 since both require construction of a rail loop track along the same general alignment. The grading and stream crossing requirements of both options are nearly identical. In summary, Option 1 provides an efficient track layout with minor capital cost saving, but with no appreciable environmental improvements over Option 2 and possible operations phase issues.

Option 3 requires substantial rock cutting, blasting and other earthmoving efforts. Significant quantities of rock would need to be removed from the hillside in order to accommodate the rail loop. Redirection or relocation of the stream path of ruisseau à la Baleine would also be necessary to accommodate the loop alignment. The requirement to construct a road overpass on Pointe Noire Road would also considerably alter the existing landscape. From a rail operations perspective, Option 3 provides no better rail service than the loop proposed in Option 2, with its higher cost does not yield a preferable operation. It was therefore eliminated as a possible alternative.

Neither of the technically and economically viable alternatives is expected to differ materially from the proposed (preferred) Kami Terminal in terms of its potential effects on potential or established Aboriginal and treaty rights. This is the case because the overall location, nature and functioning of the Kami Terminal will not change in a way that would change the nature or magnitude of the any potential interactions with Aboriginal communities or their activities.

Figure 2.6 Kami Terminal Alternatives that were Identified and Evaluated in Project Planning



3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT

The Kami Terminal lies within the Municipality of Sept-Îles (Figure 3.1) on Port Authority of Sept-Îles Lands, adjacent to similar load-out operating facilities (Pointe-Noire Terminal) (Figure 3.2). The Pointe-Noire Terminal has been in operation for many decades and contains several industrial and port facilities similar to the Kami Terminal. The region has long been the center of natural resource exploitation and the main resource industries are hydroelectricity generation and mining.

Figure 3.1 Municipality of Sept-Îles

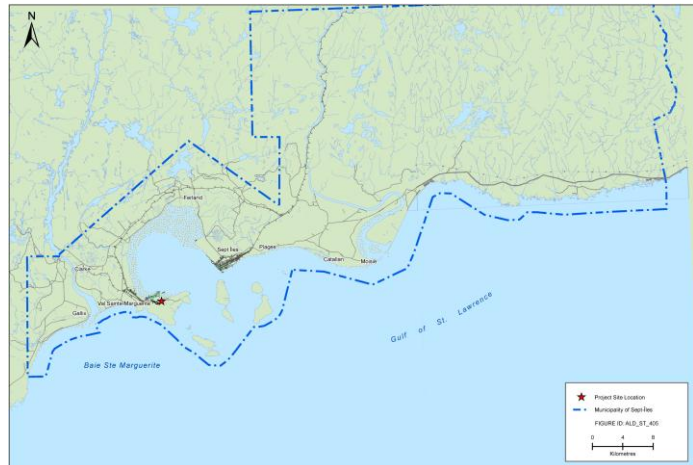
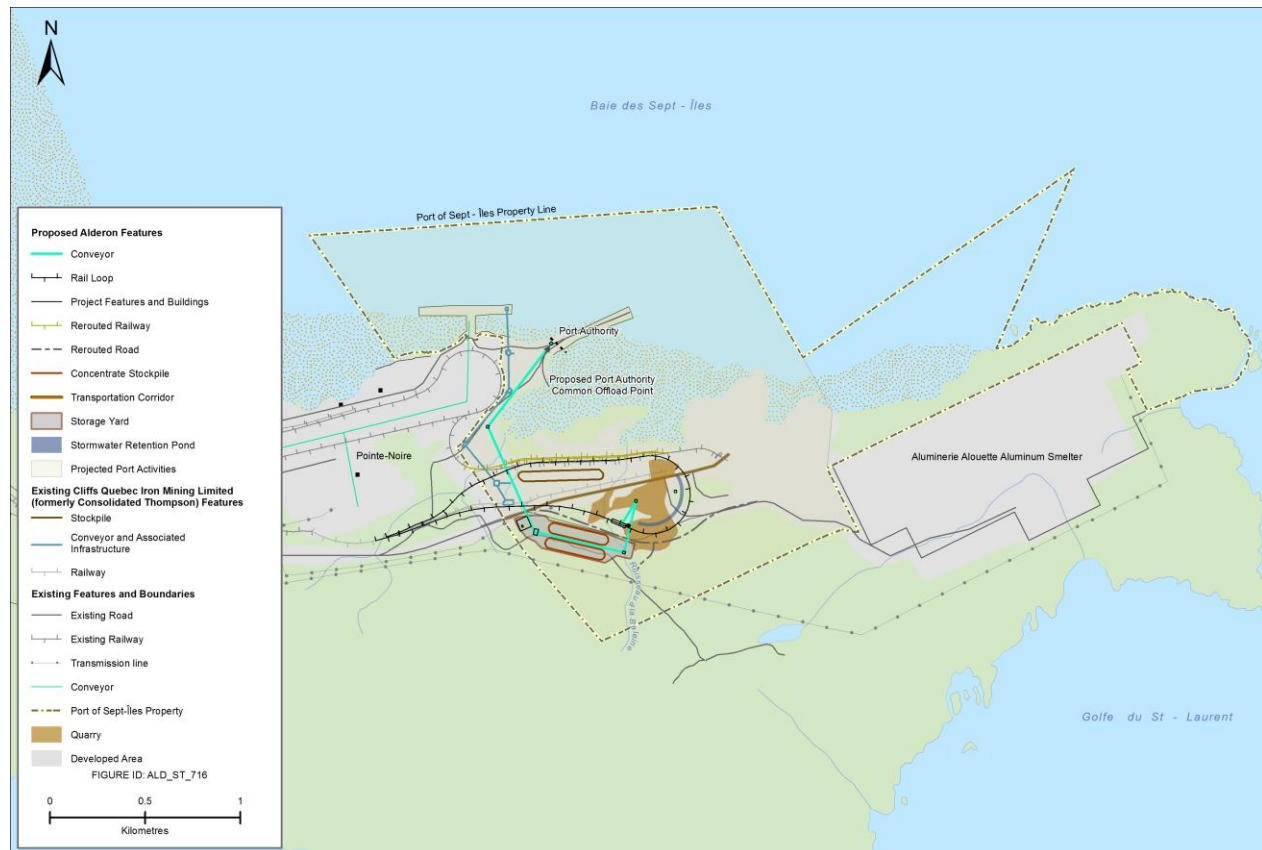
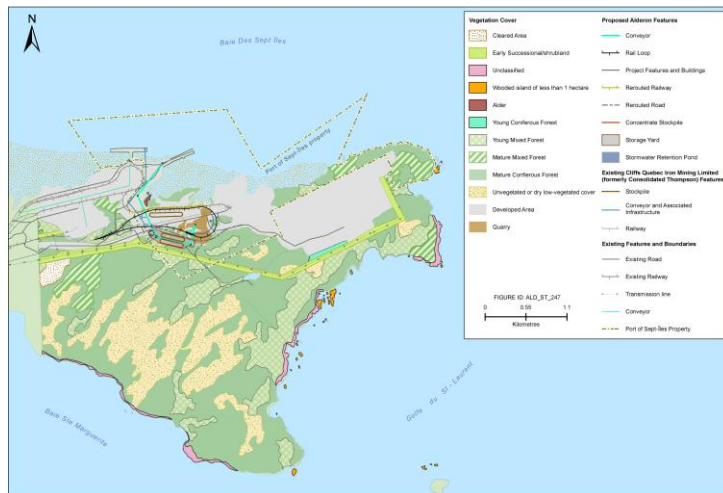


Figure 3.2 Pointe-Noire Industrial Area



Although the wide range of habitats in the Côte-Nord region makes the region attractive to a variety of bird and wildlife species, the Kami Terminal site is in an industrialized area with few natural habitats (Figure 3.2).

Figure 3.3 Habitat Types



Remaining habitat at the Kami Terminal site consists mainly of patches of young mixed forest stands and mature coniferous stands.

While freshwater fish habitat present on the Peninsula, there is none in the Kami Terminal footprint.

No species at risk, or species of conservation concern, were observed during field surveys. According to the *Centre de données sur le patrimoine naturel du Québec*

(CDPNQ) database, no flora species with special status are reported for the Port site area (personal communication, MDDEP, July 2011).

In 2009, Québec's Côte-Nord Region was home to a population of approximately 96,000, accounting for 1.2 percent of the Québec population. In 2009, Sept-Îles had a population of 25,686 inhabitants. The closest residential and recreational land uses is located approximately 1.5 km from the Kami Terminal site, in the low density Val Sainte-Marguerite.

Figure 3.4 Ancestral Territory of Innu of Uashat mak Mani-Utenam and Innu of Matimekosh-Lac John



There are two Aboriginal reserves in the vicinity of the Kami Terminal site: Uashat and Malietenam, which are located approximately 10 and 26 km, respectively, to the east of the Kami Terminal site. The Kami Terminal is located within the traditional territory of two aboriginal groups: the Innu of Uashat mak Mani-Utenam and the Innu of Matimekush-Lac John (Figure 3.4). Though located near Schefferville approximately 500 km north of Sept-Îles, the Innu of Matimekush-Lac John share their ancestral territory with the Innu of Uashat mak Mani-Utenam. Based on the information available, there is no evidence of current use of lands and resources

specifically for traditional purposes by Aboriginal Persons in the Kami Terminal area. Additionally, no Historic and Cultural Resources have been identified in the Kami Terminal area.

The EIS provides detailed descriptions of the existing biophysical and socio-economic environments that could be affected by the Kami Terminal for each VEC. Details on each specific environmental component are found in the VEC analysis in Chapters 14 through 26.

In addition, the following baseline studies were completed in support of the Kami Terminal and are provided as appendices to the EIS:

- Freshwater Fish, Fish Habitat and Fisheries (Appendix E);
- Water Resources (fresh water quality and quantity for groundwater and surface water) (Appendix F);
- Air Quality Dispersion Modelling Study (Appendix G); and,
- Socio-economic (including housing, labour force, community services, employment demands, local infrastructure) (Appendix H).

These stand-alone baseline studies support the evaluation of environmental effects, the development of mitigation measures and monitoring and follow up programs.

During the development of these baseline studies government and non-government agencies have been engaged in the design and methodology for the collection of data to help ensure a thorough and comprehensive basis for the environmental assessment.

4.0 ENVIRONMENTAL ASSESSMENT METHODS

The environmental effects of the Kami Terminal have been assessed in accordance with the CEAA and the EIS Guidelines, dated June 26, 2012 (Appendix B).

The scope of the Kami Terminal is presented in Section 1.2. The factors to be considered and the scope of the factors are presented in Sections 4.1 and 4.2; this will assist in to frame the environmental assessment and its scope. Guiding Principles are outlined in Section 4.3. The methods used to assess the effects of the Kami Terminal are described in Section 4.4. The methods used to assess cumulative effects are described in Section 4.5. The methods used to assess effects that may result from accidents and malfunctions are described in Section 4.6. The results of the effects analysis are summarized in Chapter 13; the detailed effects assessment for each of the VECs is presented in Chapters 14 to 26.

Alderon has undertaken a public consultation program and has engaged with potentially affected Aboriginal groups to understand the issues and concerns of these stakeholders. The environmental assessment focuses on these issues and concerns, using an issues-based approach so that stakeholders can see how their issues have been addressed.

4.1 Factors to be Considered

In accordance with Subsections 16(1) and (2) of CEAA and Section 3.2 of the EIS Guidelines, the EIS includes a consideration of the following factors:

- The environmental effects of the Kami Terminal, including the environmental effects of malfunctions or accidents that may occur in connection with the Kami Terminal and any cumulative environmental effects that are likely to result from the Kami Terminal in combination with other projects or activities that have been or will be carried out (Chapters 13 through 26);
- The significance of the environmental effects referenced above (Chapters 9 and 14 through 26);
- Comments from the public that are received in accordance with the Act and the regulations (Chapters 10 and 13 through 26);
- Measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the Kami Terminal (Chapters 5 and 13 through 27);
- The need for the Kami Terminal (Section 2.2);
- Alternatives to the Kami Terminal (Section 2.3);
- The purpose of the Kami Terminal (Section 2.2);

- Alternative means of carrying out the Kami Terminal that are technically and economically feasible and the environmental effects of any such alternative means (Section 2.8);
- The requirements of a follow-up program for the Kami Terminal (Chapter 27); and,
- The capacity of renewable resources that is likely to be significantly affected by the Kami Terminal to meet the needs of the present and those of the future (Chapters 14 through 26).

As stated in Section 1.1 of the EIS Guidelines, "environment" means the components of the Earth, and includes:

- (a) Land, water and air, including all layers of the atmosphere;
- (b) All organic and inorganic matter and living organisms, including human life;
- (c) The interacting natural systems that include components referred to in paragraphs (a) and (b);
- (d) The social, economic, recreational, cultural and aesthetic conditions and factors that influence the life of humans or a community;
- (e) A building, structure, machine or other device or thing made by humans;
- (f) A solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of humans; and,
- (g) A part or a combination of those things referred to in subparagraphs (a) to (f) and the interrelationships between two or more of them.

As stated in Section 1.1 of the Guidelines, "environmental effect" means, with respect to a project:

- (a) Any change that the project may cause in the present or future 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* (SARA);
- (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 addition to the factors, the EIS documents issues or concerns that were identified through regulatory, stakeholder, Aboriginal, and public consultation (Chapter 10).

4.2 Scope of the Factors to be Considered

Section 3.3 of the EIS Guidelines prescribe the scope of factors to be considered within the EIS. The scope of the factors considered in this EIS are presented in the following sections.

4.2.1 Identification of Valued Ecosystem Components

The EIS focuses on VECs, which are components or attributes of the environment that are important for ecological, legal, scientific, cultural, economic, or aesthetic reasons. The assessment considered potential environmental effects that the Kami Terminal may have on these VECs. In accordance with Section 3.3 of the EIS Guidelines, the selection of the VECs was informed by input received from regulators, stakeholders, Aboriginal groups, the public, and the Study Team.

The biophysical VECs are:

- Atmospheric Environment;
- Landforms, Soils, Snow and Ice;
- Water Resources;
- Wetlands;
- Freshwater Fish, Fish Habitat, and Fisheries;
- Birds, Other Wildlife and their Habitats, and Protected Areas; and,
- Species at Risk and Species of Conservation Concern.

The socio-economic VECs are:

- Historic and Cultural Resources;
- Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons;
- Other Current Use of Lands and Resources;
- Community Services and Infrastructure;
- Health and Community Health; and,
- Economy, Employment, and Business.

A description of each VEC and the rationale for its selection is presented for each VEC environmental effects analysis section.

4.3 Guiding Principles

4.3.1 Environmental Assessment as a Planning Tool

As indicated in Section 1.2 of the EIS Guidelines, environmental assessment is a planning tool. It is used to ensure that projects are considered in a careful and precautionary manner in order to avoid or mitigate the possible adverse environmental effects of development on the environment. It is also used to encourage decision makers to take actions that promote sustainable development and thereby achieve or maintain a healthy environment and a healthy economy.

In accordance with this, the EA of the Kami Terminal:

- Considers and evaluates alternatives (Sections 2.3 and 2.8);
- Documents consultation activities (Chapter 10);
- Proposes measures to mitigate adverse environmental effects (Chapters 13 through 27);
- Proposes measures to enhance or prolong beneficial environmental effects (Chapter 26);
- Identifies the Kami Terminal's residual environmental effects (Chapters 14 through 26);
- Assesses whether residual environmental effects are significant (Chapters 14 through 26); Assesses cumulative environmental effects (Chapters 14 through 26);
- Assesses whether cumulative environmental effects are significant (Chapters 14 through 26);
- Lists and cites all information sources (Chapter 28);
- Outlines the design of studies (Appendices F through I);
- Addresses concerns raised by the public or Aboriginal groups and ways in which the concerns have been addressed (Chapters 10 and 22); and,
- Include copies of the four required baseline studies.

4.3.2 Local Knowledge and Aboriginal Traditional Knowledge

Local knowledge has been collected by Alderon through a variety of mechanisms including meetings with Aboriginal groups and organizations and public stakeholders, public information sessions and review of existing literature. Alderon has developed an understanding of Aboriginal traditional knowledge through its direct engagement efforts with Aboriginal groups in proximity to the Kami Terminal site. Such engagement efforts have involved community meetings as well as offers of funding and technical support to assist an Aboriginal group in the collection and analysis of primary land and resource use data. Alderon has also reviewed all relevant secondary sources, including existing literature and other publicly available information provided by the Aboriginal groups in the context of other developments.

The traditional and local knowledge to which Alderon has had access has been incorporated into the EIS and has informed the description of the existing physical, biological and human environments, natural cycles, resource distribution and abundance, long and short-term trends, the use of lands and water resources, harvesting, use of lands and resources for traditional purposes, identification of issues, and the consideration of follow-up and monitoring programs.

4.3.3 Sustainable Development

Sustainable development, as presented in Section 1.2 of the EIS Guidelines, means development that meets the needs of the present, without compromising the ability of future generations to meet their own needs. The EIS considers the extent to which the Kami Terminal contributes to sustainable development by identifying, predicting, and evaluating the potential environmental effects of the Kami Terminal, evaluating the extent to which biological diversity may be affected by the Kami Terminal, and how it meets the needs of the present as well as future populations. Environmental assessment contributes to sustainable development by:

- Providing a systematic approach for identifying, predicting and evaluating the potential environmental effects of projects before decisions are made;
- Providing the means to identify mitigation measures for adverse effects;
- Enabling the integration of environmental factors into the planning and decision-making process; and,
- Providing opportunity for citizen participation.

4.3.4 Precautionary Approach

Under CEAA, one of the purposes of federal environmental assessment is to ensure that projects are considered in a careful and precautionary manner before authorities take action in connection with them, to ensure that such projects do not cause significant adverse environmental effects.

A Framework for the Application of Precaution in Science-based Decision Making About Risk (CEA Agency 2003), sets out guiding principles for the application of precaution to science-based decision making in areas of federal regulatory activity for the protection of health and safety, the environment, and the conservation of natural resources. The purpose of the framework is to:

- Improve the predictability, credibility, and consistency of the federal government's application of precaution to ensure adequate, reasonable, and cost-effective decisions;
- Support sound federal government decision making while minimizing crises and controversies and capitalizing on opportunities;
- Increase public and stakeholder confidence, in Canada and abroad, that federal precautionary decision making is rigorous, sound and credible; and
- Increase Canada's ability to positively influence international standards and the application of precaution.

In this document, the definition and “application of "precaution", "the precautionary principle", or "the precautionary approach" recognizes that the absence of full scientific certainty shall not be used as a reason for postponing decisions where there is a risk of serious or irreversible harm” (Government of Canada 2003).

The precautionary principle was considered in the design of the Kami Terminal in the following ways:

- All aspects of the Kami Terminal have been examined and planned in a careful and precautionary manner in order to ensure that they would not cause serious or irreversible damage to the environment, especially with respect to environmental functions and integrity, considering system tolerance and resilience, and/or the human health of current or future generations (Chapters 14 through 26);
- Assumptions made about the effects of all aspects of the Kami Terminal and the approaches to minimize these effects are outlined and justified (Chapters 14 through 26);
- Alternative means of carrying out the Kami Terminal were evaluated and compared in light of risk avoidance and adaptive management capacity (Sections 2.3 and 2.8);
- Priority has been given to strategies that avoid the creation of adverse effects in designing and operating the Kami Terminal (Chapters 14 through 26);
- Contingency plans that explicitly address accidents and malfunctions will be prepared (Chapter 8);
- Follow-up and monitoring activities are proposed, particularly in areas where scientific uncertainty exists in the prediction of environmental effects or effectiveness of proposed mitigation measures (Chapter 8); and,
- Present public views on the acceptability of all of the above (Chapter 10).

4.4 Methods for Assessing Environmental Effects

The environmental effects of the Kami Terminal on the VECs are assessed in Chapters 15 to 27. The methods used to assess the environmental effects are described below.

4.4.1 Valued Ecosystem Component Definition and Rationale for Selection

A description of each VEC and the rationale for its selection is presented in each VEC environmental effects analysis section. Issues that have been raised by stakeholders relating to each VEC are summarized, and linkages to other VECs are described.

The approach used to assess the Kami Terminal’s environmental effects on each VEC, and a summary of consultation with relevant regulators, is described. This includes:

- Approach to data collection / field work, if conducted;
- Primary data sources; and,

- Legislative considerations / requirements.

4.4.2 Environmental Assessment Boundaries

Boundaries are established for each VEC to focus the environmental assessment. Boundaries include spatial, temporal, and administrative.

Spatial Boundaries

The spatial boundaries for the environmental effects assessment of each VEC are defined, as described below. The PDA is the area represented by the physical footprint of the Kami Terminal as defined in Figure 4.1. The PDA is the area of physical disturbance resulting from the Kami Terminal and includes the rail loop, the ore handling and load-out facilities, the road being relocated and the conveyor system. The Local Study Area (LSA) is the maximum area within which Kami Terminal-related environmental effects can be predicted or measured with a reasonable degree of accuracy and confidence. The LSA includes the PDA and any adjacent areas where Kami Terminal-related environmental effects may reasonably be expected to occur. The LSA is defined for each VEC. The Regional Study Area (RSA) is the area within which cumulative environmental effects for each VEC may occur, depending on physical and biological conditions and the type and location of other past, present, and reasonably foreseeable projects. The RSA is the area within which the significance of Kami Terminal environmental effects is predicted. The RSA is defined for each VEC.

Temporal Boundaries

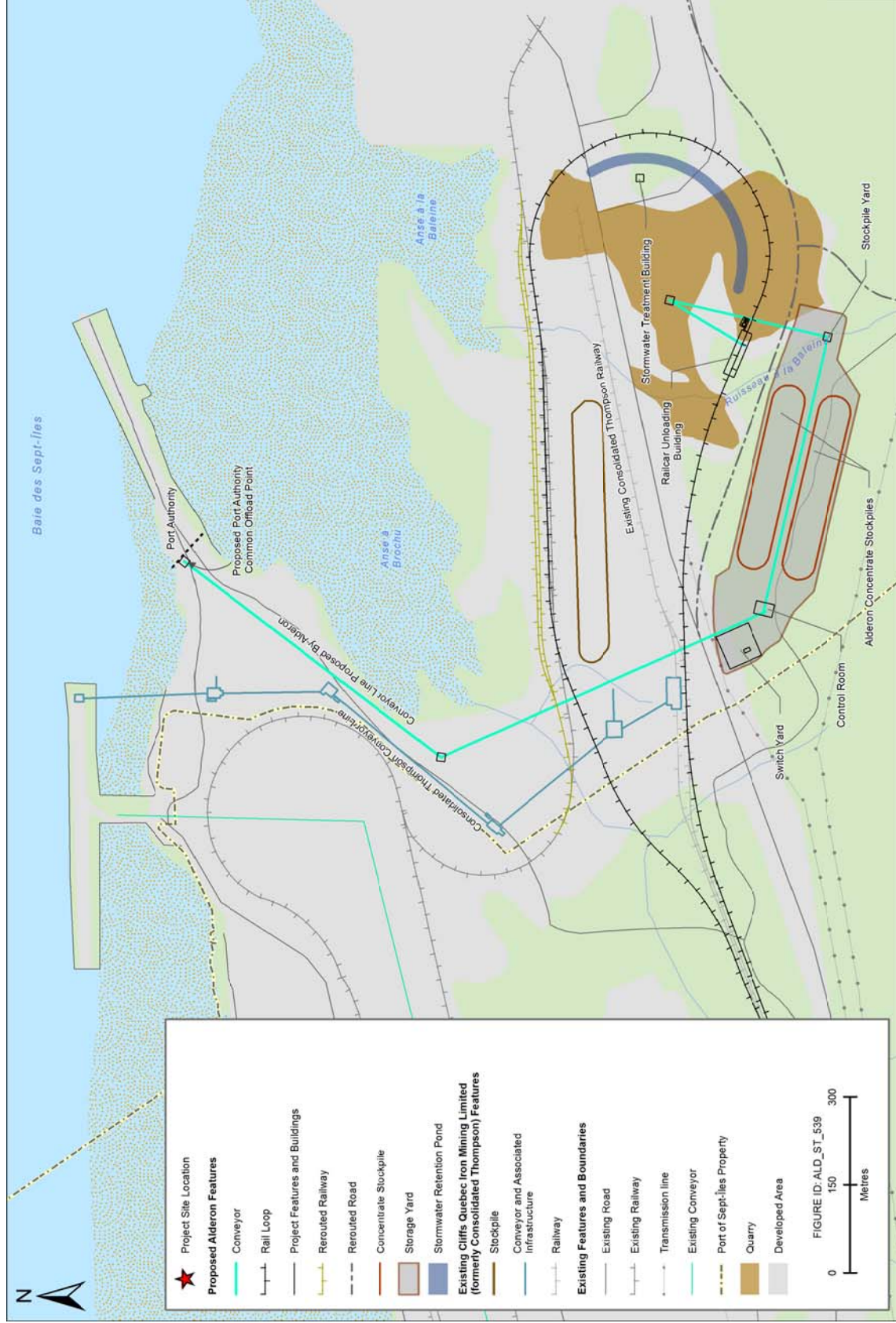
The temporal boundaries for the environmental assessment include the Kami Terminal phases of construction, operation and maintenance, and decommissioning and reclamation. The temporal boundary for construction is two years (pre-operation), for operation and maintenance is approximately 17 years, and for decommissioning and reclamation is approximately one year.

Temporal boundaries that reflect seasonal variations or life cycle requirements for biological VECs or forecasted trends for socio-economic VECs are also described.

Administrative Boundaries

Relevant regulations, policy, and administrative / management mechanisms are described for each VEC to establish the associated administrative boundaries.

Figure 4.1 Project Development Area for the Kami Terminal



4.4.3 Establishing Standards or Thresholds for Determining the Significance of Environmental Effects

As prescribed in Section 4.11 of the EIS Guidelines, the criteria for evaluating the significance of residual environmental effects, as well as pre-defined significance thresholds (i.e., significance definitions) are provided in each VEC environmental effects analysis section. The criteria for evaluating significance are: direction, magnitude, geographical extent, frequency, duration, reversibility, and ecological and socio-economic context. Pre-defined significances thresholds (i.e., significances definitions) for determining the significance of environmental effects are defined for each VEC in Chapters 14 to 26, in consideration of the above criteria, beyond which a residual environmental effect would be considered significant. Effects are rated as either “significant” or “not significant”.

An example of a significance definition is provided below:

- A significant adverse environmental effect from the Kami Terminal would cause a decline such that a sustainable population cannot be maintained within the LSA.

4.4.4 Potential Project-Valued Ecosystem Component Interactions

To ensure that all potential Kami Terminal environmental effects are assessed, activities associated with each Kami Terminal phase and with accidental events were identified. The Study Team considered each Kami Terminal activity and determined if each activity was likely to interact with each VEC to result in an environmental effect. If the activity would not result in an environmental effect (i.e., no measureable interaction), the interaction was rated as 0. If standard environmental protection measures or codified effects management measures are prescribed so that any resulting environmental effects are not significant, the interaction was rated as 1. For those interactions where standard environmental protection measures or effects management measures do not exist, and where there is more public or regulatory concern, the interaction is rated as 2. An interaction table was completed for each VEC.

To focus the assessment on important environmental effects, effects are defined and parameters are proposed to measure the effects. The rationale for selection of each environmental effect and measureable parameter is provided in each VEC-environmental effects analysis section. Detailed measureable parameters for each VEC are presented in Chapters 14 to 26. The environmental effects for each VEC are summarized in Chapter 13.

An example of the interaction table that is provided in each VEC environmental effects analysis section is presented in Table 4.1.

Table 4.1 Potential Environmental Effects of Kami Terminal to (Valued Ecosystem Component): [Example]

Kami Terminal Activities and Physical Works	Potential Environmental Effects		
	Effect 1	Effect 2	Effect 3
Construction			
Site Preparation (incl. clearing, excavation, blasting, material haulage, grading, removal of overburden and stockpiling)			
Construction of Unloading, Stacking, Storage, and Reclaiming Facilities (rail dumper building, rail car dumper and hopper, train positioner transfer houses, conveyors, dust collector, maintenance building, substation, sanitation system)			
Construction of Railway Loop			
Construction of Stream Diversion and Stream Crossings			
Access Roads and Waterline Realignment			
Onsite Vehicle / Equipment Operation			
Waste Management			
Transportation of Personnel and Goods to Site			
Expenditures			
Employment			
Operation and Maintenance			
Rail Transport			
Concentrate Handling and Stockpiling			
Water Collection, Treatment and Discharge			
Onsite Vehicle / Equipment Operation and Maintenance			
Waste Management			
Transportation of Personnel and Goods to Site			
Expenditures			
Employment			
Decommissioning and Reclamation			
Site clean-up			
Accidents and Malfunctions			
Train Derailment			
Forest Fire			
Stormwater Retention Pond Breach			
KEY			
0 = No interaction.			
1 = Interaction occurs; however based on past experience, the resulting environmental effect can be managed to acceptable levels through standard operating practices and/or through the application of best management or codified practices. No further assessment is warranted.			
2 = Interaction occurs, and resulting environmental effect may exceed acceptable levels without implementation of specific mitigation. Further assessment is warranted.			

A discussion of significance is provided for interactions rated as 0 or 1, and is not considered further in the environmental effects assessment. Interactions rated as 2 are assessed in more detail.

4.4.5 Existing Environment

The existing baseline conditions for each VEC are described for the PDA, LSA, and, if required, the RSA, resulting from historical and present activities. The level of detail is sufficient to:

- Identify, assess, and determine the significance of adverse environmental effects that may be caused by the Kami Terminal;
- Identify and characterize the beneficial effects of the Kami Terminal; and,
- Provide the data necessary to enable effective follow-up.

Existing baseline conditions for each biophysical VEC are described considering both scientific, traditional and local knowledge and perspectives regarding ecosystem health. For biological VECs, the resilience of relevant species populations, communities, and their habitats are considered, as well as the size and geographic extent and density of animal or floral populations. Habitat at regional and local scales is described for aquatic and terrestrial vegetation types and/or communities. Habitat use at regional and local scales is characterized by type of use (e.g., spawning, breeding, migration, feeding, nursery, rearing, wintering), frequency, and duration.

Existing baseline conditions for each socio-economic VEC are described, including rural, Aboriginal, and urban communities likely to be affected by the Kami Terminal, the Kami Terminal's proximity to sensitive features such as residences, cabins, public drinking water supplies, sacred sites, places of worship, and locations of hunting and gathering activities.

4.4.6 Assessment of Project-Related Environmental Effects

Potential Environmental Effects

For each of the interactions rated as 2 (i.e., those where standard environmental protection measures or effects management measures do not exist, and/or where there is more public or regulatory concern) in Table 4.1, the potential environmental effects of each Kami Terminal phase (construction, operations and maintenance, decommissioning and reclamation) are assessed for each VEC, based on the existing conditions of each VEC and existing knowledge about the environmental effects of similar projects. This information is taken from literature and from experience of similar projects.

Mitigation of Project Environmental Effects

Mitigation measures and/or effects management measures are proposed to reduce adverse environmental effects.

Characterization of Residual Project Environmental Effects

Residual environmental effects (i.e., those environmental effects that would remain after mitigation has been applied) are assessed and characterized, using the environmental effects criteria described in Section 4.4.3 (direction, magnitude, geographic extent, duration, frequency, reversibility, and context).

Summary of Project Residual Environmental Effects

The residual environmental effects of the Kami Terminal on each VEC are summarized as well as being presented in a tabular format (Table 4.2).

Table 4.2 Summary of Residual Environmental Effects of Kami Terminal: [Example]

Kami Terminal Phase	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics									Recommended Follow-up and Monitoring	
		Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Environmental or Socio-Economic Context	Significance	Prediction Confidence		
[Effect Name #1]												
Construction												
Operation and Maintenance												
Decommissioning and Reclamation												
[Effect Name #2]												
Construction												
Operation and Maintenance												
Decommissioning and Reclamation												
[Effect Name #3]												
Construction												
Operation and Maintenance												
Decommissioning and Reclamation												



Kami Terminal Phase	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics								Recommended Follow-up and Monitoring
		Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Environmental or Socio-Economic Context	Significance	
<p>KEY</p> <p>Direction: P Positive. A Adverse. N Neutral.</p> <p>Magnitude: L Low: Varies with VEC. M Moderate: Varies with VEC. H High: Varies with VEC.</p> <p>Geographic Extent: Author to use quantitative measure; or S Site (PDA); L Local: within the LSA; R Regional: within the RSA.</p> <p>Duration: Quantitative measure; or ST Short term; MT Medium term; LT Long term; P Permanent – will not change back to original condition.</p> <p>Frequency: Quantitative measure; or O Once per month or less; S Occurs sporadically at irregular intervals; R Occurs on a regular basis and at regular intervals; C Continuous.</p> <p>Reversibility: R Reversible. I Irreversible.</p> <p>Environmental or Socio-economic Context: U Undisturbed: Area relatively or not adversely affected by human activity. D Developed: Area has been substantially previously disturbed by human development (e.g., urban setting) or human development is still present. N/A Not Applicable.</p> <p>Significance: S Significant. N Not Significant.</p> <p>Prediction Confidence: Based on scientific information, statistical analysis and effectiveness of mitigation or effects management measure. L Low level of confidence. M Moderate level of confidence. H High level of confidence.</p>										

4.4.7 Determination of Significance of Residual Adverse Environmental Effects

The significance of adverse environmental effects resulting from the Kami Terminal is determined based on the pre-defined, VEC-specific significance definition, and in consideration of the application of mitigation or effects management measures.

If the environmental effects are rated as significant, then the likelihood of the environmental effect occurring (high, medium or low likelihood) is indicated. The confidence of the predictions is discussed, based on quality and/or quantity of data, understanding of environmental effect mechanisms, and/or effectiveness of the proposed mitigation / effects management.

The significance of adverse environmental effects is determined for all Kami Terminal phases, for cumulative effects, and for accidental events.

4.4.8 Follow-up and Monitoring

A follow-up program is proposed, where appropriate, to verify the accuracy of the environmental effects predictions and to determine the effectiveness of the measures implemented to mitigate adverse environmental effects. A framework is provided for those cases where there is a high level of uncertainty regarding the environmental effects prediction. The framework is detailed in Chapter 8.

Provisions regarding follow-up and monitoring within SARA are also considered in Chapter 20.

4.5 Accidents and Malfunctions

Four accidental event scenarios have been developed for the Kami Terminal. Although these events are not likely, the resulting environmental effects are assessed where relevant for each VEC.

4.5.1 Description of Potential Accidents and Malfunctions

The four potential accidents, malfunctions, unplanned events, and emergency situations, including worst cases, are described in the sections that follow.

Train Derailment

Ore concentrate will be transported from the Kami Mine Site to the Port of Sept-Îles, using the QNS&L and CFA railways, and the new rail infrastructure (Rail Loop) for the Kami Terminal at the Kami Terminal. On average, one train of iron ore concentrate will be transported each day. Each train will carry between 24,000 and 26,000 tonnes of ore concentrate in 240 railcars. Because the rail loop at the Kami Terminal will only be able to accommodate 120 rail cars at a time, inbound car trains will be split into two cuts of 120 cars at the CFA Railway staging yard. One group of 120 cars will be brought to the concentrate unloading, stacking and reclaiming facility dumper, unloaded, and returned to the staging yard. Then the second group of 120 cars will be brought over for unloading.

A train derailment could result in the depositing of iron ore concentrate on the ground or in water at stream crossings along the railways and the rail loop and in the baie des Sept-Îles. Based on experience with other train derailments on the QNS&L, the reasonable worst-case is the loss of 60 to 75 cars in a derailment as documented in Transportation Safety Board of Canada Railway Investigation Reports R95Q0019 (Government of Canada 1995) and R02Q0021 (Government of Canada 2002). The reports indicated that trains were travelling at approximately 29 mph and 34 mph, respectively when the derailments involving approximately 40 cars occurred in each case. However, trains at the Port of Sept-Îles will operate at much slower speed (15 mph maximum) and derailment magnitude decreases as speed decreases. The consequences associated with a train derailment at low speed are considerably less than for a train travelling at higher speed and it is reasonable to expect any derailment will involve no more than 75 cars per incident.

Mitigation measures to prevent derailments include:

- Manual inspection of rolling stock, undertaken before trains are loaded at the mine site, to confirm there are no problems with wheels, couplers, car body, or brakes. Inspection will also be performed after trains are emptied at the Kami Terminal. Defective equipment will be removed from the train and kept out of service until repaired.
- Electronic wayside inspection, undertaken at numerous points on the QNS&L Railway. Loaded southbound trains receive their final electronic inspection approximately 2 miles before entering the CFA Railway at Sept-Îles Junction. The system is designed to identify dragging equipment, hot wheels, and overheated axle bearings that could lead to derailment. A separate detection system on QNS&L near Labrador City identifies wheels with excessive impact forces that could damage the track and/or derail.
- Track inspections (both manual and electronic) to be carried out in accordance with Transport Canada regulations to identify track defects that could lead to derailment. Fuel will be transported by rail from the Sept-Îles area to the Kami Mine site. 30,000 gallon tank cars will be used to transport fuel.

The frequency of fuel transport is estimated at:

- Three tank cars per week of diesel heating oil during the 24-week heating season for boiler fuel; and,
- Six tank cars per week of diesel fuel for mine vehicles.

Therefore, in a worst case scenario (i.e., six tanks of diesel fuel are de-railed), 180,000 gallons of diesel fuel could be released.

Response measures to recover lost fuel include:

- Immediate response through use of absorbent booms and pads, creation of temporary pits to contain lost liquids for capture and removal. Where necessary, temporary dikes in ditches or watercourses would be installed to capture runoff for removal.

- Liquids cleanup by use of vacuum truck. This process can be used to capture both fuels and groundwater near the site for removal and disposal.
- Cleanup of rock faces with pressurized water and recovery with vacuum truck.
- Physical reclamation of contaminated soils; removal of contaminated soil and replacement with clean soil.

Forest Fire

The Kami Terminal is located next to a forest area. Although unlikely, Kami Terminal activities involving the use of heat or flame could result in a fire. The extent and duration of a resulting fire would be dependent on response efforts and meteorological conditions. Emergency response measures in case of a fire will be integrated into the existing Port of Sept-Îles, the City of Sept-Îles, and the *Société de protection des forêts contre le feu* (Sopfeu) Emergency Response Plans (ERP).

Stormwater Retention Pond Breach or Overflow

A stormwater retention pond will be created in order to collect red water generated from precipitation water runoff from the iron ore stockpiles. Red water from the pond will undergo treatment before it is released into the baie des Sept-Îles. However, in the unlikely event of a breach or overflow at the stormwater retention pond, red water could be released to the downstream environment. In such an event, it is expected that Total Suspended Solids (TSS) levels would exceed the TSS criteria of the *Canadian Water Quality Guidelines* (CWQG) published by the Canadian Council of Ministers of the Environment (CCME), but it is also anticipated that the baie des Sept-Îles could rapidly recover.

Mitigation measures in order to prevent/address a breach or an overflow of the stormwater retention pond include:

- Continuous monitoring of the water level in the pond, and generally maintained at minimum levels; and,
- Regular inspection of containment structures.

The stormwater retention pond will be lined with an impervious liner in order to prevent red water from penetrating into the underlying soils and migrating to the groundwater. The liner will be designed, installed and quality-controlled using state of the art techniques in order to minimize the risks of leakage. Mitigation measures include the installation of groundwater monitoring wells at the perimeter of the pond. Groundwater will be sampled on a regular basis to detect the presence of red water in the groundwater. However, in the unlikely event of a leak into the liner, red water detection in the groundwater monitoring system will allow for rapid intervention to identify and repair the leak.

Product Spill at Port

Iron ore concentrate will be carried from the stockpiles at the Kami Terminal to the proposed Port Authority common offload point at the terminal located at the Port of Sept-Îles using enclosed conveyors. Product loading of ships will be managed by the Port, which will comply with all applicable laws and regulations. Conveyors are designed and built in order to prevent spillage of product. The following are part of the design or of the conveyor system:

- Good surge capacity in conveyor size selection;
- Monitoring system for conveyor interruption including plugged chute detectors and belt operation sensors;
- Control system programming and interlocks to maintain safe sequence operation during normal start/stop as well as unusual and emergency operations;
- Closed circuit television monitors at transfer towers;
- Emergency stop devices along the course of the conveyor that can readily be activated when a problem is detected;
- Fire detection system; and,
- Portable fire extinguishers in case of a conveyor malfunction that involves a fire.

Also, a comprehensive preventative maintenance program will be put in place for the conveyor equipment.

Based on the design of the conveyor system (enclosed), product spill at port is not assessed further.

Premature or Permanent Shutdown

It is currently planned that the mine will be operational until approximately the end of 2033, at which time decommissioning and rehabilitation will commence. However, should market conditions change or other factors arise that result in the premature shutdown of the mine, it is expected that the port infrastructures will be divested to the Port of Sept-Îles for use by other clients.

4.5.2 Approach to Assessing Effects resulting from Accidents and Malfunctions

The potential environmental effects of each potential Accidental and Malfunction are assessed for each VEC, based on the existing conditions of each VEC and existing knowledge about the environmental effects of the accidental events. The same methods to assess the environmental effects of the Kami Terminal described in Section 4.4.6 are used.

A summary of the environmental effects analysis is provided in Table 4.3.

Table 4.3 Summary of Residual Environmental Effects for Valued Environmental Components – Accidents and Malfunctions: [Example]

Accident / Malfunction	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics										Recommended Follow-up and Monitoring
		Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Environmental or Socio-Economic Context	Significance	Prediction Confidence		
[Effect Name #1]												
Accidents and Malfunctions												
[Effect Name #2]												
Accidents and Malfunctions												
[Effect Name #3]												
Accidents and Malfunctions												



Accident / Malfunction	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics								Recommended Follow-up and Monitoring
		Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Environmental or Socio-Economic Context	Significance	
<p>KEY</p> <p>Direction: P Positive. A Adverse. N Neutral.</p> <p>Magnitude: L Low: Varies with VEC. M Moderate: Varies with VEC. H High: Varies with VEC.</p> <p>Geographic Extent: Author to use quantitative measure; or S Site (PDA); L Local: within the LSA; R Regional: within the RSA.</p> <p>Duration: Quantitative measure; or ST Short term; MT Medium term; LT Long term; P Permanent – will not change back to original condition.</p> <p>Frequency: Quantitative measure; or O Once per month or less; S Occurs sporadically at irregular intervals; R Occurs on a regular basis and at regular intervals; C Continuous.</p> <p>Reversibility: R Reversible. I Irreversible.</p> <p>Environmental or Socio-economic Context: U Undisturbed: Area relatively or not adversely affected by human activity. D Developed: Area has been substantially previously disturbed by human development (e.g., urban setting) or human development is still present. N/A Not Applicable.</p> <p>Significance: S Significant. N Not Significant.</p> <p>Prediction Confidence: Based on scientific information and statistical analysis and effectiveness of mitigation or effects management measure. L Low level of confidence. M Moderate level of confidence. H High level of confidence.</p>										

4.6 Capacity of Renewable Resources

Renewable resources that may be affected by the Kami Terminal are:

- Water resources; and,
- Waterfowl and other wildlife.

In accordance with Section 4.6.2 of the EIS Guidelines, the Kami Terminal effects were thoroughly assessed in Chapters 16 and 19. There are no likely significant adverse effects, and as a result, adverse Kami Terminal effects on the capacity of renewable resources to meet the needs of the present and those of the future are not anticipated.

5.0 AVOIDANCE AND MITIGATION MEASURES

Consistent with the environmental policy, Alderon has taken measures from the outset of planning of the Kami Terminal to avoid and mitigate effects. Wherever possible, the Kami Terminal has been planned and designed to avoid adverse environmental effects through the careful configuration of Kami Terminal components and by the use of economically and technically feasible control technologies. Where avoidance was not possible, mitigation measures have been incorporated into the design of the Kami Terminal.

The engineering design process is an iterative one, and includes considers environmental and social constraints, as well as technological constraints. The location of the concentrate handling facility was determined by the Sept-Îles Port Authority based on the port's land use plan. The location of the rail loop was based on the presence of another user of the Port, Cliffs Québec Iron Mining Limited (formerly Consolidated Thompson), and was located close and parallel to the future Consolidated Thompson rail loop to minimize the footprint of combined rail fills and foundations.

The precautionary principle was used to guide development of mitigation measures:

“Where there are risks of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for avoiding cost-effective measures to prevent environmental degradation” (United Nations Environment Programme, 1992).

The precautionary principle denotes a duty to prevent harm, when it is possible to do so, even when all the evidence is not in. This principle has been codified in several international treaties to which Canada is a signatory (Canadian Environmental Law Association 2003). Uncertainty about the magnitude or significance of environmental effects was not used as a reason to postpone economical and technically feasible mitigation. Consistent with EIS Guidelines, priority was given to avoidance wherever feasible.

The avoidance of adverse environmental effects by design was and continues to be an important principle of the Kami Terminal's design process. In addition to avoidance by design, a variety of standard mitigation practices will be applied to the Kami Terminal, and an Environmental Protection Plan (EPP) will be prepared.

5.1 Avoidance and Mitigation by Design

The engineering design process for the Kami Terminal has incorporated a variety of avoidance and mitigation measures to eliminate reduce or control adverse environmental effects related to the Kami Terminal. Examples of avoidances by design include:

- The Kami Terminal conveyor system was selected to minimize noise and will be enclosed;

- Where economically and technically possible, the Kami Terminal was designed to avoid waterbodies;
- The rail line was located close to the future Cliffs Québec Iron Mining Limited (formerly Consolidated Thompson) rail loop to minimize the combined footprint of both infrastructures;
- The retention pond was located in the proposed rail loop, which is a highly disturbed area. Water treatment will ensure that effluent release respects environmental standards; and,
- Railway design will follow the prescribed standards for track construction as set out by the AREMA and QNS&L track standards. Standard subgrade construction techniques will be applied.

Kami Terminal facilities at the Pointe-Noire Terminal, including infrastructure (e.g., site buildings, the road to be relocated to give access to the smelter and the retention pond) will be designed and constructed in accordance with all applicable laws and regulations, industry standards and codes. The applicable standards and codes and/or relevant organizations include the following:

ACGIH	American Conference of Governmental and Industrial Hygienists	ASTM	American Society for Testing and Materials
AFBMA	Anti-Friction Bearing Manufacturers Association	AWS	American Welding Society
AGMA	American Gear Manufacturer's Association	AWWA	American Water Works Association
AISI	American Iron and Steel Institute	CAGI	Compressed Air and Gas Institute
AMCA	Air Movement and Control Association	CEMA	Canadian Electrical Manufacturers Association
ANSI	American National Standards Institute	CEMA	Conveyor Equipment Manufacturers Association
API	American Petroleum Institute	CGS	Canadian Foundation Engineering Manual
ARI	American Refrigeration Institute	CGA	Canadian Gas Association
ASHRAE	American Society of Heating, Ventilating and Air Conditioning Engineers	CGS	Canadian Geotechnical Society
ASLE	American Society of Lubricating Engineers	CGSB	Canadian General Standards Board
ASME	American Society of Mechanical Engineers	CISC	Canadian Institute of Steel Construction
		CMAA	Crane Manufacturer's Association of America

CSA	Canadian Standards Association	NACE	National Association of Corrosion Engineers
CWB	Canadian Welding Bureau		
CWS	Canadian Welding Society	NBC	National Building Code of Canada
EEMAC	Electrical and Electronic Manufacturers Association of Canada	NEMA	National Electrical Manufacturers Association
FM	Factory Mutual System	NFPA	National Fire Protection Association
FPI	Fluid Power Institute	NFPA	National Fluid Power Association
HIS	Hydraulic Institute Standards	NIMA	National Insulation Manufacturers' Association
HMI	Hoist Manufacturer's Institute		
IEEE	Institute of Electrical and Electronics Engineers	PFI	Pipe Fabrication Institute
IGCI	Industrial Gas Cleaning Institute	RMA	Rubber Manufacturers' Association
ISA	Instrument Society of America	SMACNA	Sheet Metal and Air Conditioning Contractors' Association
ISO	International Organization for Standardization	SSPC	Steel Structures Painting Council
MPTA	Mechanical Power Transmission Association	TEMA	Tubular Exchanger Manufacturers' Association
MSHA	Mining Safety and Health Administration	ULC	Underwriters Laboratory Canada
MSS	Manufacturer's Standardization Society	VSMA	Vibrating Screen Manufacturers' Association

5.2 VEC-Specific Mitigation

Alderon has considered a wide variety of mitigation measures and practices, and will implement mitigation that is technically and economically feasible. More detail on Kami Terminal mitigation measures is provided, on a VEC by VEC basis, in Chapter 13 and in Part II of the EIS. This includes mitigation measures proposed for listed wildlife species, their critical habitat, or the residences of individuals of those species (Chapter 20).

Standard mitigation measures and practices will be implemented. These measures and practices are generally employed with similar iron ore mining projects and are accepted in Labrador and Canada and have been demonstrated to be effective on similar projects:

- Standard environmental protection measures for mining and construction sites include:
 - An EPP and Environmental Management Plans (EMPs), which will be developed for the Kami Terminal;

- Storage tanks for petroleum or other hazardous materials will comply with regulations and have secondary containment;
- Applicable design codes and standards will be followed in the design and construction of Kami Terminal components; and,
- ERPs (contingency plans), will be developed for the Kami Terminal and training will be conducted so that Kami Terminal employees and contractors are familiar with response measures.
- Erosion controls will be put in place, including:
 - Erosion and sedimentation controls, such as buffer zones around waterbodies, installation of ditch blocks, and silt fences.
- Atmospheric emissions such as dust and noise, will be controlled through various measures, including:
 - Dust suppression, such as watering roads and limiting certain earth-disturbing activities on especially dry and windy days;
 - Enclosed conveyors to reduce fugitive dust emissions, as required;
 - Mufflers on equipment to reduce noise;
 - Regular maintenance on vehicles and other equipment to minimize air and sound emissions;
 - No blasting during night hours to limit noise; and,
 - Blasting will be conducted in accordance with the *Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters 1998* (Department of Fisheries and Oceans).
- Standard wildlife and avifauna mitigation measures include:
 - Posted speed limits on site roads to minimize wildlife collisions;
 - Staff and contractor wildlife awareness and avoidance training; and,
 - An avifauna management plan is being developed for the Kami Terminal, and will include such measures as conducting pre-clearing surveys for active migratory bird nests.
- Standard mitigation measures for aquatic environments include:
 - Water recycling and reuse; and,
 - Maintaining vegetated buffer zones around watercourses and wetlands.
- Standard human resources planning include:
 - Orientation for new employees will include environmental policies and familiarization with protection measures as detailed in the EPP; and,

- Kami Terminal employees and contractors will undergo regular training and refreshers so that they are familiar with potential environmental issues associated with the Kami Terminal.

Of the standard mitigation measures to be used by the Kami Terminal, the risk of failure is low. Their effectiveness and reliability are well understood, as they are routinely applied to a variety of projects. However, should a mitigation measure fail, Alderon will monitor and address adverse residual environment effects. The magnitude and significance of the resultant environmental effect will depend on the nature, extent and timing of the mitigation failure.

5.3 Overview of the Environmental Protection Plan

As part of the environmental management system, an EPP is being developed for the Kami Terminal. The EPP will be a standalone, field-usable guide that outlines on-site procedures required of all Kami Terminal personnel (i.e., Alderon employees, contractors and suppliers) to reduce or eliminate potential adverse environmental effects associated with Kami Terminal activities. The Executive Vice President of Project Delivery will be responsible for preparing and implementing the EPP, including compliance. The EPP will:

- Document environmental concerns and appropriate protection measures;
- Provide a reference document for personnel when planning and conducting specific activities;
- Provide direction for accidental events management;
- Communicate changes regarding environmental protection measures through a defined revision process;
- Provide a reference to and instructions for on-site personnel to understand applicable legal, regulatory and other requirements and commitments; and,
- Provide a usable tool at the corporate level for ensuring commitments made in policy statements are implemented and monitored.

A proposed Table of Contents for the EPP follows:

1.0 INTRODUCTION

- 1.1 Purpose of the Environmental Protection Plan
- 1.2 Environmental Protection Plan Organization
- 1.3 Alderon Environmental Policy
- 1.4 Roles and Responsibilities
- 1.5 Environmental Orientation

2.0 KAMI TERMINAL OVERVIEW

- 2.1 Development of the Concentrate Unloading, Stacking, Storage and Reclaiming facility as well as the Rail Loop and Other Kami Terminal Features

- 2.2 Operation of the Concentrate Unloading, Stacking, Storage and Reclaiming facility as well as the Rail Loop and Other Kami Terminal Features
- 2.3 Clean-up and transfer of the facilities
- 3.0 REGULATORY REQUIREMENTS AND COMMITMENTS
 - 3.1 Approvals, Authorizations and Permits
 - 3.2 Compliance Standards and Monitoring
 - 3.3 Environmental Inspection and Reporting
- 4.0 ENVIRONMENTAL PROTECTION PROCEDURES
 - 4.1 Surveying
 - 4.2 Buffer Zones
 - 4.3 Laydown and Storage Areas
 - 4.4 Clearing Vegetation
 - 4.5 Grubbing and Disposal of Related Debris
 - 4.6 Overburden and Waste Rock
 - 4.7 Excavation, Embankment and Grading
 - 4.8 Erosion Prevention and Sediment Control
 - 4.9 Water Supply
 - 4.10 Trenching
 - 4.11 Watercourse Crossings
 - 4.12 Exploration Drilling, Water Well Drilling and Pump Tests
 - 4.13 Pumps and Generators
 - 4.14 Dewatering Work Areas/Trenches and Site Drainage
 - 4.15 Equipment Installation, Use and Maintenance
 - 4.16 Storage, Handling and Transfer of Fuel and Other Hazardous Material
 - 4.17 Waste Management
 - 4.18 Sewage Disposal
 - 4.19 Hazardous Waste Management
 - 4.20 Vehicle Traffic
 - 4.21 Rail Traffic
 - 4.22 Dust Control
 - 4.23 Tailings Management
 - 4.24 Snow Clearing

- 4.25 Civil Works
- 4.26 Access Road Construction and Maintenance
- 4.27 Effluent Treatment and Monitoring
- 4.28 Retention Pond
- 4.29 Installation of Buildings
- 4.30 Steel Work and Erection
- 4.31 Drilling and Blasting
- 5.0 CONTINGENCY PLANS
 - 5.1 Discovery of Historic Resources
 - 5.2 Forest Fires
 - 5.3 Fuel and Hazardous Material Spills
 - 5.4 Train Derailment
 - 5.5 Breach of Retention Pond
 - 5.6 Wildlife Encounters
- 6.0 ENVIRONMENTAL PROTECTION PLAN CONTROL REVISIONS
- 7.0 CONTACT LIST
- 8.0 REFERENCES CITED
- 9.0 SIGNATURE PAGE

When issuing requests for proposals, Alderon will include a copy of the EPP so that all prospective contractors are able to review it, and incorporate its requirements into any proposals that is submitted. Kami Terminal contractors, suppliers, consultants, and employees will be contractually obligated to comply with the EPP. Regular compliance audits will be conducted to identify any issues, and to propose solutions to problems.

The EPP will be developed as one of several EMPs (Chapter 8).

The Kami Terminal is similar to other iron ore projects in the region and proven measures will be used to mitigate environmental effects. The requirement for innovative technological solutions is not anticipated at this time.

6.0 CUMULATIVE EFFECTS ASSESSMENT

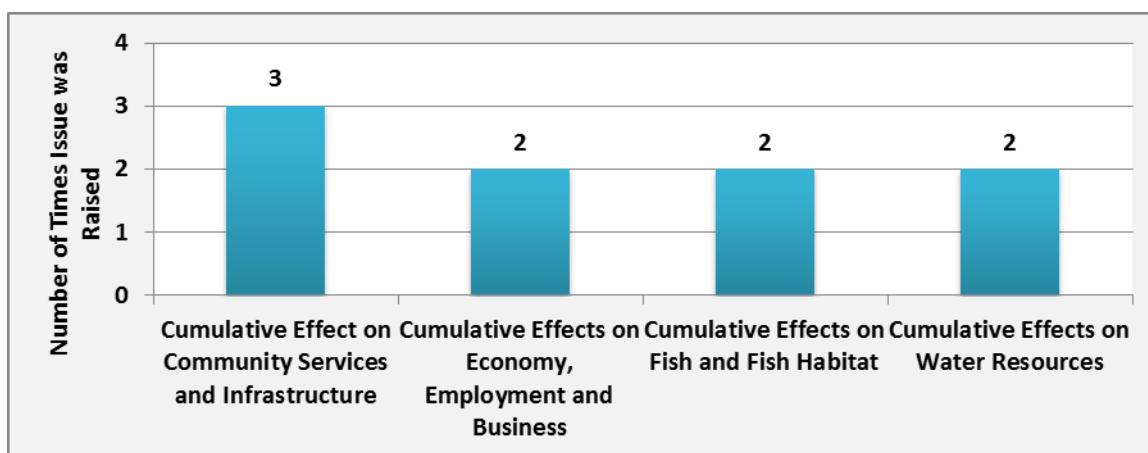
Cumulative effects are residual effects on the environment (i.e., environmental effects that occur after mitigation measures have been put in place) that are likely to arise from the Kami Terminal in combination with other projects or activities that have been or will be carried out. The significance of the residual cumulative effects that remain after mitigation has been implemented is assessed.

This section describes how the potential cumulative effects of the Kami Terminal acting in combination with other past, present, and reasonably foreseeable future activities are assessed. Detailed and VEC-specific cumulative effects assessment is provided for each VEC in Chapters 14 to 26 of the EIS. A summary of the results of the cumulative effects analyses is presented in Chapter 13.

6.1 Issues

Issues identified during consultation and engagement activities that related to cumulative effects are presented in Figure 6.1.

Figure 6.1 Frequency of Issues Raised Pertaining to Cumulative Effects



Some of the primary questions and issues related to cumulative effects that have been raised through Alderon's consultation and engagement activities to date include, for example:

- Cumulative effects on community services and infrastructure such as capacity of QNS&L railway, housing, and traffic; and,
- Cumulative effects on economy, employment and business such as opportunities for local workforces and local businesses.

A detailed record of these issues and Alderon's responses is included in Chapters 14 to 26.

6.2 Approach

Cumulative effects are assessed in the RSA specific to each VEC (i.e., the spatial boundaries in which cumulative effects are predicted to occur). The assessment focuses on the degree of change from residual environmental effects on the VECs resulting from the Kami Terminal acting in combination with other relevant on-going and future projects. The RSA typically defines the spatial boundaries for cumulative effects assessment.

The methods for assessing cumulative effects are described in Section 6.2.1, and the relevant on-going and future projects are described in Section 6.3.

6.2.1 Methods

The cumulative effects assessment methods used in this EIS address and are consistent with the requirements of CEAA and the EIS Guidelines issued by governments for the Kami Terminal, as well as the following guidance documents:

- *Operational Policy Statement – Addressing Cumulative Environmental Effects Under the Canadian Environmental Assessment Act* (Government of Canada 2007); and,
- *Cumulative Effects Assessment Practitioners Guide* (Government of Canada 1999).

In doing so, the EIS assesses and evaluates any cumulative effects that are likely to result from the Kami Terminal in combination with other projects or activities that have been or will be carried out. The cumulative effects assessment is reported in a separate subsection for each VEC. It considers the total environmental effect on the VEC as a result of the Kami Terminal's likely residual environmental effects and those of other relevant projects and activities, using the following staged approach:

1. Past and on-going projects and activities and their environmental effects are, as described earlier, reflected in the baseline (current) environment for each VEC. An overview of these previous and on-going developments and other human activities in the general area of the Kami Terminal has also been provided throughout the EIS as part of the environmental setting and context description. The current condition of the VEC as a result of these natural and/or anthropogenic factors, and thus its overall sensitivity or resiliency to further disturbance or change, is integrally considered throughout the environmental effects assessment. This current condition of the VEC is again briefly summarized at this step.
2. With the current VEC condition established, the cumulative effects assessment then summarizes and considers whether and how this current condition will be changed by the introduction of the Kami Terminal and its residual environmental effects (as assessed in detail in the earlier components of each VEC section).
3. From here, other on-going and reasonably foreseeable future projects and activities that are relevant to this VEC and its cumulative effects assessment are identified. These comprise any current or reasonably foreseeable future projects or activities whose effects on the VEC would likely overlap in space and time with those of the Kami

Terminal (e.g., overlap with the Kami Terminal area or its zone of influence affects the same wildlife populations or communities). Where such interaction with the effects of another identified project is considered likely or unlikely to occur, the rationale for this determination is also provided.

4. In cases where the predicted residual environmental effects of the Kami Terminal on the VEC will overlap in space and time with those of one or more other existing and/or future projects and activities, the potential cumulative effects of the Kami Terminal in combination with those of these other relevant developments are assessed and evaluated.

The cumulative effects assessment considers and analyzes each of the potential types of cumulative effects that may occur from:

- Possible additive effects, where the total cumulative effect is equal to the sum of the individual effects that have contributed to it);
- Interactive or synergistic effects, where the total environmental effect may be greater or less than the sum of the contributing effects, such as possible reactions between them, the exceedance of some ecological or social threshold; and,
- Induced activities and their effects.

In summary, the cumulative effects assessment assesses and evaluates the overall (total) environmental effect on the VEC resulting from the likely residual effects of the Kami Terminal in combination with those of other relevant projects and activities. In doing so, the cumulative effects assessment:

- Considers the effects of past and on-going projects and activities as part of the pre-Kami Terminal environment baseline, and integrally considers and incorporates this baseline (and the resulting current condition of the VEC) into the environmental effects assessment.
- Assesses the likely nature and degree of change from this existing (baseline) environment as a result of the Kami Terminal's effects in combination with other relevant on-going and future projects and activities.
- Concludes, for each the VEC-specific cumulative effects assessment, by providing a summary and evaluation of these predicted cumulative effects, using the same effects descriptors and significance definition and approach is used for the environmental effects assessment for the Kami Terminal.

Table 6.1 is an example of the table that is used in each VEC section to summarize the key results of the associated cumulative effects assessment.



Table 6.1 Summary of Potential Cumulative Effects: [Example]

VEC Existing Condition (Past and On-Going Activities)	Likely Effect Interaction (Y/N)	Rationale	Cumulative Effects	Geographic Extent							
				Direction	Magnitude	Duration	Frequency	Reversibility	Significance	Confidence	
Kami Terminal Residual Environmental Effects											
Other Projects and Activities											
Pointe-Noire Port Expansion (Port of Sept-Îles)											
CFA and QNS&L											
Alouette Aluminum Smelter (Aluminerie Alouette)											
Second Port-Cartier Pellet Plant (ArcelorMittal)											
Bloom Pointe-Noire Terminal (Cliffs Resources)											
Arnaud Apatite-Magnetite mine (Mine Arnaud)											
Cumulative Effects Summary (Kami Terminal + relevant other projects and activities											
Summary of the likely overall cumulative effects of the Kami Terminal in combination with the other relevant projects and activities.											

6.3 Other Projects and Activities

On-going and reasonably foreseeable future projects with environmental effects that are likely to overlap in space and time with those of the Kami Terminal are prescribed in Section 4.8 of the EIS Guidelines and include:

- Labrador Operations (existing and planned expansions) – Iron Ore Company of Canada (IOCC);
- Wabush Mines - Cliffs Resources;
- Mount Wright Mine - ArcelorMittal;
- Bloom Lake Mine and Rail Spur - Cliffs Resources;
- Schefferville Iron Ore Mine - Labrador Iron Mines;
- DSO Iron Ore Project - Tata Steel (formerly New Millennium);
- Lower Churchill Hydroelectric Generation Project; and,
- Infrastructure or other projects at the Port of Sept-Îles.

Among these projects, only the Bloom Lake Mine (not shown on Figure 6.1) and Rail Spur project by Cliffs Resources (Bloom Pointe-Noire Terminal) and infrastructure for other projects at the Port of Sept-Îles have components that can overlap with the Kami Terminal. Other projects at the Port of Sept-Îles include the following:

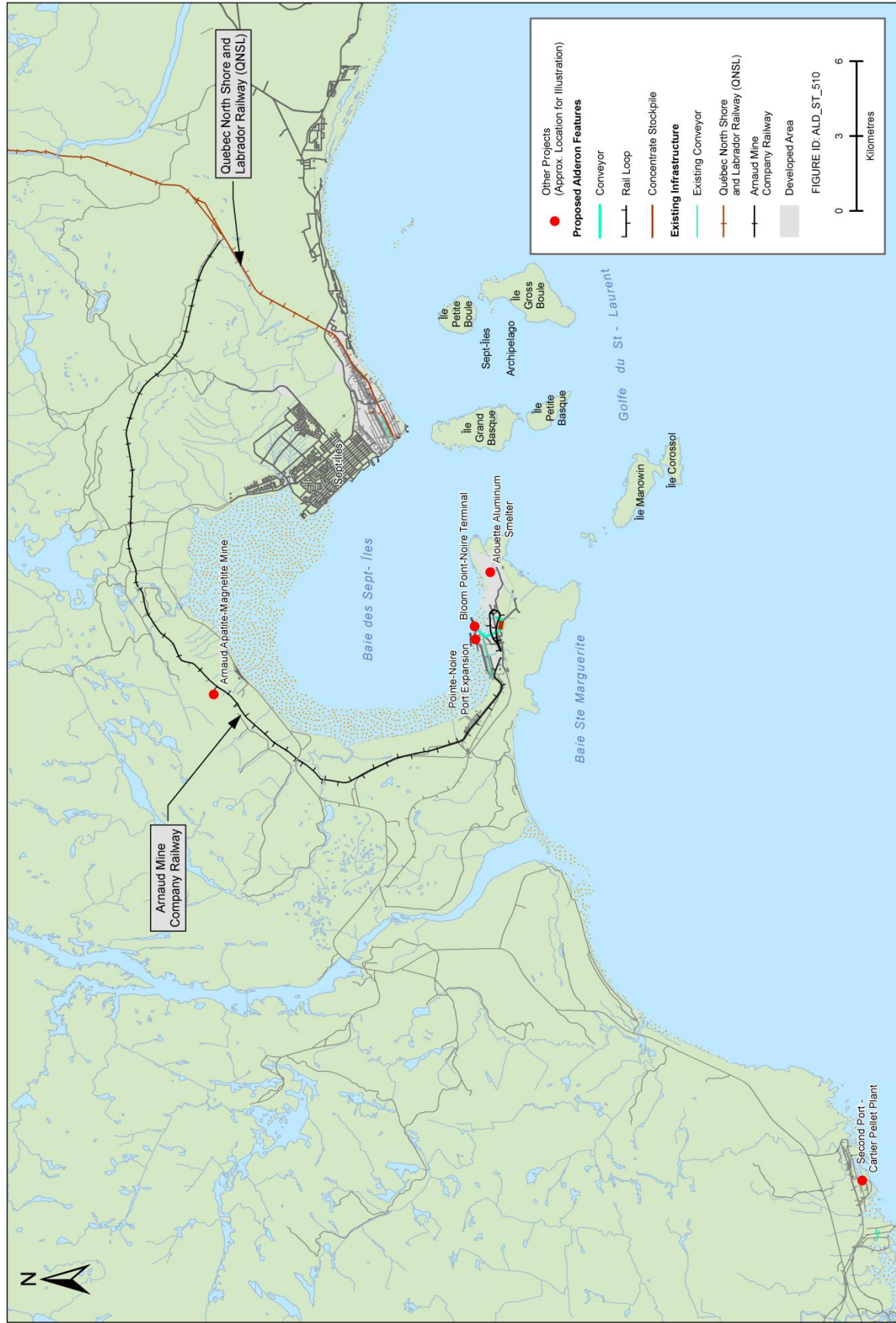
- Pointe-Noire Port expansion (Port of Sept-Îles); and,
- Alouette Aluminum Smelter (Aluminerie Alouette).

Other projects that can potentially overlap with the Kami Terminal are:

- Chemin de fer Arnaud (CFA) and Québec North Shore and Labrador (QNS&L);
- Second Port-Cartier pellet plant (ArcelorMittal), not shown on Figure 6.1; and,
- Arnaud apatite-magnetite mine (Mine Arnaud).

The locations of these projects, except for those indicated above, are shown on Figure 6.2.

Figure 6.2 Location of Other Projects and Activities



Pointe-Noire Port Expansion

According to information received from port authorities, the port plans to build a multi-user deep water dock with two ship loaders and two conveyer lines. Construction of the new facility at Pointe-Noire should be completed by the end of March 2014. Last year, the port handled 26.3 million tonnes of iron ore for mining companies, namely Cliffs Natural Resources, Consolidated Thompson Iron Mines Ltd., Labrador Iron Mines Holdings Limited, Tata Steel Limited, New Millenium Iron Corp., as well as IOCC. These companies have plans for increased production and there are a number of projects in development.

The total investment needed for port expansion is \$220 million. The federal government recently announced a contribution of \$55 million.

It is estimated that port expansion will create permanent employment for 200 workers and that construction work will generate 1,000 jobs. When all the changes have been made, the shipping capacity at the port will be 70 million tonnes per year compared to approximately 26 million tonnes in 2011. New infrastructure at Pointe-Noire terminal will make it possible for Chinamax type ships to come to port. These ships have a loading capacity that varies between 300,000 and 400,000 tonnes (Gougeon 2012).

CFA and QNS&L

The CFA Railway started in 1959 and the QNS&L Railway started in 1954. These two railways have an increase in traffic in the near future owing to the industrial boom that will in turn increase industrial shipping activity at the port. Many different mining companies are planning on using these two common carriers to access shipping infrastructure at the port. Also, it is expected that a number of changes will be needed along the rail system to accommodate increased traffic and port access.

Aluminerie Alouette Aluminum Smelter

The Aluminerie Alouette aluminum smelter is North America's largest aluminum smelter; it will become even larger with a plan to invest more than \$2 billion over 15 years (Marowits 2011). The facility is presently the tenth largest in the world; it will add 216 smelting pots at a cost of \$1.5 billion and develop a new low-energy consumption technology that will create about 300 direct jobs at the facility in Sept-Îles. The Aluminerie Alouette aluminum smelter is located immediately to the east of future Alderon Iron Ore port facilities.

Second Port-Cartier Pellet Plant

ArcelorMittal recently announced a \$2.1 billion expansion of the Mont-Wright iron mine and concentrator at Fermont, Québec. Plans call for moving twice as much ore and waste next year (Scales 2012). Ore is concentrated at the mine site and then transported by rail 420 km to the pellet plant at Port-Cartier. It is planned that these facilities be expanded.

In order to match the increase in concentrator capacity, new rolling stock is needed along with longer trains to haul concentrate to Port-Cartier.

The cost of ArcelorMittal's iron ore expansion in Québec includes \$900 million to build a second pellet plant in Port-Cartier. The engineering is not yet complete but pellet production will double from 9.2 million t/y to 18.5 million t/y. The pellet plant construction schedule is two years. However, this is on hold for now. If a decision is later made not to construct the new pellet plant, the additional concentrate from Mont-Wright will be shipped to internal and external clients via port installations in Port-Cartier.

Bloom Pointe-Noire Terminal

Cliffs Natural Resources is planning to invest \$1 billion in North America in 2012. Approximately \$470 million will be used for improving their mine in Bloom Lake near Fermont. A total of \$45 million will be used to improve its railway and port infrastructure at the Pointe-Noire terminal in Sept-Îles. This investment will make it possible for the company to increase its production to 16 million tonnes per year of iron ore concentrate (Lévesque 2012).

Arnaud Apatite-Magnetite Mine

According to the Government of Canada MPMO, Mine Arnaud Inc. proposes the development of an apatite and magnetite mine with a production capacity of 23,000 tonnes per day. It will be located approximately 15 km west of Sept-Îles. The project consists of an open pit mine, crushing plants, a processing facility, a loading system with transport by train to the port of Sept-Îles, infrastructure for hauling minerals, an electricity generating system, a tailings pond, wastewater management, and an explosives storage facility. The environmental impact assessment for this project was presented to provincial and federal regulator in March 2012.

6.4 Results of Cumulative Effects Assessment

The results of the VEC-specific cumulative effects are summarized in Chapter 13 and are presented in detail in Chapters 14 to 26. With the application of the mitigation measures proposed, there are no likely significant adverse cumulative effects predicted from the Kami Terminal in combination with other projects and activities.

6.5 Management of Cumulative Effects

The mitigation and effects management measures proposed by Alderon will mitigate the overall cumulative effect of the Kami Terminal in combination with other projects and activities. In addition, Alderon will participate in the regional economic forum which was recently been set up by the authorities and business councils of the Côte-Nord Administrative Region. The purpose of the regional economic forum is to find ways to maximize the regional economic benefits of ongoing industrial and mining projects. Alderon will collaborate with this forum with the objective of identifying means of optimizing regional access to employment and business opportunities. Other benefits enhancement measures during the construction phase include promoting regional subcontracting for materials and services and opportunities for local and Aboriginal businesses and workers.

7.0 EFFECTS OF THE ENVIRONMENT ON THE PROJECT

In accordance with EIS Guideline requirements and Section 2(1) of the CEAA, this chapter provides a discussion of the expected and potential effects of the environment on the Kami Terminal's design, construction and operation. Predictions are provided on how local conditions and natural hazards, such as severe and/or extreme weather conditions and external events (e.g., flooding, ice jams, rock slides, landslides, fire, outflow conditions and seismic events) could adversely affect the Kami Terminal and how this in turn could affect the environment (e.g., environmental emergencies due to extreme environmental conditions). Measures that will be implemented to prevent and respond to such events are also described.

7.1 Study Area

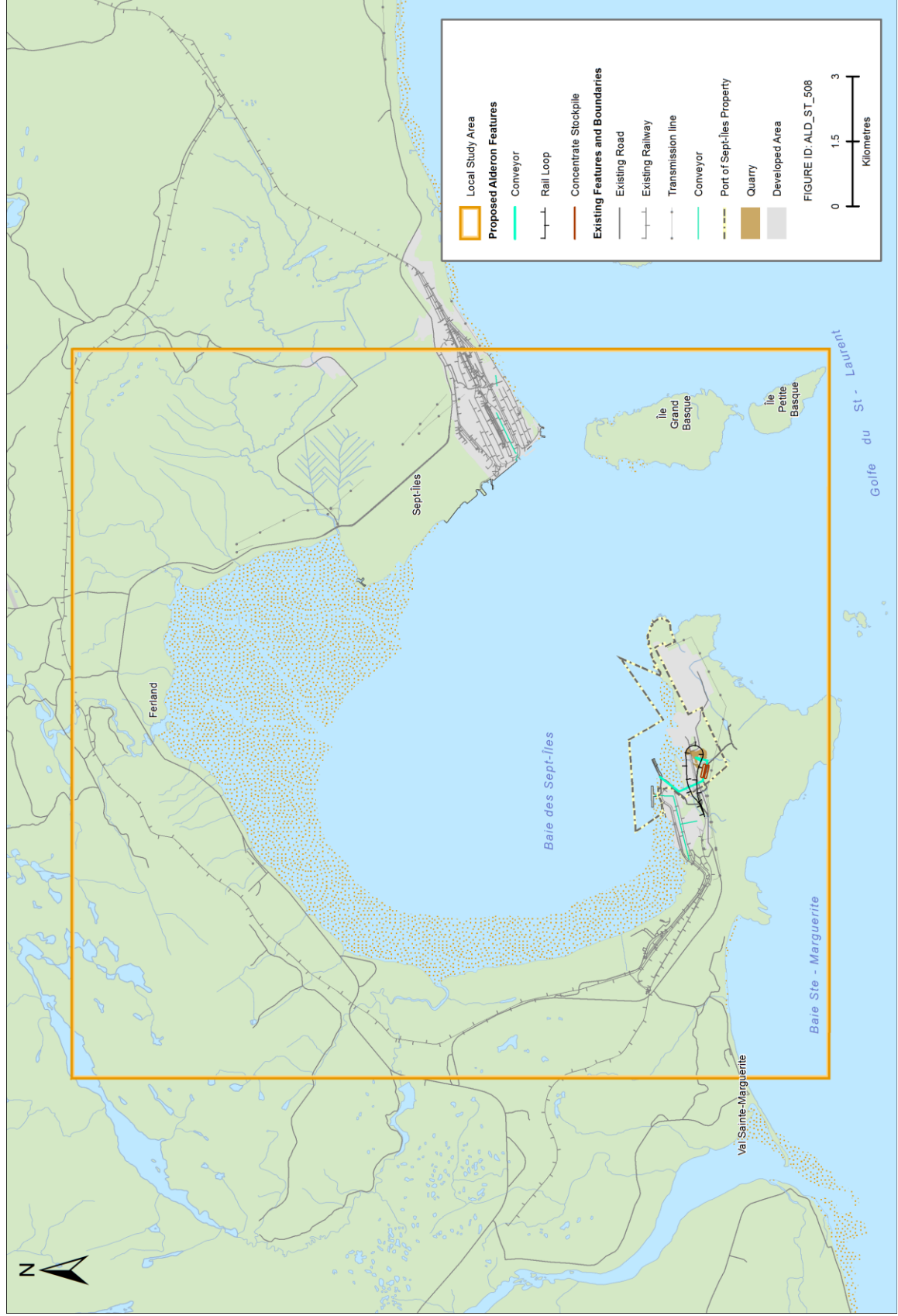
The study area for the purpose of assessing the effects of the environment on the Kami Terminal encompasses the Marconi Peninsula, its coastal area as well as baie des Sept-Îles (Figure 7.1). This was selected as the study area because the considered environmental factors such as climate and seismicity are described for a larger area; their effects being either transient (such as weather) or more widely felt (such as seismicity).

7.2 Environmental Factors Considered

The following environmental factors are listed in the EIS guidelines for the Project as a whole. In many cases, these factors relate to the Kami Mine.

- Physiography: topography, drainage network;
- Climate: historical records of total precipitation (rain and snow), mean, max and min temperatures;
- Geological context: bedrock and surficial cover stratigraphy and composition, geomechanical properties, and structural geology features such as fractures and faults, in the mine area and where major Project infrastructures and earthworks are proposed (e.g., mine open pit, infrastructures, cutting and tunneling locations along the railway route);
- Hydrogeological context: hydrogeological characteristics of the different geological units (hydraulic conductivities, porosity, storage coefficients) ; groundwater geochemistry, and groundwater levels for the areas that will be disturbed by major Project components;
- Streamflow data records (levels and yields) of surroundings lakes, rivers and brooks (Chapter 16);
- Geotechnical properties of Quaternary sediments, such as slope stability and bearing capacity of facility foundations and the railway line route under both static and dynamic conditions, including ground ice and thermal conditions;

Figure 7.1 Study Area for Effects of the Environment on the Kami Terminal



- Potential geotechnical and geophysical hazards within the Project area, including potential seasonal subsidence, seismicity and faulting, risks associated with cut/fill slopes and constructed facilities. Where appropriate, the assessment should be supplemented by illustrations such as maps, figures, cross sections and borehole logs;
- Potential effects on foundation stability of major Project components from geological fractures and faults, and associated implications of these features on Project planning and engineering design. Those Project components assessed shall include, but are not limited to railway embankments, tunnels, major watercourse crossings, and open pits; and,
- Potential effects of the groundwater level on mining operations.

For the Kami Terminal specifically, the environmental factors considered during the I design process include severity of climate (wind, temperature, severe precipitation events, ice and snow, storm surges and flooding) as well as tidal events, seismic activity (earthquakes) and climate change. These factors can produce loading or other forces that are partly incorporated into design criteria for the Kami Terminal.

Flooding is not considered an important factor because the Kami Terminal site slopes moderately toward baie des Sept-Îles and the two streams that drain the port property within the PDA have very small watersheds. Ruisseau à la Baleine, an intermittent watercourse, crosses the PDA. This watercourse is fed by runoff waters from the upstream surrounding areas and flows northward into baie des Sept-Îles near Pointe à la Baleine. The stream, near the shoreline, has been channeled and flows in a series of underground culverts. Another small intermittent watercourse with minor upstream branches is on the western side of the PDA. This watercourse also drains northward into baie des Sept-Îles, south of anse à Brochu.

Storm surges are changes in water level caused by atmospheric forcing associated with storms. Set-up from high winds, they will cause water to pile up higher than sea level. Depending on the storm track, the storm surge wave may propagate directly up on shore and, if accompanied by shoaling and funneling, will further compound the water level rise. As a result, particularly in low-lying regions or at times coincident with high tide, coastal flooding may occur. Storm surges are not expected to affect the Kami Terminal because the elevations above sea level of the equipment and structures of the Kami Terminal will prevent possible damage due to tidal storm surge sea water level changes. In addition, the equipment location and harbor barrier islands will minimize the potential for damage due to wind driven on-shore ice flows. A tsunami related event could potentially damage pier and shore area facilities, depending on the wave height, but is low probability due to water depth and the protection offered by the barrier islands. Therefore, storm surges are not discussed further.

Severe precipitation events are a governing factor in the design and construction of the facilities. Ice is an important factor in the design, construction and operation of the facilities. Earthquakes are included under seismic events and influence the design of the facilities. Baseline conditions are included in this chapter. Forest fires would have a minimal effect on the facilities due to the non-combustible construction, although short operational delays may be incurred due to smoke and burning debris. Additional discussion of forest fires is in Chapter 13.

Climate change is discussed in the context of the Kami Terminal and its potential to affect many of the environmental factors that influence the design, construction and operation of the Kami Terminal.

Information on the existing physiography conditions are provided in Chapters 15 and 16.

It is important to note that the results of photo-interpretation of the PDA indicate generally stable terrain. There is evidence of limited erosion (shallow ravines) on the course of the two existing streams and some wave related erosion directly on the coast. The PDA is characterized by generally stable terrain conditions associated with the predominance of rock lying either at ground surface or under shallow sandy till.

7.3 Current and Anticipated Environmental Conditions

7.3.1 Climate

The Sept-Îles climate is subarctic, marked by long and cold winters and short and mild summers. The presence of the Gulf of St. Lawrence causes a maritime influence, with increased humidity, fog and colder weather, especially in summer when winds are come from the south.

There are two meteorological stations located in Sept-Îles. The one at the airport measures upper air (soundings) data twice a day while the one at Pointe-Noire (closer to the Kami Terminal) measures a limited number of other parameters.

The climate normals for Sept-Îles are presented in Table 7.1 from 1971 through 2000, as measured at the Sept-Îles Airport and compiled by the Canadian Meteorological center (Environment Canada 2012). The average annual temperature is 0.8°C; the warmest month of the year is July, with an average daily temperature of 15.3°C. January is the coldest month, with an average daily temperature of -15.3°C. The extreme maximum temperature recorded at the Sept-Îles Airport is 32.2°C was in June 1947 and the minimum of -43.3°C was in January 1950.

The average annual precipitation is 757 mm and includes rain and snow (melted equivalent) precipitations. September is wettest month with an average rainfall of 113 mm. The month of February has the lowest precipitation, with an average of 67.2 mm. The maximum snowfall occurs in December with an average of 97 cm while the average maximum accumulation of snow occurs in February, with an average snow depth of 68 cm.

Figure 7.2 presents the wind rose and wind class frequency distribution for the Sept-Îles Airport and was prepared with hourly wind data as measured from 2005 to 2011. The average measured wind speed is 14.7 km/h and the most frequent wind direction (direction from which the wind blows) is east while the second most frequent wind direction is north. The maximum gust speed was measured in January 1960 with a speed of 161 km/h.

Figure 7.3 presents the wind rose and wind frequency distribution for Pointe-Noire from 2005 through 2011 and was prepared with hourly wind data. The most frequent wind direction is west and the second most frequent wind direction is west-northwest.

Table 7.1 Climate Normals for Sept-Îles Airport, 1971-2000

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temperature													
Daily Average (°C)	-15.3	-13.4	-7.1	0	5.9	11.7	15.3	14.2	9.3	3.4	-3.1	-11.3	0.8
Daily Maximum (°C)	-9.8	-7.8	-2.1	3.8	10.3	16.4	19.6	18.8	13.6	7.4	0.7	-6.5	5.4
Daily Minimum (°C)	-20.9	-19	-12.1	-3.8	1.5	7	10.9	9.6	4.8	-0.6	-7	-16.1	-3.8
Extreme Maximum (°C)	22.2	10.6	11.8	19.2	28.3	32.2	32.2	31.1	29.4	22.2	16.9	9.4	
Extreme Minimum (°C)	-43.3	-38.3	-31.7	-26.4	-11.7	-2.8	1.7	-0.6	-6.5	-12.8	-28.9	-36.5	
Precipitation													
Rainfall (mm)	9.3	10.9	26	61	83.1	99.3	99.8	91.1	113.2	97.5	48.3	18	757.4
Snowfall (cm)	87.3	59.7	64.7	37.5	9.1	0	0	0	0	7.9	49	96.9	412
Precipitation (mm)	87.4	67.2	88.8	102.8	94	99.3	99.8	91.1	113.2	106.5	97.7	108.1	1156
Average Snow Depth (cm)	56	68	66	40	5	0	0	0	0	0	5	32	23
Extreme Daily Snowfall (cm)	52	49.4	50.8	44.6	29.2	0.5	0	0	0.6	28.2	45.4	55.8	
Extreme Daily Precipitation (mm)	52	94	50.8	74.9	69.6	68.1	84.8	76.5	98.6	67	114.6	69.8	
Days with Rainfall													
>= 0.2 mm	1.6	1.3	3.6	7.9	13.3	14	15.9	14	14.4	13.8	7.1	2.3	109
>= 5 mm	0.59	0.59	1.4	3.1	5.1	6	6.2	5.6	6.9	5.7	3	0.79	44.9
>= 10 mm	0.28	0.38	0.93	2	2.8	3.1	3.1	2.9	3.9	3.4	1.6	0.50	24.9
>= 25 mm	0.07	0.10	0.28	0.71	0.46	0.86	0.75	0.67	0.93	0.73	0.33	0.14	6
Days with Snowfall													
>= 0.2 cm	15.9	11.8	12.2	7.7	1.7	0	0	0	0.07	2.9	9.8	15.7	77.7
>= 5 cm	5.6	3.8	4.3	2.5	0.57	0	0	0	0	0.42	3.3	6.2	26.7
>= 10 cm	2.9	1.5	2.1	1.1	0.29	0	0	0	0	0.12	1.6	3.3	13
>= 25 cm	0.24	0.31	0.28	0.14	0.04	0	0	0	0	0.04	0.22	0.57	1.8
Days with Precipitation													
>= 0.2 mm	16.2	12.4	13.5	12.8	13.9	14	15.9	14	14.3	15.2	14.1	16.4	172.8
>= 5 mm	5.5	3.7	5.3	5.5	5.9	6	6.2	5.6	6.9	6.3	6.1	6.1	68.8
>= 10 mm	2.7	1.8	3	3.6	3.3	3.1	3.1	2.9	3.9	3.8	3.5	3.3	37.9

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 25 mm	0.31	0.59	0.66	1.1	0.57	0.86	0.75	0.67	0.93	0.77	0.67	0.86	8.8
Wind													
Speed (km/h)	16	15.4	17	16.7	14.9	13.9	12.4	12	13.2	14.1	15.2	15.8	14.7
Most Frequent Direction	N	N	N	E	E	E	E	E	E	E	N	N	E
Maximum Hourly Speed (km/h)	97	90	80	93	83	89	64	68	80	80	89	101	
Maximum Gust Speed (km/h)	161	161	121	124	121	129	103	113	154	122	130	159	
Visibility (hours with)													
< 1 km	23.9	13.2	21.3	26.3	20	23.5	26	24.5	22.1	16.9	18	27.7	263.1
1 to 9 km	110.3	84.4	97.9	103.6	77.6	70.7	79.2	69.4	76.2	69.7	86.6	115.9	1041.6
> 9 km	609.8	579.7	624.7	590.1	646.5	625.8	638.8	650.2	621.7	657.5	615.4	600.4	7460.7
Cloud Amount (hours with)													
0 to 2 tenths	245.1	248	222	173.2	168.3	142	127.4	168.8	172.1	181.9	176.6	241.4	2266.7
3 to 7 tenths	123.8	114.1	123.8	122.3	153.6	188.9	211.5	203.5	159.6	144.8	136.8	110.8	1793.5
8 to 10 tenths	375.1	315.3	398.2	424.5	422.1	389.2	405.1	371.7	388.3	417.3	406.6	391.8	4705.2

Figure 7.2 Wind Rose and Wind Class Frequency Distribution, Sept-Îles Airport, 2005 to 2011

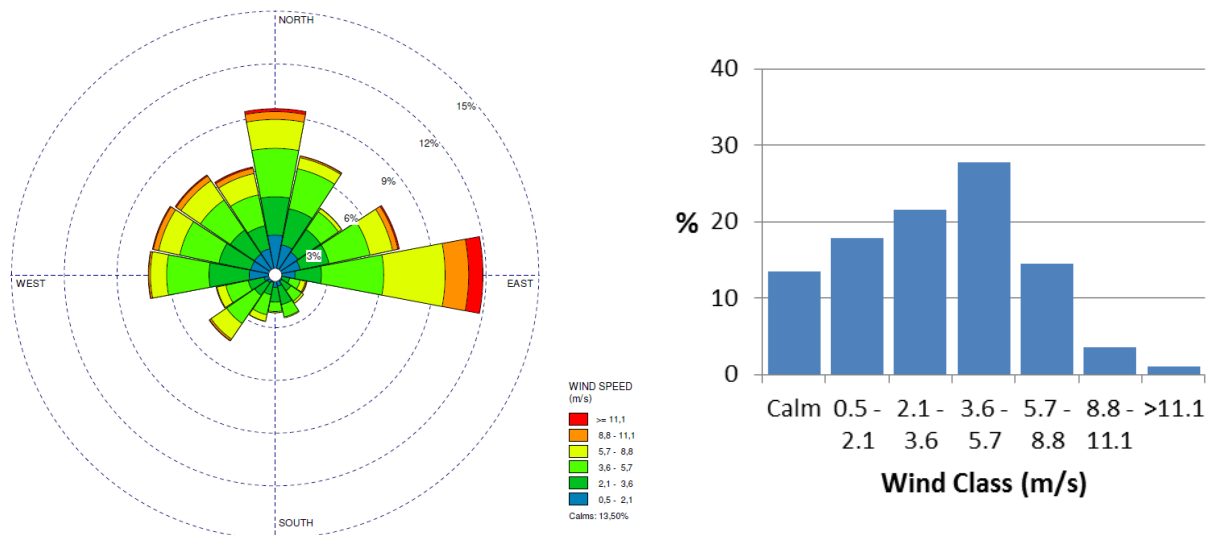
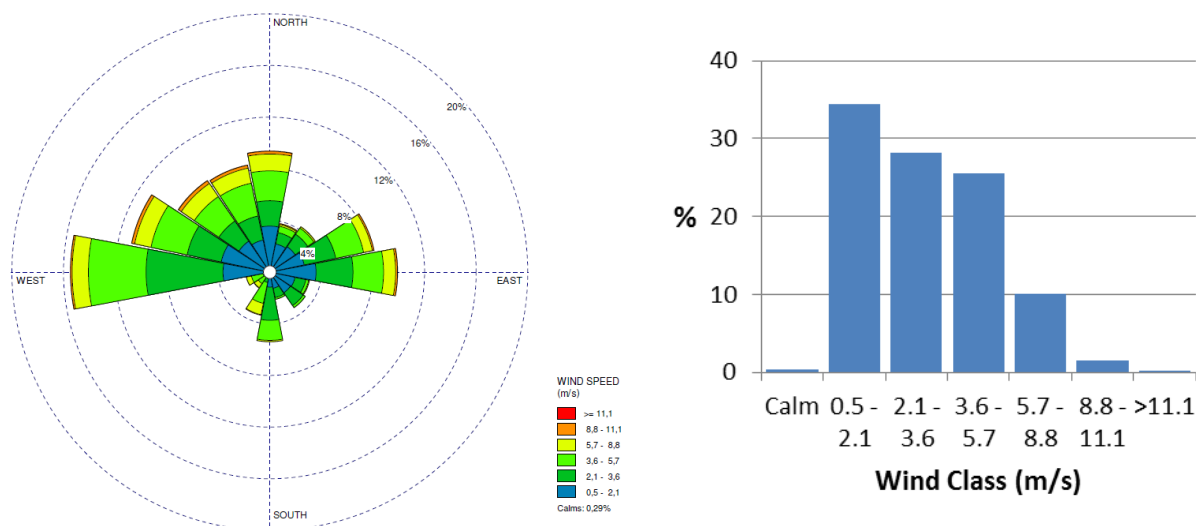


Figure 7.3 Wind Rose and Wind Class Frequency Distribution, Pointe-Noire, 2005 to 2011



7.3.2 Long Term Climate Change

Climate and weather affect the planning, design, construction, maintenance and performance of facilities such as roads, railways, shipping terminals and bridges as well as many other infrastructures throughout their service life. Although the Canadian planning system is quite robust with standards and stringent building codes, future weather conditions may reach or exceed the limits of tolerance for some parts of the system. In accordance with the EIS Guidelines and standard practice, the CEA Agency procedural guide, *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* (Agency 2003) was used as guidance.

Over the next 100 years, Atlantic Canada will likely experience warmer temperatures, a greater frequency of storm events, increasing storm intensity, rising sea level, storm surges, coastal erosion and flooding (Vasseur and Catto 2008). As indicated earlier, potential effects of climate change on operation of the Kami Terminal would be primarily related to increases in the frequency of adverse weather events and changes in precipitation.

7.3.3 Seismicity

Figure 7.4 shows the historic seismicity in the region. Natural Resources Canada (NRCan 2000) describes the rate of seismic activity in Eastern Canada as:

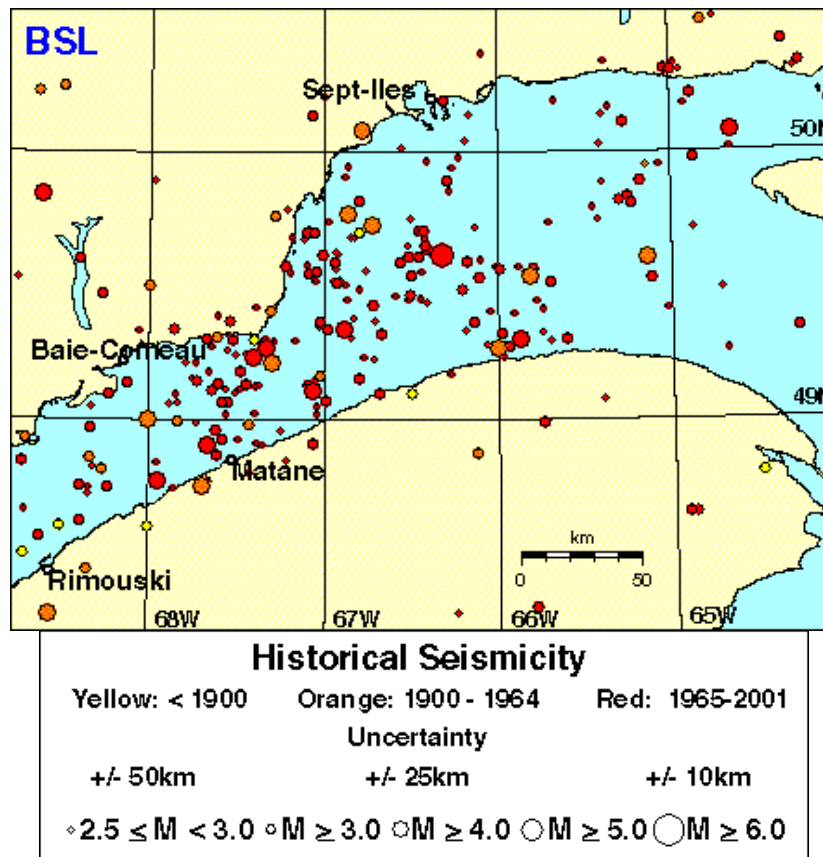
- Each year, approximately 450 earthquakes occur in eastern Canada. Of this number, perhaps four will exceed magnitude 4, thirty will exceed magnitude 3, and about twenty-five events will be reported felt. A decade will, on average, include three events greater

than magnitude 5. A magnitude 3 event is sufficiently strong to be felt in the immediate area, and a magnitude 5 event is generally the threshold of damage.

The seismicity of the Lower St. Lawrence region specifically is indicated by (NRCan 2000):

- The Lower St. Lawrence Seismic Zone (LSZ) is a seismically active region of eastern Canada. As most earthquakes occur under the St. Lawrence River, between the regions of the Québec North Shore and the Lower St. Lawrence, this zone is sometimes referred to as the "Lower-St. Lawrence-Québec North Shore" Seismic Zone.

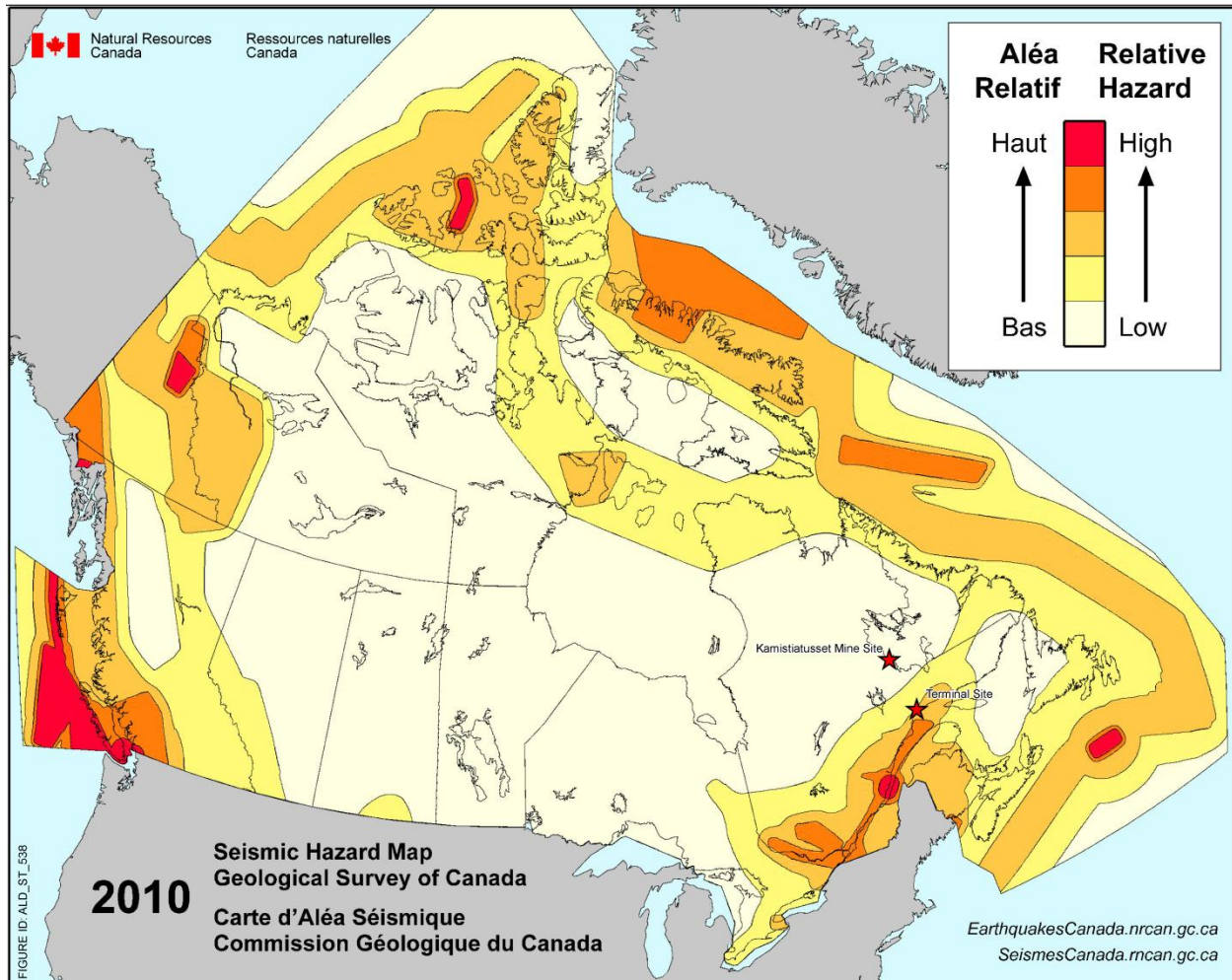
Figure 7.4 Historical Seismicity



Source: NRCan 2000

Seismic hazard for Canada is indicated in Figure 7.5. Seismic hazard is used in the National Building Code to prescribe building design. The Sept-Îles area is located within a zone that has a moderate relative hazard. The Kami Terminal infrastructure and features are designed, sited, and constructed in consideration of the risk of seismic activity.

Figure 7.5 Seismic Hazard Map for Canada



7.4 Mitigation

Ultimately, to mitigate the effects of the physical environment on the Kami Terminal, there must be adequate planning, design and operation procedures that consider the expected normal and extreme physical environmental conditions that may be encountered. There must also be adequate monitoring and forecasting of physical environment conditions. Through adequate monitoring and forecasting, Kami Terminal activities can be adaptively managed to maintain a safe working environment.

The primary mitigation tool is the implementation of sound planning. Engineering design will adhere to national and international standards. These standards document the proper engineering design for site-specific normal and extreme physical environmental conditions and provide design criteria that the regulatory agencies consider satisfactory for withstanding the potential physical environmental conditions. These codes consider physical environmental criteria such as temperature, wind, snow, and ice loading, and drainage. In addition, the design life is taken into consideration so that materials are chosen with sufficient durability and corrosion resistance.

7.4.1 Concentrate Unloading, Stacking, Storage, and Reclaiming Facilities

The Kami Terminal will be designed and constructed to receive, store and then transport the iron ore concentrate for eventual shipment to markets. The outdoor storage yard will be designed to accommodate 800,000 tonnes of concentrate (or potentially, up to a total of approximately 1,110,000 tonnes) in two piles running generally parallel to the stacker-reclaimer units. The yard will contain a liner with multiple, alternating layers of crushed gravel, geotechnical fabric, rock fill, and sand forming the yard floor. Run-off water will be collected below the surface in buried piping and will flow by gravity to a storm water retention pond for treatment prior to discharge. A stacker-reclaimer will be established at the facility, which will have a capacity matching the yard and ship loading requirements. The ore will be deposited dry and will drain toward the retention pond after rainfall. This pond is designed to contain a 100-year flood event.

The concentrate unloading, stacking, storage, and reclaiming facilities will take into consideration the surrounding environmental conditions outlined in Section 7.2. The facilities design adheres to applicable codes and standards including the following:

- Canadian Geotechnical Society - Canadian Foundation Engineering Manual;
- Mining Association (1998) of Canada's *A Guide to the Management of Tailings Facilities*; and,
- Kami Terminal-specific *Operation, Maintenance, and Surveillance Manual* for the TMF developed in accordance with the Mining Association of Canada's *Developing and Operation, Maintenance, and Surveillance Manual for Tailings and Water Management Facilities* (2003).

By adhering to these standards, the Kami Terminal design has incorporated and accommodated the potential effects of the environment during construction and operation.

7.4.2 Rail Loop

Railway design will follow the standards for track construction as set out by the AREMA (2012) and QNS&L track standards. Standard subgrade construction techniques will take into consideration the anticipated environmental conditions as identified in Section 7.2. Mitigation measures to prevent derailments include:

- Manual inspection of rolling stock will be undertaken before trains are loaded at the mine site to confirm there are no problems with wheels, couplers, car bodies, or brakes. Defective equipment will be removed from the train and kept out of service until repaired.
- Electronic wayside inspection will be undertaken on QNS&L approximately 13 km before trains enter the rail infrastructure. The system is designed to identify dragging equipment, hot wheels, and overheated axle bearings that could lead to derailment. A separate detection system approximately 5 km before trains enter the rail infrastructure identifies wheels with excessive impact forces that could damage the track and/or derail.

- Track inspections (both manual and electronic) will be carried out in accordance with Transport Canada regulations to identify track defects that could lead to derailment.

In addition, three high-horsepower, AC-traction motor-equipped locomotives will be required to operate each iron ore train; this is a new standard for heavy haul applications using locomotives. The locomotives will be arranged for distributed power operation within the train with two units on the front and one unit approximately 160 cars behind the front of the train. This arrangement helps to reduce excessive stresses in railcar couplings and provide adequate air pressure for the braking system throughout the train in severe cold weather conditions.

7.4.3 Buildings, Conveyor Systems and Associated Facilities

The site buildings, conveyor systems, roadways and retention pond will be designed and constructed in accordance with applicable laws and regulations, industry standards and codes and will incorporate and accommodate any anticipated effects of the environment. The applicable standards and codes and/or relevant organizations include the following:

ACGIH	American Conference of Governmental and Industrial Hygienists	AWWA	American Water Works Association
AFBMA	Anti-Friction Bearing Manufacturers Association	CAGI	Compressed Air and Gas Institute
AGMA	American Gear Manufacturer's Association	CEMA	Canadian Electrical Manufacturers Association
AISI	American Iron and Steel Institute	CEMA	Conveyor Equipment Manufacturers Association
AMCA	Air Movement and Control Association	CGS	Canadian Foundation Engineering Manual
ANSI	American National Standards Institute	CGA	Canadian Gas Association
API	American Petroleum Institute	CGS	Canadian Geotechnical Society
ARI	American Refrigeration Institute	CGSB	Canadian General Standards Board
ASHRAE	American Society of Heating, Ventilating and Air Conditioning Engineers	CISC	Canadian Institute of Steel Construction
ASLE	American Society of Lubricating Engineers	CMAA	Crane Manufacturer's Association of America
ASME	American Society of Mechanical Engineers	CSA	Canadian Standards Association
ASTM	American Society for Testing and Materials	CWB	Canadian Welding Bureau
AWS	American Welding Society	CWS	Canadian Welding Society
		EEMAC	Electrical and Electronic Manufacturers Association of Canada

FM	Factory Mutual System	NEMA	National Electrical Manufacturers Association
FPI	Fluid Power Institute		
HIS	Hydraulic Institute Standards	NFPA	National Fire Protection Association
HMI	Hoist Manufacturer's Institute		
IEEE	Institute of Electrical and Electronics Engineers	NFPA	National Fluid Power Association
IGCI	Industrial Gas Cleaning Institute	NIMA	National Insulation Manufacturers' Association
ISA	Instrument Society of America	PFI	Pipe Fabrication Institute
ISO	International Organization for Standardization	RMA	Rubber Manufacturers' Association
MPTA	Mechanical Power Transmission Association	SMACNA	Sheet Metal and Air Conditioning Contractors' Association
MSS	Manufacturer's Standardization Society	SSPC	Steel Structures Painting Council
NACE	National Association of Corrosion Engineers	TEMA	Tubular Exchanger Manufacturers' Association
NBC	National Building Code of Canada	ULC	Underwriters Laboratory Canada

The design and fabrication will comply with the requirements of other relevant municipal, provincial and federal authorities. In case of a discrepancy, the more rigid requirements shall govern.

All materials used for construction of site buildings will comply with applicable building codes for anticipated temperatures, winds and precipitation (rainfall, snow and ice) and will maintain designed structural integrity. The retention pond is designed for a 100-year flood event and will therefore handle extreme seasonal fluctuations (rainfall, snowfall and melt). Emergency preparedness plans will be developed and implemented in the event of anticipated oncoming extreme weather conditions.

Exterior structural steel, including conveyor supports will be selected for cold weather suitability, and coated for long-term corrosion resistance due to precipitation as well as salt spray. Serious winter ice storms could damage above ground electrical power distribution systems. Severe snow storms can delay rail car unloading or ship loading until the snow has been cleared. Strong winds and wave action can also potentially delay ship docking and leaving schedules.

7.4.4 Definition of Significant Effects

The range of effects on the Kami Terminal due to the physical environment can range from minor (e.g., production interruption or delays due to weather) to major (e.g., injury and temporary shutdown).

A significant effect of the environment on the Kami Terminal is determined to be one that:

- Results in a substantial delay in construction (e.g., more than one season) or shutdown of producing operations;
- Compromises public safety; and
- Damages infrastructure to the extent that repairs is not economically or technically feasible.

7.5 Summary of Residual Effects

The Kami Terminal is designed to meet normal climatic and seismic criteria for the Sept-Îles area. Precautions will be taken where possible, but some naturally occurring weather or seismic events may have short-term effects on operations of the Kami Terminal.

The elevations above sea level of the equipment and structures will prevent possible damage due to tidal storm surge sea water level changes. In addition, the equipment location and harbor barrier islands protection will minimize the potential for damage due to wind driven on-shore ice flows. In the event of significant seismic activity, there is a possibility that potentially loose material or trees from the hillside south of the concentrate storage yard could slide down the hill into the yard, necessitating later clean-up and removal.

The design and operational strategies as described will adequately address potential effects that the environment may have on the Kami Terminal, making it likely that:

- There will be no substantial delays in construction (e.g., more than one season);
- There will be no long term interruptions in service;
- There will be no damage to infrastructure that compromises public safety; and,
- There will be no damage to infrastructure that would not be economically or technically feasible to repair.

Therefore, the residual adverse effects of the environment on the Kami Terminal are predicted to be not significant.

8.0 ENVIRONMENTAL MANAGEMENT

The Project is a large industrial development that requires adaptive planning and management. Alderon will employ a variety of planning and management strategies throughout all Project components, including the Kami Terminal, and phases to avoid or minimize adverse environmental effects, and enhance benefits.

8.1 Planning

Alderon is committed to develop the Project within a sustainable development framework as described in its corporate environmental policy:

Alderon is committed to developing the Project in an environmentally sustainable manner as is reflected in the environmental policy.

Alderon engages in the exploration discovery, development, production and distribution of iron ore and its associated products.

Alderon believes that our opportunities to contribute to and thrive in the economies in which we operate must be earned through a demonstrated commitment to sustainable development.

Accordingly Alderon's actions will demonstrate a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our communities of interest. Our actions must reflect a broad spectrum of values that we share with our employees and communities of interest and they must underscore our ongoing efforts to protect our employees, communities, customers and the natural environment.

Alderon is committed to continually improve its environmental performance through monitoring and adaptive management. In order to achieve this, we will establish, document and maintain environmental management systems which will be integrated into all aspects of our activities. Contractors and suppliers will be required to demonstrate they adhere to our environmental policy and practices as part of our selection process and throughout Project activities.

Alderon gives high priority to minimizing the impact of activities on the environment. Reclamation of disturbed areas as a result of exploration, development or operation activities is ongoing. Alderon will ensure the establishment of a sustainable ecosystem which supports wildlife after mine closure.

In addition, Alderon has committed to the following guiding principles for development of the Project:

- *Provision of a safe and healthy work place;*
- *Minimize water crossings, and impact to rivers and lakes;*
- *Minimum footprint for all infrastructure;*
- *Minimize water consumption;*
- *Implement progressive reclamation; and,*
- *Provide opportunities for training and employment of area residents.*

One demonstration of Alderon's commitment to sustainable development is its participation in the Restoration of Labrador Exploration Sites (ROLES) Project, which involves the clean-up and restoration of abandoned mineral exploration sites. The ROLES Project, which is a collaboration between industry partners, government and aboriginal communities, was initiated in 2012. The main objective of this initiative is to clean eighteen priority abandoned exploration sites in Labrador.

Detailed EMPs, including an ERP, for all phases of the Project will be developed, in consultation with federal regulatory agencies, Aboriginal groups, the public and other stakeholders. Summaries of the EMPs will be presented at one or more public events related to the Project.

The EMPs will detail the environmental management procedures and practices that will be implemented to manage the ongoing daily operation of the Project as well as the rail loop. The EMPs will be an integral part of the development and operation of the Project. The ERP will document the procedures to be followed in the event of an emergency. The objectives of the ERP will be to establish, document, and communicate emergency response procedures that are protective of human health, the environment and the Project.

The EMPs and ERP will specify responsibilities and resources, and include a contact list, a summary of response and reporting requirements, and an inventory of safety and response equipment. The EMPs and response procedures will be developed in accordance with permitting or other regulatory instruments for the Project, as well as the environmental management requirements identified during the environmental assessment of the Project.

Consistent with Alderon's environmental policy, the management of Kami Terminal features and activities that may result in environmental effects is described below.

8.1.1 Emissions, Discharges and Waste Management

Emissions, discharges, and wastes will be managed so as to avoid contamination of the surrounding environment through untreated or unplanned releases. Mitigation measures and management strategies are summarized below for specific types of emissions, discharges and wastes.

8.1.2 Water Management

A Water Management Plan (WMP) is being developed for the Kami Terminal. This plan outlines water management in and around major Kami Terminal components. Of particular interest in the case of the Kami Terminal is water management through the use of a stormwater retention pond and the separation of clean water entering the PDA from the runoff associated with precipitation at the concentrate unloading, stacking, storage, and reclaiming facilities (red water).

Water on the Kami Terminal site requires careful management for several reasons, including:

- The proximity of the Kami Terminal to baie des Sept-Îles and the presence of two watercourses poses the potential for contamination and sedimentation if site runoff is not carefully managed;
- Red water run-off from the concentrate unloading, stacking, storage, and reclaiming facilities that may also be high in TSS and therefore will require treatment; and,
- The WMP will describe how water on the site will be diverted, collected, treated, and stored so as to avoid adverse environmental effects and enhance Kami Terminal efficiencies through water conservation.

8.1.3 Site Drainage

Drainage management is required to minimize surface erosion, scour and sedimentation. Specific drainage control measures will be developed for the Kami Terminal component areas including:

- Development of surface ditches and ponds to control storm water runoff; and,
- Installation of culverts to allow for cross-drainage of roads, concentrate unloading, stacking, storage, and reclaiming facilities, and rail line.

8.1.4 Rock fill Management and Ore Concentrate Management

Rockfill material is expected to be chemically inert and not present a risk for Acid Rock Drainage or Metal Leaching (ARD / ML).. Rockfill will be used for the general construction of roads, railway beds, and foundation of the concentrate unloading, stacking, storage, and reclaiming facilities. Testing done on the ore concentrate indicates that ARD / ML leaching will not occur.

8.1.5 Solid Waste

Solid waste generated by all phases of the Kami Terminal will consist of domestic solid waste and construction waste. A WMP will be developed so that waste is handled and disposed of safely and in an approved manner. Domestic solid waste will be separated into recyclable and non-recyclable portions, and sent to licensed, existing facilities, with the approval of the operator. Alderon will coordinate with the Port Authority for approval to use their landfill for domestic solid waste.

8.1.6 Hazardous Waste

Small quantities of used and waste oils, solvents and other chemicals may be kept at the Kami Terminal site. These hazardous wastes will be stored in secured, labeled containers and Material Safety Data Sheet (MSDS) information sheets will be available for all chemicals used or kept at the Kami Terminal site. A used oil storage tank will be on site and used oil will be collected for recycling or reuse. The collection, storage, transportation, and disposal of used oil will be compliant with local regulations. A licensed hazardous waste disposal company will be engaged to dispose such material.

8.1.7 Sewerage

Sewage generated by at the Kami Terminal site will be pumped through underground piping to the existing port sewage treatment system.

8.1.8 Hazardous Materials

Hazardous materials on site will generally be limited to hydrocarbon products. The use, storage, and handling of fuels and oils, solvents and grease, and other petroleum products will comply with local regulations. Above ground fuel storage tanks will have secondary containment measures with 110 percent capacity. Spill kits will be readily available in the event of a fuel spill. Other hazardous materials that will likely be present on site include batteries, which will be stored in a secured, dyked area. MSDS information sheets will be available for all applicable chemicals used or kept at the Kami Terminal site.

8.1.9 Dust and Air Quality

The primary air emission from the Kami Terminal will be dust. Numerous dust suppression techniques will be used:

- Work areas and roads will be watered regularly during dry periods;
- Conveyors will be enclosed; and,
- Dust-generating activities will be limited on dry, very windy days, unless sufficient watering is available.

Air emissions will also be released during the operation of heavy equipment and passenger vehicles. These emissions will consist of combustion by-products. Emissions from heavy equipment and passenger vehicles will be minimized by ensuring that equipment and vehicles are maintained and functioning properly. An anti-idling policy will be in place for all passenger vehicles.

Mitigation measures and management of air emissions are detailed in Chapter 14.

8.1.10 Noise

Sources of sound from the Kami Terminal will include blasting, excavation, and the operation of heavy equipment, machinery (conveyors), and vehicles. Standard mitigation measures will be used to attenuate sound dispersion, including using mufflers on vehicles, and enclosing machinery in buildings or other encasements.

Mitigation and management of noise are detailed in Chapter 14.

8.1.11 Clean-up and Transfer Plan

The Clean-up and Transfer Plan will address ownership, transfer, and control of Kami Terminal components and the responsibility for monitoring and maintaining Kami Terminal structures. Specifically, it will describe how:

- Hazardous chemicals, reagents, and materials will be removed;
- Any equipment deemed potentially hazardous will be removed from the site and disposed of in accordance with appropriate regulations;
- Material and equipment with salvage value will be removed and sold;
- Fuel storage and dispensing facilities will be removed;
- Soil and groundwater conditions in areas that warrant assessment (e.g., fuel dispensing facility, ore storage areas) will be assessed and remedial measures will be implemented where necessary;
- Dewatering wells and groundwater monitoring wells will be decommissioned;
- Grading and/or scarification of disturbed areas will be undertaken to promote natural re-vegetation, or, in areas where natural re-vegetation is not sufficiently rapid to control erosion and sedimentation, the placement and grading of overburden will be considered; and,
- Any other special clean-up requirements associated with the site will be undertaken.

8.2 Environmental Management Plans

A variety of EMPs will be developed for the Kami Terminal in consultation with federal and provincial government agencies, Aboriginal groups, the public, and other stakeholders as described in Section 8.1. The EMPs will be developed using pertinent legislation, regulations, industry standards, and guidance. The following plans will be developed and in place prior to the activities they will govern:

- An EPP will be developed for the Kami Terminal. In general, the EPP will identify environmental concerns and general protection measures that are to be considered in developing mitigation, and will outline the general environmental protection measures to be followed for Kami Terminal work. It will be updated and modified regularly according to

the Kami Terminal phase and as determined by site-specific conditions. A table of contents for the EPP is provided in Chapter 5.

- As described in Section 8.1.2, the WMP will outline water management in and around the Kami Terminal component areas.
- As described in Section 8.1.11, a Clean-up and Transfer Plan will be developed for the Kami Terminal.
- An ERP (Contingency Plan) will be developed to, among other things, prevent spills that may result in adverse environmental effects, and to provide a response framework to quickly and effectively respond to a spill in the unlikely event that one should occur.
- A WMP will be developed for domestic waste in order to maximize recycling and waste reduction and to minimize waste sent to landfill.

The timing for the preparation and updating of these plans is presented in Table 8.1.

Table 8.1 Environmental Management Plans

Plans	Prepared / Updated In		
	Construction (includes any pre-construction activities) Phase	Operation and Maintenance Phase	Decommissioning and Reclamation Phase
Clean-up and Transfer Plan		x	x
Emergency Response Plan (Contingency Plan)	x	x	x
Waste Management Plan	x	x	
Environmental Protection Plan	x	x	x

In addition to the EMPs, a Health and Safety Program will be developed and Hazard Identification and Risk Assessment will be undertaken.

- The health and safety of Kami Terminal employees and the general public is of primary importance to the Proponent, as is the commitment to minimize environmental effects. Accordingly, the Proponent will take a proactive approach toward maintaining a safe and secure work environment. A Health and Safety Program will be established for the Kami Terminal and will be regularly reviewed and updated so that best practices are in use to promote a safe and healthy work environment.
- The Hazard Identification and Risk Assessment will identify existing or potential health, safety, or environmental hazards and will be conducted before work begins. In addition to the identification of hazards, actions required to eliminate or mitigate such hazards will also be identified. The objective is to identify hazards and to eliminate or mitigate them to the lowest practical level, and to define safe work practices or procedures to minimize the potential for a worker injury or an environmental incident.

8.3 Follow-up and Monitoring Program

A follow-up and monitoring program will be designed and conducted, as appropriate, during all phases of the Kami Terminal. The requirement for follow-up and monitoring has been determined based on the results of the EIS; programs are presented for each VEC, where warranted, in Chapters 14 to 26. A summary is provided in Chapter 27.

The purpose of the follow-up program is to verify the accuracy of the predictions made in the environmental assessment as well as the effectiveness of the mitigation measures. Follow-up programs are proposed in those cases where the level of confidence in an effects prediction is low due to the nature of the effect (i.e., unique or relatively unknown). This information will be used to refine and optimize mitigation measures and implement adaptive management measures associated with the Kami Terminal.

Compliance and inspection monitoring will also be conducted, the object of which is to confirm that the Kami Terminal is being operated in compliance with mitigation commitments, and that releases from the Kami Terminal meet regulated levels. Elements of compliance and inspection monitoring will also be incorporated into the EPP.

Based on the results of the environmental effects analysis, an initial list of candidate follow-up monitoring programs, including those for species at risk, are presented in Table 8.2. For the purpose of the follow-up program, the Kami Terminal phases are defined as the construction phase, the operation and maintenance phase and the decommissioning and reclamation phase (clean-up and transfer).

Table 8.2 Summary of Follow-up and Monitoring Program

VEC / Topic	Proposed Monitoring Objective or Activity	Monitoring Area or Location	Construction	Operation and Maintenance	Decommissioning and Reclamation
Atmospheric Environment	Monitor CO emissions from blasting near Kami Terminal site with portable monitors.	Local Study Area	x		
	Participate in air quality monitoring program initiated in Sept-Îles.	Potentially Plage Sainte-Marguerite		x	
	Noise monitoring.	Local Study Area	x	x	x
Water Resources	Monitoring of water quality to ensure compliance with the MDDEP Directive 019 guidelines, CCME water quality requirements for the protection of aquatic life and Québec surface water criteria for the protection of aquatic life.	Stormwater Retention Pond Discharge		x	

VEC / Topic	Proposed Monitoring Objective or Activity	Monitoring Area or Location	Construction	Operation and Maintenance	Decommissioning and Reclamation
Birds, Other Wildlife and Their Habitats, and Protected Areas	On-site monitoring for compliance with the EPP.	Local Study Area	x	x	
Species at Risk and Species of Special Conservation Concern	On-Site Monitoring for compliance with the EPP.	Local Study Area	x	x	x
Historic and Cultural Resources	Adhere to all federal and provincial archaeological legislation.	Local Study Area	x		
	On-site monitoring for compliance with the EPP.	Local Study Area	x		
Current Use of Lands and Resources for Traditional Purposes by Aboriginal Persons	Any follow-up and monitoring programs that have been identified and proposed for other VECs (particularly for the biophysical environment) will be indirectly applicable to land and resource use.	Local Study Area	x	x	x
Other Current Uses of Lands and Resources	Participate in air quality monitoring program in Sept-Îles.		x	x	x
Community Services and Infrastructure	Monitor local housing indicators (e.g., vacancy rates, rental prices, sale prices.).	Local Study Area	x		
Economy, Employment and Business	Promote opportunities for local and aboriginal businesses and workers.	Regional Study Area	x	x	
	Promote regional subcontracting and services.	Regional Study Area	x	x	

The follow-up and monitoring program will be finalized after release from the EA process, and prior to the relevant Kami Terminal phase (i.e., construction, operation and maintenance, decommissioning and reclamation). The frequency and duration of monitoring will be determined at that time. Monitoring objectives (i.e., confirmation of mitigation, confirmation of assumptions, and verification of predicted effects) will be established within a field-testable and statistically verifiable framework.

In accordance with the CEA Agency's *Operational Policy Statement on Follow-up Programs* under the *Canadian Environmental Assessment Act* (2011), feedback for the follow-up program will be received on the following topics:

- Requirements and objectives of the program;
- Monitoring program details;

- Duration of program;
- Data collection methods; and,
- Roles and responsibilities.

Results of the follow-up and monitoring program will be reported on an annual basis to the relevant government agencies, and will be shared with Aboriginal groups and the public. Although not currently foreseen, if required, Alderon will retain the services of independent researchers.

In the event of an unforeseen effect, or where benchmarks, regulatory standards, or guidelines are exceeded, Alderon will work with regulatory agencies to identify the underlying cause and to address it in an adaptive manner.

If potential adverse environmental effects are identified for a listed wildlife species or its critical habitat, a monitoring plan will be developed. Government departments responsible for the species in question would be engaged in developing adaptive management measures to effectively mitigate the adverse environmental effects. A detailed assessment of the Kami Terminal on species at risk is provided in Chapter 20.

9.0 SIGNIFICANCE OF RESIDUAL ADVERSE ENVIRONMENTAL EFFECTS

Residual environmental effects of the Kami Terminal on the biophysical and human environments, after mitigation has been applied, are summarized in Chapter 13 and are detailed in Chapters 14 to 26.

The CEA Agency's reference guide *Determining Whether a Project is likely to Cause Significant Adverse Environmental Effects* (November 1994) was used as an information source to determine the significance of environmental effects. Depending on the nature of the environmental effect, the threshold for significance is based on existing federal and provincial regulatory standards, sustainability of populations, levels of economic activity, capacity of existing infrastructure and services, or levels of Aboriginal and other current land and resource use. The pre-defined significance thresholds for each VEC are presented in Chapter 13 and Chapters 14 to 26. In accordance with CEA Agency guidance and the EIS Guidelines, professional expertise was also applied in addition to the CEA Agency criteria for evaluating the significance of the residual environmental effects, including cumulative effects. Criteria were direction, magnitude, duration, frequency, ecological or socioeconomic context, geographic extent, and degree of reversibility. Likelihood and confidence level are also considered. Criteria are defined and described for each VEC in Chapters 14 to 26.

To determine if the effects will be significant, an analysis of Kami Terminal effects, including cumulative effects and effects resulting from accidents and malfunctions, for each VEC was conducted. The level of confidence for the determination of significance is generally high, based on the:

- Analyses conducted;
- Knowledge base pertaining to the Kami Terminal and other similar iron ore projects in the area; and,
- Knowledge base pertaining to the surrounding environment.

In cases where the level of confidence is not high, monitoring will be done to verify environmental effects predictions.

The significance of residual adverse environmental effects (those effects remaining after the implementation of mitigation or effects management measures) is determined for each VEC in Chapters 14 to 26. Although significant residual adverse environmental effects might occur in some instances of accidents and malfunctions, the Kami Terminal is not likely to result in significant adverse environmental effects under normal operating conditions. In the case of Economy, Employment and Business, residual environmental effects will be positive.

10.0 CONSULTATION

10.1 Introduction

Alderon has conducted its consultation and engagement activities in relation to Aboriginal groups and communities, public stakeholders and regulatory agencies with respect to the Project as a whole, including both the Kami Iron Ore Mine and Rail Infrastructure (the Kami Mine) and the Concentrate Storage and Load-out Facility in the Port of Sept-Îles (the Kami Terminal). EIS 1, Chapter 10 provides a complete description of all consultation and engagement activities undertaken by Alderon as part of the development of the EIS for the Project. EIS Volume 1, Chapter 10 also includes a full inventory of all issues raised by Aboriginal groups and communities, public stakeholders and regulatory agencies in relation to the Project and Alderon's responses to those issues. This Chapter contains a general description of Alderon's consultation and engagement efforts with Aboriginal groups and organizations, public stakeholders and regulatory agencies in relation to the Project as a whole and an identification of specific issues raised in relation to the Kami Terminal.

10.1.1 Objectives

Since the acquisition of the Kami Property in December 2010, Alderon has worked to establish open and transparent communication with various potentially interested or affected individuals and organizations. Alderon's approach includes engagement with Aboriginal groups, public stakeholders and regulatory agencies. The objectives of this consultation and engagement program were identified in accordance with the EIS Guidelines (CEA Agency and DOEC 2012), the Newfoundland and Labrador *Environmental Protection Act* (NLEPA), and CEAA.

The overall objectives of the consultation and engagement program are to:

- Provide Project information and updates on a regular basis;
- Engage Aboriginal groups and stakeholders throughout the EA process and during the life of the Project;
- Identify issues of concern with the Project early in the process;
- Adapt the Project design, where possible, to avoid and mitigate adverse environmental effects; and,
- Demonstrate how issues and concerns raised during engagement activities have been addressed in the EIS.

10.1.2 Approach

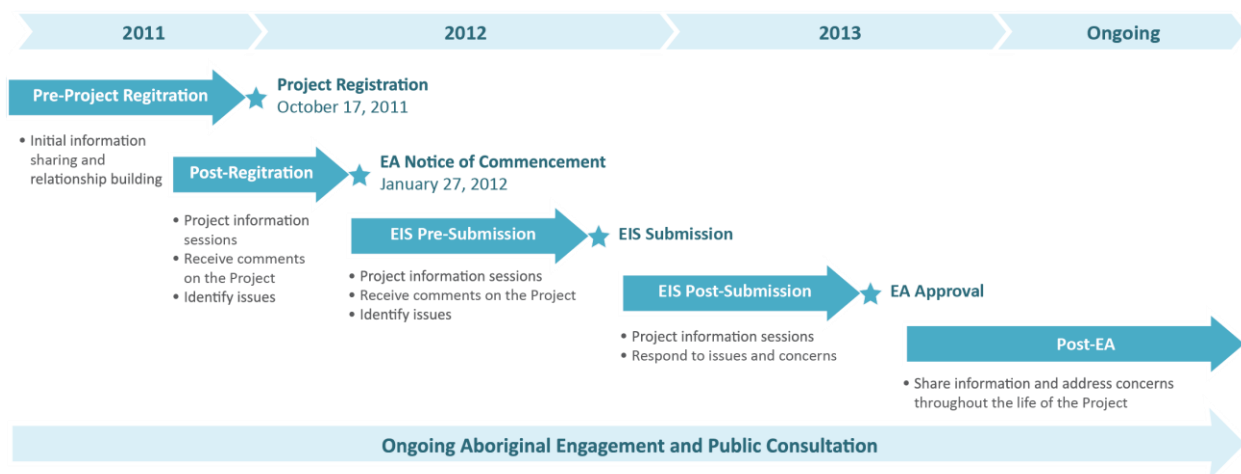
Alderon's consultation and engagement program includes five phases:

- Pre-Project Registration (ending October 2011);

- Post-Registration Consultation (October 2011 to January 2012);
- EIS Pre-Submission Consultation (January to October 2012);
- EIS Post-Submission Consultation (October 2012 to EA decision); and,
- Post-EA Consultation (EA decision to closure and decommissioning).

Figure 10.1 is an overview of the timeline for the EA process and subsequent to the EA decision, including associated consultation and engagement phases and program milestones.

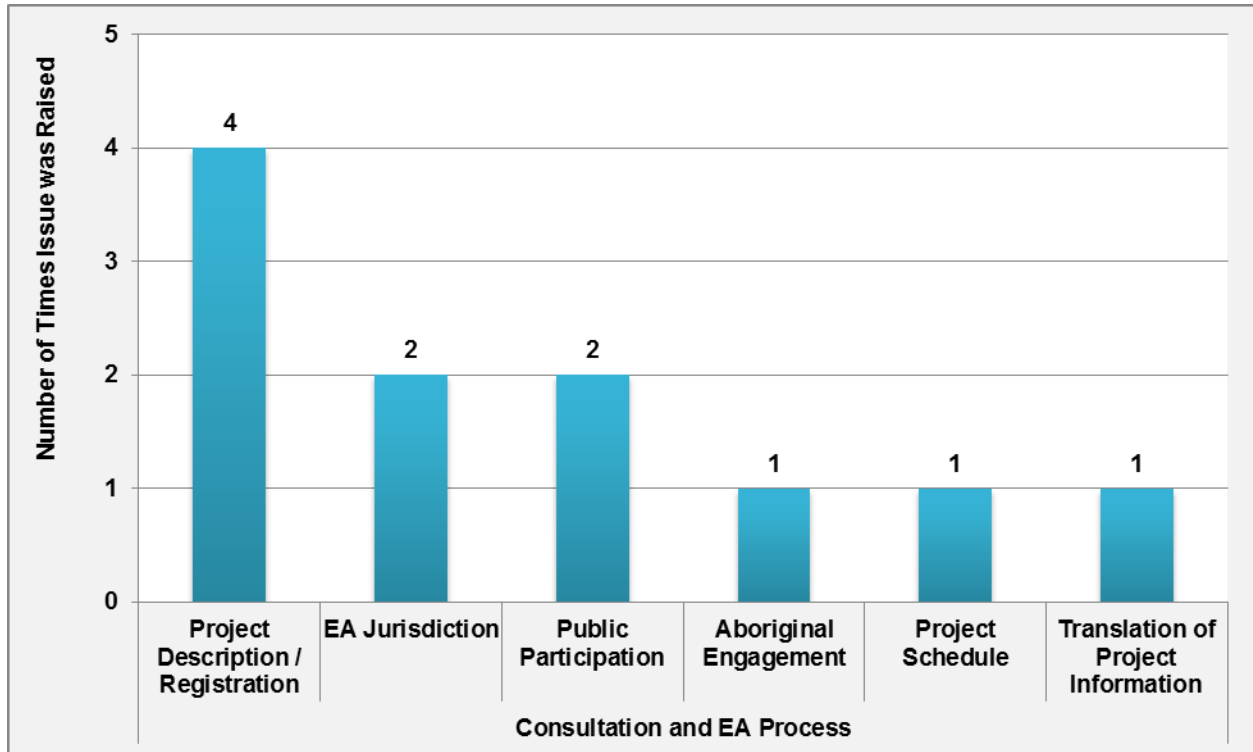
Figure 10.1 Timeline for Consultation and Engagement Program



10.1.3 Issues Identification

All participant comments collected as part of the EIS consultation and engagement program are documented using an issues tracking database called StakeTracker. In this database, issues are organized by VEC. This Chapter includes a summary of issues identified for each component or VEC by participant group. Bar graphs provide an overview of the frequency of issues raised. It is important to note that where an issue was raised multiple times at one meeting, it has been counted as one single occurrence. Frequency of issues raised related to consultation and the EA process is presented in Figure 10.2.

Figure 10.2 Frequency of Issues Related to Consultation and EA Process



Issues and comments identified during Aboriginal engagement and public consultation in relation to the Kami Terminal are summarized in Section 10.8 and within each VEC chapter. Responses to all questions and comments, and the location in the EIS where each issue has been addressed are also included in these locations.

The following sections include a description of the methods used to consult and engage Aboriginal groups, public stakeholders and regulatory agencies up until the EIS submission. An overview of the types of activities utilized by Alderon is provided, including a description of the methods, target audience and goals of each activity.

10.2 Aboriginal Consultation

A number of Aboriginal groups and communities in Québec and Labrador assert Aboriginal rights, including Aboriginal title, to areas of Québec and Labrador, including lands where proposed Project components and activities will take place. The claims of these groups and communities are at varying stages of governmental recognition, acceptance, negotiation and settlement as described in Section 1.6 and EIS Volume 1, Section 1.6. As a consequence, the claims by various Aboriginal groups and communities to rights and interests within the Project area and adjacent lands are based on a mixture of Aboriginal rights assertions, interim arrangements and consultation and accommodation agreements.

The Government of Canada and the Government of Newfoundland and Labrador (the Crown) have a legal duty to consult and, if appropriate, accommodate Aboriginal peoples whose treaty

rights or asserted or established Aboriginal rights could be affected by a Crown decision or activity. The duty of the Crown to consult may be discharged in a variety of ways, including through the EA process. Section 4.12.1 of the EIS Guidelines requires Alderon to engage with Aboriginal people that may be affected by the Project and that have asserted or established Aboriginal rights, Aboriginal title or treaty rights. Consistent with this requirement, Alderon has engaged with Aboriginal groups or communities whose asserted or established rights may be affected by the Project in order to provide Project information to, and collect information from, them so that it can be considered in this EA process, and throughout the life of the Project.

Consistent with its *Aboriginal Relations Policy* (Section 1.1.1), Alderon recognizes the importance of building relationships based on mutual trust and respect with Aboriginal groups whose treaty rights or asserted or established Aboriginal rights may be affected by the Project. Alderon is committed to working constructively and collaboratively with those Aboriginal groups in proximity to the Project to achieve mutually beneficial outcomes. Alderon has developed and implemented an *Aboriginal Engagement Strategy and Action Plan* (Appendix J) to guide and inform its engagement initiatives with Aboriginal groups to establish and maintain positive working relationships with Aboriginal groups over the lifetime of the Project. This action plan is consistent with the requirements of any applicable treaties, laws, regulatory measures and governmental policies, including the EIS Guidelines.

10.2.1 Aboriginal Issues Identification and Responses

Only one Aboriginal group identified a specific issue in relation to the Kami Terminal during engagement. That group was Uashat mak Mani-Utenam which identified as an issue the need to be consulted in relation to the Project as a whole and not simply in relation to the Kami Terminal site. Alderon's approach to engagement with Uashat mak Mani-Utenam and all other potentially affected Aboriginal groups, as described in Section 10.2.2, has been a comprehensive one which includes both the Kami Mine and the Kami Terminal

10.2.2 Aboriginal Communities and Organizations

Alderon is committed to engaging relevant Aboriginal groups and communities in relation to the Project. Alderon has engaged with Aboriginal groups that have asserted or established Aboriginal rights, Aboriginal title or treaty rights and that may be affected by the Project. Based on this criteria, there are five Aboriginal groups in proximity to the Kami Mine (EIS Volume 1, Section 1.6) and which form the participant list for Alderon's Aboriginal engagement program:

- Innu Nation;
- NCC;
- Uashat mak Mani-Utenam;
- Matimekush-Lac John; and,
- NNK.

These groups and communities are described in EIS, Volume 1, Chapter 10, Section 10.2.2. Of these groups, only two – Uashat mak Mani-Utenam and Matimekush-Lac John – have asserted Aboriginal rights and title to a shared territory which includes lands in proximity to the Kami Terminal. A brief description of each of these two groups is provided in the following subsections.

10.2.2.1 Uashat mak Mani-Utenam First Nation

The Uashat mak Mani-Utenam First Nation (Uashat mak Mani-Utenam) is located in the Sept-Îles area. It comprises Uashat which is a 177 ha reserve, located on the western outskirts of Sept-Îles and the Maliotenam Reserve which is located 16 km east of Sept-Îles and comprises an area of 527 ha.

The two reserves constitute a single band governed by a band council, Innu TakuaiKAN Uashat mak Mani-Utenam (ITUM) (Corporation Ashuanipi 2010). ITUM is divided into political, administrative and programs branches (Castonguay, Dandenault *et Associés* 1996). The council is made up of a chief and nine councilors (Coté 2006), all of whom are elected for two years following a customary process. The administration is composed of a Director General and six Directors who oversee service areas such as financial aid, housing, education, land use management and economic development.

According to the Indian Registry, Uashat mak Mani-Utenam comprised 4,064 registered members as of March 2012 (AANDC 2012). Of this group, 892 people lived off the reserves of Uashat and Maliotenam (AANDC 2012). The population and selected demographics for Uashat mak Mani-Utenam are shown in Table 10.1.

Table 10.1 Uashat mak Mani-Utenam Population and Selected Demographics

Demographic	Innu TakuaiKAN Uashat Mak Mani-Utenam	
	Registered Population	Percentage
Total Population	4,064	-
On the reserve	3,172	78.1
Off the reserve	892	21.9
Males	2,015	49.6
Females	2,049	50.4
Source: AANDC 2012		

According to the 2011 Census, the population of Uashat Reserve was 1,485, which represents an increase of 24.8 percent since 2006 (Statistics Canada 2012). Maliotenam Reserve had 1,316 residents, 17.2 percent more people than in 2006 (Statistics Canada 2012). The population of Uashat mak Mani-Utenam is very young: in 2006 the median age was 24.5 years with 43 percent of the population under 20 years of age (AANDC 2012). The main language spoken by the ITUM's membership is Innu-aimun. Many community members are also conversant in French as a second language.

Uashat and Maliotenam each offer a range of community services within the reserves, mainly administered by ITUM, including schools, health care, church, and recreational facilities (AANDC 2010). The Mani-Utenam Health Center and Uashat Health and Social Services Center provide medical care and social services to the reserves. Specific services include: nurse consultation, school health programs, family medicine, drug addiction programs, home care assistance and a nutrition service. These centers are run by ITUM.

Other community resources include Journal Innuvelle, Radio CKAU-FM Kushapetsheken, and the Shaputuan Museum. The museum hosts permanent and temporary exhibits on Innu culture and organizes cultural events for the local community to raise awareness of Innu culture outside the community (ITUM 2012). Located in nearby Sept-Îles, the *Institut culturel et éducatif Montagnais* (ICEM) offers language training, publishes books and develops various media to promote Innu language and culture (ICEM 2012).

Uashat mak Mani-Utenam is connected by road year-round. The proximity of the communities to Sept-Îles allows them to connect with many of the municipal services of the town, including the household water supply, waste water system, and, in the case of Uashat, fire protection services. Maliotenam maintains its own fire station, fire engine, and firefighting equipment (AANDC 2008). Through a team of 18 police officers and three support staff, Uashat mak Mani-Utenam Public Security provides policing, road safety, and crime prevention services to the two communities (ITUM 2012).

Uashat and Maliotenam each offer a range of community services. Three schools - *École Tshishteshinu*, *École Johnny Pilot*, and *École Manikanitsh* - deliver elementary and secondary school curricula to 748 students from pre-kindergarten to Secondary 5 (AANDC 2010). To support students, ITUM provides financial aid for elementary, secondary and post-secondary education (ITUM 2012). ITUM also manages financial support programs to local families and runs a workforce insertion and skill development program for unemployed adults.

The Mani-Utenam Health Center and Uashat Health and Social Services Center provide medical care and social services to the reserves. Specific services include: nurse consultation, school health programs, family medicine, drug addiction programs, home care assistance and a nutrition service. These centers are run by ITUM (ITUM 2012).

10.2.1.2 Innu Nation of Matimekush-Lac John

The Innu Nation of Matimekush-Lac John (Matimekush-Lac John) is located on two reserves near Schefferville, Québec, approximately 510 km north of Sept-Îles. Matimekush Reserve is located on the shore of Lac Pearce and has an area of 0.68 km². The Lac John Reserve covers an area of 0.23 km² and is located 3.5 km from Matimekush and from the center of Schefferville. Currently, the Matimekush Reserve and Lac John Reserve are jointly administered by *Conseil de la Première Nation des Innus de Matimekush-Lac John* (CPNIMLJ). The Band Council consists of a chief and four councilors, who are elected for two-year terms according to a customary process and pursuant to the Indian Act (AANDC 2011). The council is involved in negotiations and selects the council director and administration. The administration oversees

four service areas for the community: Health and social services, education services, employment services, and technical services and special projects.

Based on Indian Registry data, there were 869 registered members of Matimekush-Lac John as of March, 2012 (AANDC 2012). Of these, 735 lived on the two reserves (AANDC 2012). The population and selected demographics of Matimekush-Lac John are shown in Table 10.2. According to the 2011 Census of Population, 561 people resided on the Matimekush and Lac-John reserves (Statistics Canada 2012). This represents an increase of 2.9 percent since 2006. During this period, growth was much greater in Lac John. Based on the 2006 Census, approximately 40 percent of the population was under 20 years of age and the median age of the population is 27.6 years (AANDC 2012). Most of the members speak Innu-aimun, with French as a secondary language.

Table 10.2 Innu of Matimekush – Lac John Population and Selected Demographics

Demographic	Matimekush-Lac John (AANDC 2012)	
	Registered Population	Percentage
Total Population	869	-
On the reserve	735	84.6
Off the reserve	134	15.4
Males	438	50.4
Females	431	49.6

Other facilities in Matimekush-Lac John offer a number of other services, including Council Administration offices, a community garage, gas station, community radio station, community center, church and arena (AANDC 2008). School facilities include a library and gymnasium, which is open to the community in the evening (CPNIMLJ 2012).

Road access to the community is limited to certain times of the year (AANDC 2008). A local airport and twice-weekly rail service connects Matimekush-Lac John with Schefferville and Sept-Îles (AANDC 2008; Transport Ferroviaire Tshuëtin Inc. 2009).

Council manages garbage collection and disposal, waste water treatment and maintenance of the sanitary sewer system, storm sewer system, and local roads (AANDC 2008). Though security services are provided locally by the Aboriginal police force, the community relies on Schefferville for certain services and infrastructure, including fire department services, electricity and some of its potable water (AANDC 2008). There is one school in the community. In addition to the regular curriculum, Kanatamat Tshitipenitamunu School runs extra-curricular programs and a breakfast club for students. The school employs teachers, a special needs teacher, an educational psychologist, and administrative and support personnel, including a crossing-guard, bus driver, IT technician, secretary and librarian (CPNIMLJ 2012).

Health services are available through the *Poste de soins infirmiers* (CPNIMLJ 2012). The clinic provides preventative, curative and emergency services to the community and is staffed with nurses, a community health nurse, a nutritionist, psychologists, doctors, a home care nurse,

liaison officer and support and administrative staff (CPNIMLJ 2012). Medical specialists are brought to the clinic several times a year to provide care in several areas including: ophthalmology, dentistry, optometry, and otolaryngology (CPNIMLJ 2012). The clinic also arranges appointments and transport for clients seeking specialist care in Sept-Îles and Québec City (CPNIMLJ 2012). Social services available in the community include a residential school survivor program, suicide prevention services, women's shelter and youth center (CPNIMLJ 2012). A new daycare center will provide holistic care to 44 children up to six years of age (CPNIMLJ 2012). The daycare is part of the First Nations Head Start On-Reserve Program started by the First Nations of Québec and Labrador Health and Social Services Commission in 2012.

10.2.3 Aboriginal Engagement Activities

The EIS Guidelines require Alderon, as the Project proponent, to comply with the following requirements respecting Aboriginal peoples whose asserted or established rights may be affected by the Project:

- To ensure that Aboriginal peoples have access to Project-related information on a timely and ongoing basis and in a manner that is consistent with community needs and circumstances;
- To describe the concerns raised by Aboriginal groups in respect of the Project and, where applicable, describe how such concerns have been or will be addressed;
- To document in the EIS any potentially adverse effects on the current use of lands and resources for traditional purposes by Aboriginal persons that would be caused by a Project-induced change in the environment; and,
- To describe any measures, actual or proposed, to prevent, mitigate or otherwise accommodate adverse effects.

In compliance with the EIS Guidelines, Alderon is committed to engaging potentially affected Aboriginal groups to identify, understand and address any potential effects of the Project as a whole on Aboriginal communities and groups and their current land and resource use for traditional purposes. In undertaking this exercise, Alderon has made significant efforts to engage with each of the potentially affected Aboriginal groups and communities in Labrador and Québec. Alderon has proposed and, where acceptable to the particular group, established formal mechanisms to enable each of these groups to share information and views on the Project so that Alderon may understand and respond to questions, issues and concerns with regard to the Project and its potential effects.

More specifically, Alderon's engagement activities with each of the potentially affected Aboriginal groups have included the following initiatives:

- **Information Sharing Initiatives** – The provision of opportunities for document review through the transmission of Project documentation, including the Project registration, corporate policies, explanatory brochures and permit applications (translated as appropriate), publication of such information on the Project website and offers to meet

with Aboriginal leadership and community members to provide and discuss Project information (such meetings to take place in the language and manner to be determined in discussion with the particular Aboriginal group).

- **Community Engagement Initiatives** – The development of an *Aboriginal Relations Policy* (Section 1.1.1) and associated *Aboriginal Engagement Strategy and Action Plan* (Appendix J), meetings and offers to meet with Aboriginal leadership to identify appropriate engagement methods and activities, meetings and offers to meet with groups and communities to identify and respond to issues and concerns with respect to the Project, offers to conclude formal consultation arrangements, supported by capacity funding, and the provision of financial and other support for community initiatives.
- **Traditional Land and Resource Use Studies** – Offers to provide funding and technical resources to Aboriginal groups to conduct traditional land and resource use studies and collect traditional knowledge to augment Alderon’s understanding of Project effects upon traditional activities, offers to meet with elders and to engage directly with particularly affected members of Aboriginal groups.
- **Avoidance or Mitigation Initiatives** – The discussion, where and as appropriate, of mitigation and avoidance measures to address potential adverse effects upon current use of land and resources for traditional purposes, offers to meet with the community to respond to issues of concern, incorporation of traditional land and resource use information into the EIS, offers to enter into benefits agreements to address potential adverse effects of the Project.

All these initiatives are documented in the EIS, which contains the following information to assist the federal and provincial governments in their consultation processes:

- An inventory of the engagement activities undertaken with each Aboriginal group;
- The identification of the issues and concerns raised by Aboriginal groups, including a summary of discussions, issues or concerns raised;
- The reference to specific locations in the EIS indicating how and where issues are addressed; and,
- A separate description of Current Use of Land and Resources by Aboriginal Persons for Traditional Purposes in Chapter 22 and EIS Volume 1, Chapter 22, and incorporation of Aboriginal traditional knowledge throughout the VEC chapters, as available.

10.3 Aboriginal Engagement and Issue Scoping

This section includes an overview and documentation of the engagement activities undertaken in relation to each Aboriginal group, including the following information:

- Attempts to arrange engagement activities, including letters, phone calls, and emails, in order to provide Project information and opportunities for feedback;
- Summary of completed events, including type of event, dates, attendees, information presented, and methods for feedback; and,

- An identification of the issues, if any, identified by an Aboriginal group in relation to the Kami Terminal and response.

A summary of the key issues raised by Aboriginal groups and stakeholders and reference to the sections of the EIS in which these issues are addressed is provided in Section 10.8 and Tables 10.16 – 10.24. Copies of community meeting notices and meeting materials are provided in Appendix L.

10.3.1 Innu Nation

Innu Nation asserts Aboriginal rights, including title, in and to the lands and resources in Labrador, including the Kami Mine area. Innu Nation, Canada and the Province signed an AIP in November, 2011 and are currently negotiating the terms of a final comprehensive Land Claims Agreement which will include a land selection component based upon the terms of the Tshash Petapen Agreement. (Figure 10.3). The AIP is not legally binding and Innu Nation continues to assert Aboriginal claims in Labrador, including lands within the Kami Mine area. Alderon is aware that the claims of Innu Nation to Aboriginal rights and title in Labrador have not been settled and that accordingly, that the development of the Kami Mine potentially may affect the asserted Aboriginal rights of Innu Nation and its members' land and resource use in the area. As a consequence, Alderon is committed to working collaboratively and constructively with Innu Nation to establish a long-term, mutually beneficial relationship over the life-time of the Project and to respond to community concerns in relation to the Project.

Consistent with the objective of early and timely engagement, Alderon's efforts to engage Innu Nation commenced on May 23, 2011 prior to Project registration and have been continuing since that time. These efforts include a number of initiatives relating to information sharing, community engagement, the assessment of the effects of the Project on current land and resource use and the identification of mitigation measures, as appropriate.

Alderon has met with Innu Nation leadership on a number of occasions since March, 2011 to discuss the Project and community issues and concerns and has extended many offers to deliver Project presentations to Innu communities, although no offer has yet been accepted. Alderon has provided Innu Nation with Project-related documentation, including Project registration and associated materials, Alderon's EPP, Project brochures and similar documents, and copies of permit applications. Alderon has also provided information respecting employment, training and business opportunities, and has offered to meet with both Innu Nation executive and with Innu Nation membership to discuss such information.

Alderon and Innu Nation concluded a Memorandum of Understanding (MOU) on August 11, 2011 to establish and maintain a positive working relationship over the life of the Project. The MOU provided a framework for Alderon and Innu Nation to work together to establish a long term, mutually beneficial, cooperative and productive relationship. It also provided a process to allow the Alderon and Innu Nation to identify contracting and employment opportunities for Innu businesses and Innu Nation during exploration activities. Pursuant to the MOU, Alderon and Innu Nation have been engaged in the negotiation of a benefits agreement which will address such matters as employment, business opportunities and environmental management

throughout all phases of the Project. These negotiations have been ongoing on a regular basis since late fall, 2011.

Alderon has also offered to engage Innu Nation through the conclusion of formal arrangements, supported by offers of capacity funding and in December 2011, provided a draft Community Engagement Agreement which is currently under review by Innu Nation. The draft agreement provides the framework for the ongoing exchange of information between Alderon and Innu Nation to determine the interests, values and concerns of the Innu of Labrador. It also provides capacity for the collection of data related to current land and resource use in the Kami Mine area and traditional knowledge. Information produced pursuant to the agreement would be used by Alderon to augment its understanding of Labrador land and resource use and to inform mitigation and adaptation measures, as appropriate.

The issues raised by Innu Nation in relation to the Project as a whole are summarized in EIS Volume 1, Section 10.3.1 and Figure 10.5 of Volume 1. Issues and comments identified during Aboriginal engagement are summarized in EIS Volume 1, Section 10.8 and within each VEC chapter of Volume 1.

Innu Nation has not identified any issues in relation to the Kami Terminal.

An overview of engagement activities held with Innu Nation prior to Project registration and throughout the EA process is set out in Table 10.3.

Figure 10.3 Labrador Innu Tshash Petapen Land Selection

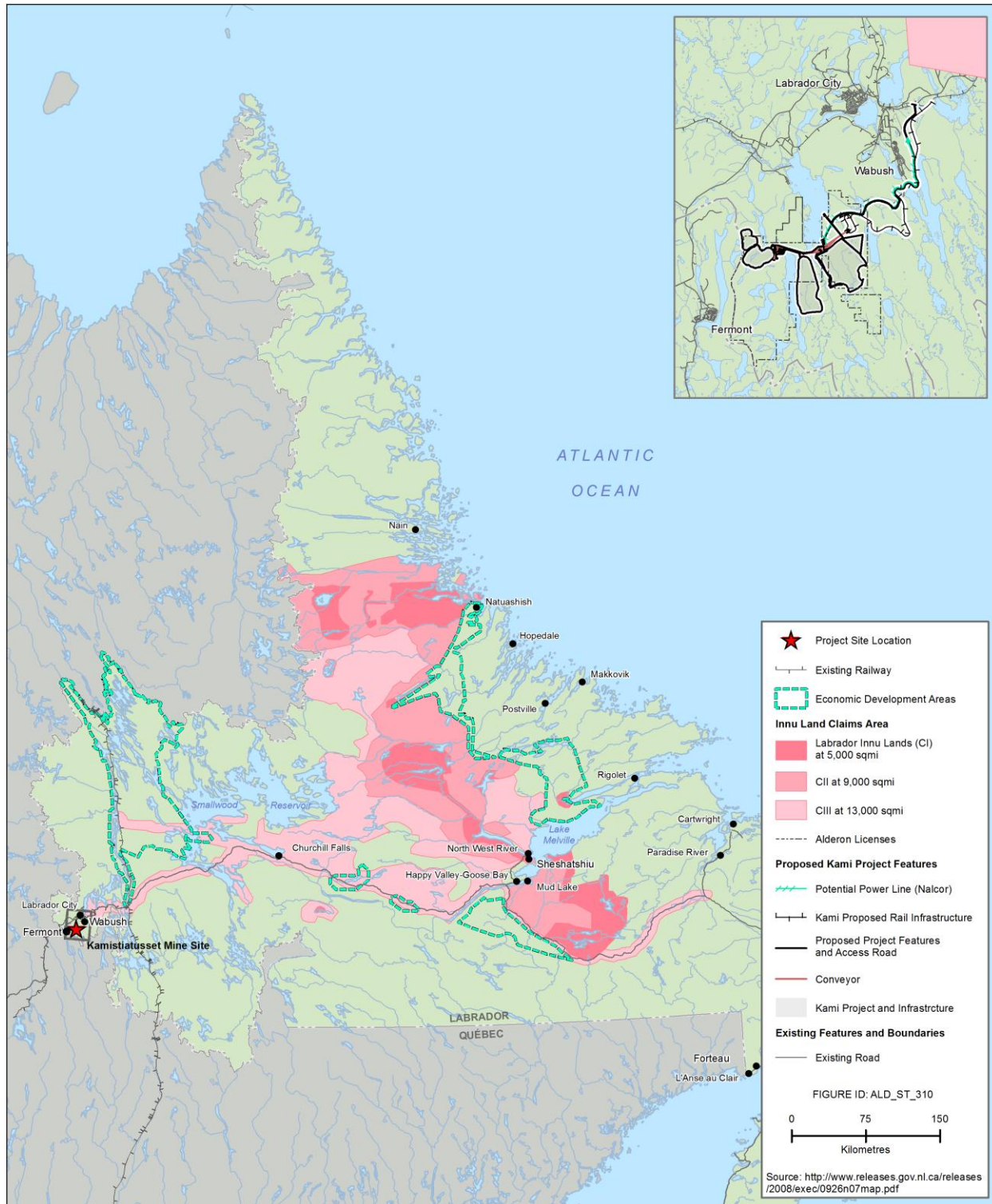


Table 10.3 Summary of Engagement Activities with Innu Nation

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
May 23, 2011	Meeting	Grand Chief and Environmental Analyst	Provided update on progress of the Project, permit applications and Innu business opportunities.
June 9, 2011	Email	Grand Chief and Environmental Analyst	Followed-up to meeting in May 2011 with information about the Project, the Project registration and exploration program.
August 31, 2011	Letter	Grand Chief	Provided program update and notification that Alderon will be submitting an Application for Exploration Approval and Notice of Planned Mineral Exploration Work.
September 27, 2011	Meeting	Innu Nation Band Council Negotiators, and Environmental Monitors	Discussed the MOU and the next steps. Parties agreed that the next steps involved the negotiation of a benefits agreement.
October 19, 2011	Meeting	Innu Nation Negotiators and Advisor	Provided a Project update and discussed the benefits agreement.
October 27, 2011	Outgoing Letter	Grand Chief, Legal Advisor, Financial Advisor	Correspondence from Alderon to Grand Chief concerning the October 19, 2011 meeting and the Memorandum of Understanding.
Post-Project Registration			
November 1, 2011	Email	Environmental Analyst	Provided Project registration and Project Overview Brochure and offered to meet with community to discuss the Project and the EA process.
November 1, 2011	Telephone Call	Environmental Analyst	Confirmed receipt of Project registration documents and discussed interest for presentation.
November 9, 2011	Letter	Grand Chief	Reiterated offer to meet with the community, and expressed interest in identifying how best to engage community members. Proposed meeting on November 24, 2011.
November 17, 2011	Email	Environmental Analyst	Confirmed meeting on November 24, 2011 and indicated that the Grand Chief is planning on attending.
November 24, 2011	Meeting	Grand Chief, Environmental Analyst, Consultation Coordinator, Negotiator and two community members	Provided an overview of the Project, an update on EA process and information about the 2012 Winter Drilling program. Engagement with community members was also discussed.
November 24, 2011	Email	Environmental Analyst	Followed-up the November 24 meeting, and provided a copy of Alderon's EPP.
November 29, 2011	Email	Environmental Analyst	Followed-up the November 24 meeting and provided employment numbers for winter 2012 drilling program.



Date	Activity	Participant(s)	Summary
December 20, 2011	Email	Environmental Analyst	Provided draft Community Engagement Agreement for consideration.
EIS Pre-Submission			
January 11, 2012	Email	Environmental Analyst	Provided update on the Innu Nation of Labrador's review of the draft Community Engagement Agreement.
January 17, 2012	Outgoing Letter	Grand Chief and Councillors	Letter to Grand Chief regarding benefits agreement negotiations.
January 19, 2012	Telephone Call	Environmental Analyst	Message left requesting information on the status of the Innu Nation of Labrador's review of the Community Engagement Agreement.
January 20, 2012	Meeting	Grand Chief, Deputy Grand Chief, Financial and Legal Advisors	Provided Project update, including provisions in 2012 exploration permit. Discussed content of Terms of Reference for Negotiations, and business, training and employment opportunities. Next meeting was scheduled for February 27-29, 2012.
January 26, 2012	Telephone Call	Environmental Analyst	Followed-up to the January 19 telephone call regarding the Community Engagement Agreement.
February 27, 2012	Letter	Grand Chief	Extended offer to hold a community meeting in Sheshatshiu to provide community members with Project information and hear their issues and concerns.
February 28, 2012	Meeting	Grand Chief, Deputy Grand Chief, Financial and Legal Advisors	Discussed proposal to finance Innu Nation Traditional Land and Resource Study (Community Engagement Agreement). Parties also advanced benefits agreement negotiations.
March 27, 2012	Telephone Call	Innu Business Development Centre	Inquired about employment opportunities for two recent drilling trainees.
March 27, 2012	Telephone Call	Environmental Analyst	Followed-up on to discuss review of the Community Engagement Agreement. Confirmed that Innu Nation of Labrador had been reviewing the agreement and that the proposed engagement activities and scope of the agreement are acceptable.
May 4, 2012	E-mail	Environmental Advisor	Followed-up to discuss status of review of Community Engagement Agreement and offered to meet to discuss at request of Innu Nation.
May 14, 2012	E-Mail	Environmental Advisor	Confirmed that Community Engagement Agreement is under review by Innu Nation and that Alderon will be contacted in near future respecting status of review.
May 23, 2012	Meeting	Grand Chief, Deputy Grand Chief, Chief, Negotiators, Financial and Legal Advisors	Benefits agreement negotiating session.



Date	Activity	Participant(s)	Summary
June 7, 2012	Letter	Grand Chief	Provided information about draft permit application for Exploration Approval and Notice of Planned Exploration Work. Correspondence contained cover letter, draft permit application, map and explanatory memo. Cover letter contained name of contact person to provide information and respond to questions associated with the permit and offers a community meeting to discuss application and provide a Project update.
June 12, 2012	Conference Call	Legal Advisor, Financial Advisor, Advisor	Discussed review of draft benefits agreement.
June 20, 2012	Meeting	Grand Chief, Deputy Grand Chief, Negotiators, Legal and Financial Advisors	Benefits agreement negotiating session.
July 16, 2012	Meeting	Advisor, Manager of Innu Business Development Centre	Discussed procurement process, business and employment opportunities in relation to the Project.

10.3.2 NunatuKavut Community Council

NCC has asserted Aboriginal rights and title to a large portion of western, central and southern Labrador, including the Kami Mine area and in a portion of southeastern Québec (Figure 10.4). Although the land claim was filed with Canada in 1991, it has not yet been accepted for negotiation by the federal or provincial governments. NCC's claims in Québec do not include the Kami Terminal area. Alderon is aware of the claims of NCC to Aboriginal rights and title in Labrador. As a consequence, Alderon is committed to working collaboratively and constructively with NCC to establish a long-term, mutually beneficial relationship over the life of the Project and to respond to community issues and concerns in relation to the Project.

Alderon's efforts to engage with NCC commenced on August 31, 2011, prior to Project registration and have been ongoing since that time. These efforts include initiatives related to information exchange, community engagement, the identification and assessment of Project effects on land and resource use for traditional purposes and discussion of mitigation measures, as appropriate.

Alderon has met with the President and members of NCC executive on several occasions to discuss the Project, the EA process and community engagement. Alderon has provided NCC with a wide range of Project-related information, including the Project registration and related brochure, a map illustrating cabin locations in the Kami Mine area and copies of permit applications and has offered to meet with NCC to discuss this information.

Alderon has concluded formal arrangements, supported by capacity funding, with NCC. The Community Engagement Agreement which was entered into on February 28, 2012, provides a framework for the ongoing exchange of Project-related information between Alderon and NCC to determine the interests, values and concerns of NCC membership. Pursuant to this agreement, Alderon has provided NCC with funding to collect data related to traditional land and resource use and traditional knowledge in the Kami Mine area. NCC conducted land and resource use interviews with ten land users in early summer, 2012 and also surveyed a representative sampling of its membership to identify issues and concerns in relation to the Project. The results of this exercise, including land and resource use maps, have been incorporated into the Appendix I and EIS Volume 1, Chapter 22 and have been used to augment Alderon's understanding of the possible effects of the Project upon NCC membership's current land and resource use for traditional purposes. The information generated through interviews, map biographies and surveys are also valuable sources of information in identifying community issues and concerns and will be helpful in informing Alderon's next steps in its relationship with NCC as well as the development of any required mitigation measures.

Figure 10.4 NunatuKavut Community Council Asserted Land Claim Area



A community meeting with NCC membership to discuss the Project, the EA process and the Community Engagement Agreement was held in Labrador City on July 12, 2012 and interest was expressed in a follow-up meeting later in the fall of 2012. Although the turnout at this meeting was small due to competing demands on members' time, a number of issues were identified and discussed which will be further considered by Alderon in the course of ongoing engagement with NCC.

The issues raised by NCC in relation to the Project as a whole are summarized in EIS Volume 1, Section 10.3.2 and Figure 10.7 of Volume 1. Issues and comments identified during Aboriginal engagement are summarized in EIS Volume 1, Section 10.8 and within each VEC chapter of Volume 1.

NCC has not identified any issues in relation to the Kami Terminal

An overview of engagement activities held with NCC is set out Table 10.4.

Table 10.4 Summary of Engagement Activities with the NunatuKavut Community Council

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
August 31, 2011	Letter	NCC President	Provided update with summary and map of proposed activities for 2011 -2012.
September 13, 2011	Email	NCC President	Discussed the Project development and arrange meeting with council to discuss the Project in more detail.
September 29, 2011	Email	Environmental and Research Manager	Discussed meeting to provide more information about the Project.
Post-Project Registration			
October 24, 2011	Telephone Call	Environmental and Research Manager	Acknowledged receipt of Project registration and expressed interest in meeting to learn more about the Project.
November 4, 2011	Meeting	Environmental and Research Manager, NCC President	Discussed the next steps for community engagement during the EA.
November 9, 2011	Letter	NCC President	Letter to President with proposition to meet with Alderon on November 25, 2011.
November 10, 2011	Email	Environmental and Research Manager	Confirming meeting with NCC leadership in Goose Bay on November 25, 2011.
November 24, 2011	Email	Environmental and Research Manager, NCC President	Shared proposed agenda for NCC review for the meeting to be held on November 25, 2011.
November 25, 2011	Meeting	NCC President, Environmental and Research Manager	Provided a Project overview, a description of the 2012 winter drilling program map, and discussed the EA process.
December 20, 2011	Email	Environmental and Research Manager	Provided draft Community Engagement Agreement for consideration.
EIS Pre-Submission			
January 11, 2012	Email	Environmental and Research Manager	Provided review of the Community Engagement Agreement.
January 12, 2012	Email	Environmental and Research Manager, NCC President	Proposed meeting on January 19 or 20, 2012 to discuss review.



Date	Activity	Participant(s)	Summary
January 17, 2012	Email	Environmental and Research Manager	Responded to NCC comments on the Community Engagement Agreement.
January 20, 2012	Meeting	NCC President, Environmental and Research Manager	Discussed Community Engagement Agreement.
February 2, 2012	Email	Environmental and Research Manager	Updated on Community Engagement Agreement (presented to Board).
February 27, 2012	Letter	NCC President, Environmental and Research Manager	Invited NCC members to participate in Alderon's Public Information Sessions to be held in Wabush and Labrador City on March 13 and 14, 2012.
February 28, 2012	Meeting	NCC President and Environmental and Research Manager	Signed a Community Engagement Agreement with NCC to initiate a Traditional Land and Resource Use Study to meet the requirements of the EA.
May 7, 2012	Meeting	Environmental and Research Manager; and Senior Researcher	Discussed the work plan associated with the Community Engagement Agreement and progress of the Land and Resource Use Study.
May 10-16, 2012	Emails	Environmental and Research Manager	Discussed Survey and Interview Guide and implementation of Community Engagement Agreement.
June 6, 2012	Telephone Call	Environmental and Research Manager	Discussed progress on implementation of Community Engagement Agreement and dates for community meeting in Lab West.
June 7, 2012	Telephone Call	Environmental and Research Manager	Confirmed targeted dates for meeting in Labrador West to June 18-23. NCC confirmed that interview participants had been identified and that preliminary work relating to the interviews had been done. NCC to contact Alderon with respect to confirmed date for meeting with NCC membership within the next several days.
June 7, 2012	Letter	NCC President	Provided letter, draft permit application for Exploration Approval and Notice of Planned Mineral Exploration Work, map and explanatory memo. Same material faxed on June 8, 2012. Letter contained the name of a contact person to provide information and respond to questions related to the permit. Offered a community meeting to discuss the permit application and provide a Project update.
June 14, 2012	Telephone Call	Environmental and Research Manager	Discussed progress on implementation of the Community Engagement Agreement and possible dates for a community meeting in Lab West.
June 19, 2012	Telephone Call	Environmental and Research Manager	Discussed progress in implementation of land and resource interviews in Lab City under Community Engagement Agreement.



Date	Activity	Participant(s)	Summary
June 26, 2012	Telephone Call	Environmental and Research Manager	Discussed progress under the Community Engagement Agreement and need for amendments.
June 27, 2012	Letter	Environmental and Research Manager	Received letter from NCC respecting amendment to the Community Engagement Agreement. NCC requested an extension to the Agreement.
July 6, 2012	Telephone Call	Environmental and Research Manager	Confirmed community meeting in NunatuKavut. Purpose of the meeting is to provide a Project update, discuss EA process and report on the progress of implementation of the Community Engagement Agreement with specific reference to the land and resource use interviews.
July 12, 2012	Meeting	Environmental and Research Manager	Provided Project update and reported on progress of EA.

10.3.3 Innu of Uashat mak Mani-Utenam

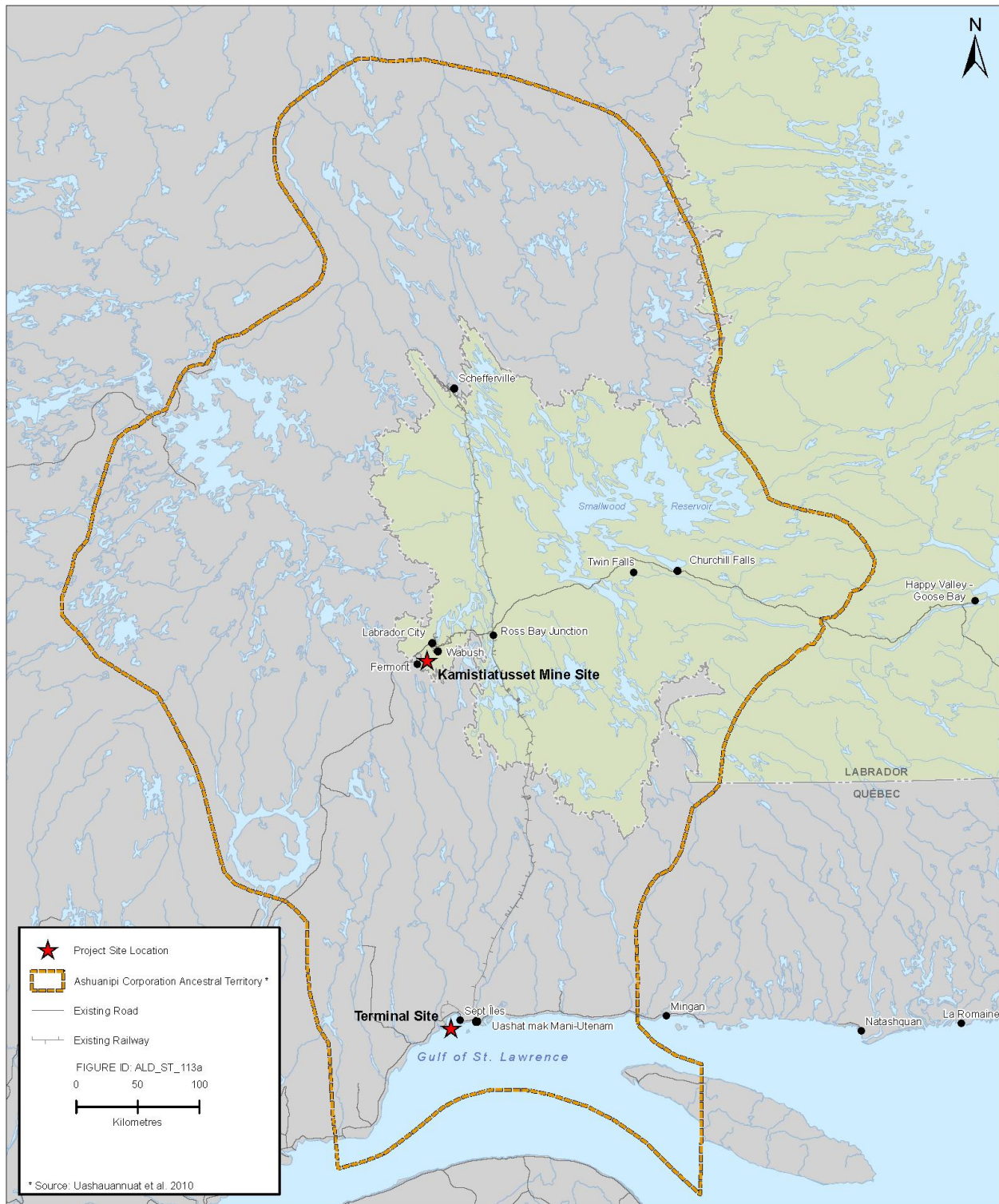
The Innu of Uashat mak Mani-Utenam occupy two reserves in and near Sept-Îles, Québec. The Innu of Uashat mak Mani-Utenam assert Aboriginal rights, including Aboriginal title, to a portion of lands in eastern Québec and western Labrador, including both the Kami Mine area and the Kami Terminal site (Figure 10.5). The territory subject to the claim of Aboriginal rights is shared with the Innu of Matimekush-Lac John. In addition, certain traditional families of Uashat mak Mani-Utenam also claim interests in Beaver Reserves Lots 244 and 245, which overlap the Kami Mine in whole or in part.

Alderon is aware that the claims of the Innu of Uashat mak Mani-Utenam to Aboriginal rights and title in both Labrador and Québec have not been settled. It is the position of the Innu of Uashat mak Mani-Utenam that the Project (both the Kami Mine area and the Kami Terminal site) may affect their asserted Aboriginal rights and land and resource use. Alderon is committed to working collaboratively and constructively with the Innu of Uashat mak Mani-Utenam to establish a long-term, mutually beneficial relationship over the life of the Project and to respond to community issues and concerns about the Project.

Consistent with the objective of early and timely engagement, Alderon's efforts to engage the Innu of Uashat mak Mani-Utenam commenced on January 12, 2011, prior to Project registration, and have been ongoing since that time. These efforts include initiatives related to information exchange, community engagement and capacity building, identification and assessment of Project effects on land and resource use for traditional purposes, and discussion of mitigation measures, as appropriate.

Alderon met with the Chief, members of Band Council and advisors on many occasions to discuss the Project, the EA process and the most appropriate method of community engagement. Repeated offers to meet with the community to discuss the Project have been made, but to date no offer has been accepted. Alderon has provided Project-related documentation, including Project registration and materials associated with 2011 exploration activities, and copies of permit applications. Alderon has also made several offers to meet with leadership and community members to discuss such information. In providing the information, Alderon has indicated its preparedness to begin engagement in the manner requested by the Innu of Uashat mak Mani-Utenam.

Figure 10.5 Traditional Territory of the Innu of Uashat mak Mani-Utenam and the Innu of Matimekush-Lac John



Alderon has also offered to engage the Innu of Uashat mak Mani-Utenam through formal arrangements, supported by offers of capacity funding, and has prepared several draft offers for consideration. Such formal arrangements would provide a framework for the ongoing exchange of information to enable Alderon to identify community interests, values and concerns. As part of such formal offers, Alderon has proposed to provide funding to collect data related to traditional land and resource use and traditional knowledge. The results of that data collection would be used to augment Alderon's understanding of the possible effects of the Project on current land and resource use for traditional purposes, and to inform mitigation measures, if necessary. Although various drafts have been exchanged by the parties, no agreement has been concluded. As a separate but related initiative, and in response to certain concerns expressed by the Chief, Band Council and advisors, Alderon has offered on three separate occasions to consult directly with the traditional families claiming interests in Beaver Reserves Lots 244 and 245, but no response has been received.

Alderon has also proposed to negotiate an MOU which would provide the framework to work together to establish a long-term, mutually beneficial, cooperative and productive relationship. The proposed MOU would provide a framework for ongoing community engagement and a potential process for the negotiation of a benefits agreement to address all phases of the Project, including pre-development activities. This agreement would address such matters as employment, business opportunities and environmental management. While this offer has not been accepted, Alderon remains committed to the initiation of negotiations and to continue its efforts for community engagement.

The issues raised by the Innu of Uashat mak Mani-Utenam in relation to the Project as a whole are summarized in EIS Volume 1, Section 10.3.3 and Figure 10.9 of Volume 1. Issues and comments identified during Aboriginal engagement are summarized in EIS Volume 1, Section 10.8 and within each VEC chapter of Volume 1.

The Innu of Uashat mak Mani-Utenam have identified one concern with respect to the Kami Terminal. That issue is the need to be consulted on all aspects of the Project and not just on the Kami Terminal. Alderon has adopted a comprehensive approach to engagement with the Innu of Uashat mak Mani-Utenam which includes both the Kami Mine and the Kami Terminal.

An overview of engagement activities held with the Innu of Uashat mak Mani-Utenam is set out in Table 10.5.

Table 10.5 Summary of Engagement Activities with the Innu of Uashat mak Mani-Utenam

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
January 12, 2011	Letter	Chief	Introduced Alderon and the Project. Provided information on the exploration program and offered to meet in February or March.
January 21, 2011	Series of Telephone Calls	Chief of Lands Bureau and Legal Counsel	Confirmed receipt of letter and that the community is aware of the Project. Confirmed that the Project is on claimed territory.
January 26, 2011	Meeting	Vice-Chief	Introduced the proponent and the Project, heard about preliminary concerns and issues and defined the next steps of the process.
February 22, 2011	Letter	Chief	Thanked the Chief for meeting with the Vice-Chief on January 26, 2011 and confirmed the start of the 2011 winter drill program. Also, proposed a meeting with the community (once winter program is complete) to provide an update and explain our exploration plans for the remainder of 2011.
March 3, 2011	Email	Councillor	Arranged a meeting between Alderon and Uashat Band Council during the PDAC in Toronto.
March 7, 2011	Meeting	Chief, Vice-Chief, Councillor	Discussed the Project and next steps.
March 10, 2011	Email	Vice-Chief	Expressed thanks for arranging the meeting held on March 7, 2011, provide a copy of a MOU template, and requested the possibility of including the community of Matimekush-Lac John into the MOU discussions be considered.
April 7, 2011	Email	Advisor	Requested contact information to schedule meetings with the community and council members.
April 20, 2011	Email	Vice-Chief	Provided available dates for meetings with council and/or community members in late June in Sept-Îles and requested update regarding the status of MOU review.
April 27, 2011	Email	Vice-Chief	Followed-up on the April 20, 2011 email to ask if Alderon should be communicating with additional people to plan meetings and/or find out when comments on proposed MOU can be expected.
April 27, 2011	Email	Vice-Chief	Responded with call request with Alderon regarding the proposed MOU and scheduling a meeting.



Date	Activity	Participant(s)	Summary
May 2, 2011	Email	Councillor	Provided information on the Project and requested a meeting.
May 7, 2011	Telephone Call	Vice-Chief	Confirmed meeting with advisors in Montreal.
May 8, 2011	Telephone Call	Vice-Chief	Received a call to reschedule meeting.
May 9, 2011	Email	Vice-Chief	Provided Project update and confirmed purpose of the meeting.
May 11, 2011	Meeting	Vice-Chief, Legal Advisor	Discussed concerns and issues and defined the next steps of the process.
May 12, 2011	Email	Vice-Chief, Legal Advisor	Followed-up on the May 11, 2011 meeting and requested further information on some of the topics that were discussed.
May 19, 2011	Letter	Vice-Chief	Followed-up on May 11, 2011 and affirmed Alderon's approach to engagement and acknowledge the community's Aboriginal rights, title and treaty rights. Requested a list of Registered Businesses to provide information about opportunities.
May 30, 2011	Email	Vice-Chief, Legal Advisor	Requested meeting in Sept-Îles on June 28 or 29, 2011 with Chief, the community and council. Requested a list of the businesses owned and operated by the community members so they can be considered for additional contracts awarded in the future.
June 13, 2011	Email	Vice-Chief, Legal Advisor	Advised community of Alderon's meeting and outcomes with the DOE. Advised that they might receive a registration document to review from DOE. Requested that once the June 3, 2011 registration document is received requesting approval for their planned activities on the Land Management Unit, please advise Alderon of any concerns as quickly as possible. If there are no concerns please let the DOE know as soon as possible to avoid any further delays.
August 16, 2011	Meeting	Chief and Councillor	Provided Project update and discussion of Term Sheet.
August 31, 2011	Letter	Chief	Provided a Project update.
September 12, 2011	Telephone Call	Chief of Lands Bureau and Legal Counsel	Schedule a meeting to discuss the Project.
September 29, 2011	Meeting	Legal Advisor, Vice-Chief, Legal Advisor, Chief of Lands Bureau and Legal Counsel	Provided an overview of the Project, discussed agreements (review draft MOU, term sheet) and determined next steps.
September 29, 2011	Email	Chief of Lands Bureau and Legal Counsel	Requested to discuss possibility of interviewing families who have trapping rights in the area of the Kami Mine.



Date	Activity	Participant(s)	Summary
Post-Project Registration			
October 19, 2011	Letter	Legal Advisor, Legal Advisor, Chief of Lands Bureau and Legal Counsel	Thanked the negotiators for meeting held on September 29, 2011.
October 20, 2011	Email	Chief of Lands Bureau and Legal Counsel	Offered to meet to with the community to provide information about the Project and the EA process.
November 9, 2011	Letter	Chief, Vice-Chief, Chief of Lands Bureau and Legal Counsel	Proposed meeting for Project update on November 28, 2011.
November 14, 2011	Email	Councillor, Chief of Lands Bureau and Legal Counsel, Executive Secretary	Inquired about availability for meeting on December 05, 2011.
November 28, 2011	Email	Councillor, Chief of Lands Bureau and Legal Counsel, Executive Secretary	Confirmed meeting with the Band Council on Thursday December 1, 2011.
December 1, 2011	Meeting	Chief, Vice-Chief, Chief of Lands Bureau and Legal Counsel	Provided an overview of the Project, update on EA process, 2012 winter drilling program. Commitment to IBA negotiation and process to engage community members were also discussed.
December 5, 2011	Letter	Vice-Chief, Chief of Lands Bureau and Legal Counsel	Expressed commitment to engage with the community to provide Project information and hear issues and concerns.
January 25, 2012	Meeting	Chief of Lands Bureau	Discussed the negotiation of a benefits agreement and next steps.
February 14, 2012	Outgoing Letter	Chief, Chief of Lands Bureau	Followed-up on the negotiation of a benefits agreement and next steps
EIS Pre-Submission			
March 7, 2012	Letter	Chief, Vice-Chief, Chief of Lands Bureau and Legal Counsel	Expressed commitment to engage with Innu Takuaihan Uashat mak Mani-Utenam throughout the EA process.
May 16, 2012	Meeting	Chief, Chief of Lands Bureau and Legal Counsel, Legal Counsel, Legal Counsel	Discussed engagement approach for EA and continuing offer to enter into benefits agreement negotiations



Date	Activity	Participant(s)	Summary
May 23, 2012	Email	Legal Advisor	Followed-up meeting of May 16, 2012, and provided draft agreement for review by Alderon.
June 7, 2012	Letter	Chief	Provided draft permit application, map and explanatory memo respecting an application for Exploration Approval and Notice of Planned Mineral Work for information. Letter provided name of contact person and an offer of community meeting to discuss the permit and provide a Project update.
July 10, 2012	Letter	Chief	Responded to draft agreement submitted on May 23, 2012, reiterated Alderon's commitment to engage with the Innu of Uashat mak Mani-Utenam and outlined proposal for next steps in negotiations.
July 17, 2012	Letter	Chief	Followed-up meeting of May 16, 2012, reiterated Alderon's commitment to meaningful engagement and proposed next steps in engagement for the EA process, included offer to fund a Land and Resource Use Study and to engage directly with traditional families associated with Beaver Reserves Lots 244 and 245.

10.3.4 Innu of Matimekush-Lac John

The Innu of Matimekush-Lac John occupy two reserves near Schefferville, Québec, approximately 200 km north of the Kami Mine site.

The Innu of Matimekush-Lac John have asserted Aboriginal rights, including Aboriginal title, to a large portion of eastern Québec and western Labrador, including lands within the Project area which territory is shared with Uashat (Figure 10.5).

Alderon is aware that the claims of the Innu of Matimekush-Lac John to Aboriginal rights and title in both Labrador and Québec, including in the Kami Mine area and the Kami Terminal, have not been settled. Alderon is committed to working collaboratively and constructively with the Innu of Matimekush-Lac John to establish a long-term, mutually beneficial relationship over the life of the Project and to respond to community issues and concerns.

Consistent with the objective of early and timely engagement, Alderon's efforts to engage the Innu of Matimekush-Lac John commenced on January 12, 2011, prior to Project registration, and have been ongoing since that time. These efforts include initiatives related to information exchange, community engagement, the identification and assessment of Project effects on land and resource use for traditional purposes, and discussion of mitigation measures, as appropriate.

Alderon met with the Chief and members of Band Council on a number of occasions to discuss the Project, identify issues and concerns and discuss the process of community engagement as part of the EA process. Repeated offers were made to meet with the community to discuss the Project, but to date the meeting has not been held due to scheduling difficulties. Alderon provided the Innu of Matimekush-Lac John with Project-related documentation, including Project registration and associated materials, and copies of permit applications as well as Project information respecting employment, training and business opportunities, and has offered to meet with both leadership and the community to discuss such information.

Alderon offered to engage the Innu of Matimekush-Lac John through formal arrangements, supported by offers of capacity funding. As part of this offer, Alderon has proposed funding for the Innu of Matimekush-Lac John to collect data related to traditional land and resource use and traditional knowledge. Originally this offer was made to both the Innu of Uashat mak Mani-Utenam and Matimekush-Lac John concurrently, as the two communities had agreed to work together, given the common claim area. However, the communities subsequently expressed an interest in working separately. Alderon renewed the community engagement offers for conducting traditional land and resource use studies with the Innu of Matimekush-Lac John on March 7, 2012. The results of this data collection would be used to augment Alderon's understanding of the possible effects of the Project on the Innu of Matimekush-Lac John's current land and resource for traditional purposes and inform mitigation measures, as appropriate. No response to this offer has been received.

Alderon offered to enter into an agreement to provide a framework for Alderon and the Innu of Matimekush-Lac John to work together, with the intent of establishing a long-term, mutually

beneficial, cooperative and productive relationship. On April 11, 2012, Alderon provided the Innu of Matimekush-Lac John with a draft Framework Agreement that would provide a process for ongoing community engagement and set the terms of reference for the negotiation of a benefits agreement to address all phases of the Project. Any benefits agreement would address such matters as employment, business opportunities and environmental management. It would also be intended to enable Alderon to respond to community issues and concerns. While the Innu of Matimekush-Lac John have not responded directly to this offer, they have expressed willingness to enter into negotiations. Alderon remains committed to continuing engagement with the Innu of Matimekush-Lac John.

The issues raised by Matimekush-Lac John in relation to the Project as a whole are summarized in EIS Volume 1, Section 10.3.4 and Figure 10.10 of Volume 1. Issues and comments identified during Aboriginal engagement are summarized in EIS Volume 1, Section 10.8 and within each VEC chapter of Volume 1.

Matimekush-Lac John has not identified any issues in relation to the Kami Terminal.

An overview of engagement activities held with the Innu of Matimekush-Lac John is set out in Table 10.6.

Table 10.6 Summary of Engagement Activities with the Innu of Matimekush-Lac John

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
January 12, 2011	Letter	Chief	Introduced Alderon and provided details about the company, management team, and 2011 exploration Project. Extended an offer to discuss any questions or concerns they may have.
January 19, 2011	Telephone Call	Chief	Scheduled meeting to provide Project information.
January 26, 2011	Meeting	Chief and Band Council	Introduced the proponent and the Project, heard preliminary concerns and issues and defined the next steps of the process.
February 22, 2011	Letter	Chief	Provided an update of the exploration program.
August 31, 2011	Letter	Chief	Provided a Project update.
Post-Project Registration			
October 24, 2011	Telephone Call	Chief	Requested a meeting to discuss the Project.
November 9, 2011	Letter	Chief	Proposed a meeting on November 30, 2011.
November 30, 2011	Email	Chief	Confirmed meeting to be held on December 6, 2011.
December 6, 2011	Meeting	Chief	Provided information about the company, the Project, and the EA process. Discussed the community engagement process.
December 13, 2011	Email	Legal Counsel	Requested to meet with Band Council and community members to provide information about the Project and EA process.
December 21, 2011	Email	Legal Counsel	Discussed tentative meeting with the Band Council and the community on January 17, 2012.
EIS Pre-Submission			
January 10, 2012	Email	Legal Counsel	Requested confirmation for the tentative meeting for January 16-18, 2012.
January 13, 2012	Letter	Chief	Confirmed purpose of proposed meeting to be held on January 17, 2012. The main objective would be to discuss community engagement and determine next-steps and land-use activities in the Project area and identify issues and concerns.
January 16, 2012	Email	Legal Counsel	Received notice from the Innu of Matimekush-Lac John that the January 17 meeting had to be postponed to January 30, 2012.
January 19, 2012	Telephone Call	Legal Counsel	Confirmed January 31, 2012 meeting date with the Band Council.



Date	Activity	Participant(s)	Summary
January 31, 2012	Meeting	Chief and Band Council	Provided information on the Project and discussed community engagement process. Also discussed Band's concerns on the Project. The Band Council agreed to have Alderon hold a community meeting.
February 27, 2012	Letter	Chief	Requested community meeting to present Project information and hear questions and concerns.
March 7, 2012	Letter	Chief	Stated commitment to engage with Matimekush-Lac John throughout the EA process to provide Project information to community members and gain a better understanding of the interests, values, concerns, land and resource use activities, traditional knowledge and issues.
March 20, 2012	Letter	Chief	Expressed commitment to engage with community on the Project as part of the EA process. Committed to send draft Community Engagement Agreement as next step.
April 12, 2012	Email	Chief	Provided draft Community Engagement Agreement for discussion purposes. Suggested meeting to discuss the agreement.
June 7, 2012	Letter	Chief	Provided draft permit application for Exploration Approval and Notice of Planned Mineral Exploration Work together with map and explanatory memo. Provided name of a contact person to provide any additional information and to respond to questions. Offered a community meeting to discuss the permit application and provide a Project update. Same materials also faxed on June 8, 2012.
June 14, 2012	Meeting	Legal Counsel	Discussed the scheduling of a community meeting during the summer and the process for initiation of agreement negotiations.
June 21, 2012	Email	Legal Counsel	Suggested community meeting in August.
July 3, 2012	Letter	Chief	Proposed a community meeting to provide Project-related information, including information respecting the EA process, to identify community issues and concerns and to discuss current land and resource use activities in the Project area. Letter also restates Alderon's interest in initiating benefits agreement negotiations at the earliest opportunity and request to meet with Chief and Band Council to discuss the Framework Agreement previously submitted in April, 2012. Letter reaffirms Alderon's commitment to engage with the Innu of Matimekush-Lac John.
July 10, 2012	Email	Legal Counsel	Follow-up e-mail to Alderon legal counsel respecting scheduling of meeting to provide Project update, discuss EA process and community issues and concerns.

10.3.5 Naskapi Nation of Kawawachikamach

The NNK comprises a single reserve located near Schefferville, Québec, approximately 240 km north of the Kami Mine area. NNK has a settled land claim within the Province of Québec through the signing of the Northeastern Québec Agreement in 1978. NNK has also submitted a claim to a portion of western and central Labrador, including the Project area (Figure 10.6). This claim has not been accepted for negotiation by either Canada or Newfoundland and Labrador and remains outstanding.

Alderon is aware that while the the claims of NNK to Aboriginal rights and title in Québec have been resolved, those in Labrador have not been settled. As a consequence, Alderon is committed to working collaboratively and constructively with NNK to establish a long-term, mutually beneficial relationship over the life of the Project and to respond to community issues and concerns in relation to the Project.

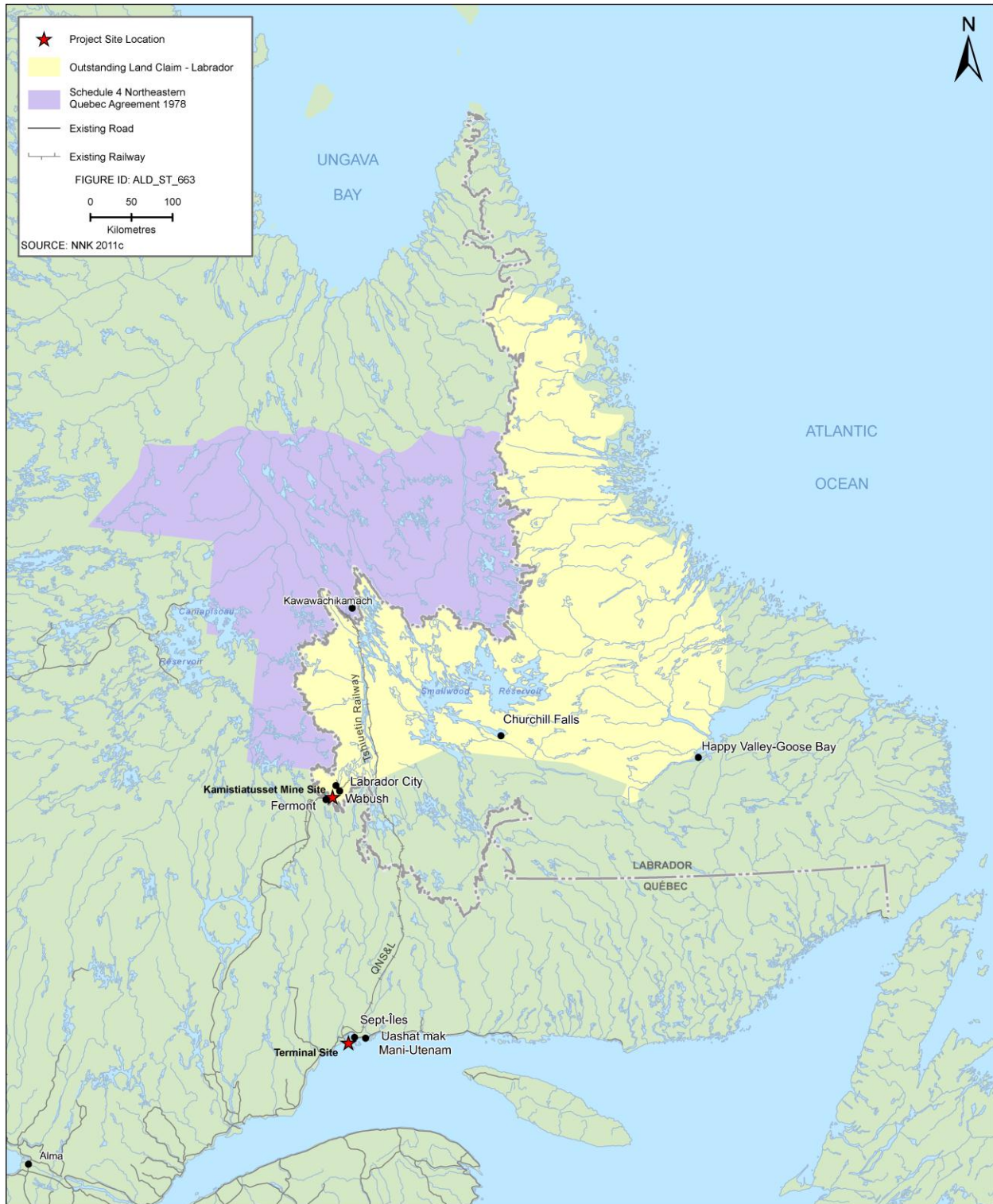
Consistent with the objective of early and timely engagement, Alderon's efforts to engage with NNK commenced on January 12, 2011, prior to Project registration and have been ongoing since that time. These efforts include initiatives related to information exchange, community engagement, the identification and assessment of Project effects on land and resource use for traditional purposes and discussion of mitigation measures, as appropriate.

Alderon has met with the Chief and members of Band Council as well as NNK advisors to discuss the Project, the EA process and community engagement. It has also met once with the community to provide Project-information and to discuss community issues and concerns. Alderon has provided NNK with Project-related information, including Project documentation, corporate information and copies of permit applications and has offered to meet with the Chief and Band Council to discuss this information.

A community meeting to discuss the Project, the EA process and community issues and concerns was held in Kawawachikamach in January, 2012. In 2012, Alderon offered to meet with the community again as part of the EA process but no response to these offers has been received.

On March 7, 2012, Alderon offered to engage NNK through the conclusion of formal collaborative arrangements, supported by offers of capacity funding, which would facilitate information exchange and assist in the identification and understanding of NNK's interests, values and concerns. As part of this offer, Alderon also committed to providing NNK with funding to consolidate information on land and resource use activities in the Kami Mine area and traditional knowledge. The results of this exercise would be used to augment Alderon's understanding of the possible effects of the Project upon NNK's s current land and resource use for traditional purposes in western Labrador and to identify and respond to community issues and concerns. An advisor to NNK undertook to bring Alderon's offer to the attention of Band Council to determine if the proposed approach was acceptable to the community. No response has been received from NNK as to the acceptability of this offer.

Figure 10.6 Naskapi Nation of Kawawachikamach Land Claim - Labrador



The issues raised by NNK in relation to the Project as a whole are summarized in EIS Volume 1, Chapter 10, Section 10.3.5 and Figure 10.12 of Volume 1. Issues and comments identified during Aboriginal engagement are summarized in EIS Volume 1, Section 10.8 and within each VEC chapter of Volume 1.

NNK has not identified any issues in relation to the Kami Terminal.

An overview of engagement activities held with NNK is set out in Table 10.7.

Table 10.7 Summary of Engagement Activities with Naskapi Nation of Kawawachikamach

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
January 19, 2011	Telephone Call	Chief	Confirmed receipt of letter.
February 22, 2011	Letter	Chief	Provided an update on the 2011 winter drill program and stated commitment to establish and maintain ongoing communication with the community.
February 22, 2011	Letter	Chief	Provided program update.
August 31, 2011	Letter	Chief	Provided program update.
September 1, 2011	Letter	Chief	Introduced Alderon and provided details about the company, management team, 2011 exploration project and extended offer to discuss any questions or concerns.
Post-Project Registration			
October 24, 2011	Telephone Call	Chief and General Director	Left message to confirm receipt of Project registration documents and discuss interest for meeting.
November 2, 2011	Telephone Call	General Director	Confirmed receipt of Project registration documents and discussed interest for meeting.
November 9, 2011	Letter	Chief, General Director	Proposed to meet with Band Council on November 29, 2011 to provide Project information.
November 14, 2011	Email	General Director	Discussed meeting with Band Council in November 2011.
November 17, 2011	Meeting	General Director, Advisor, General Advisor	Provided an overview of the Project and proposed exploration activities. Discussed process to engage with the community.
November 18, 2011	Email	General Director, Advisor, General Advisor	Followed-up meeting held on November 17 and provided a copy of the presentation and EA process flowchart.
November 29, 2011	Email	General Director, Advisor, General Advisor	Followed-up meeting held on November 17 and provided answers to questions raised during the meeting.
EIS Pre-Submission			
December 5, 2011	Email	General Director, General Advisor	Discussed meeting with Council and community in Kawawachikamach during week of January 23, 2012.
January 10, 2012	Telephone Call	General Advisor	Confirmed meetings with Band Council and community on Monday January 23, 2012.
January 11, 2012	Email	General Advisor	Provided a draft meeting notice for review and translation into Naskapi by NINK.
January 12-17, 2012	Emails	General Advisor	Series of emails to finalize logistics of community meeting, including arrangements for translation of document into Naskapi as well as interpretation during the presentation.



Date	Activity	Participant(s)	Summary
January 23, 2012	Meeting	Deputy Chief, Chief, General Advisor, Two Councillors, Training and Employment Coordinator, Atmacinta / Financial Consultant	Presented information about the Project, received feedback from the Band Council about the Project, and identified issues relevant to the Band Council and the community.
January 23, 2012	Community Meeting	Chief, General Advisor, Translator, approximately 45 community members	Presented information about the Project with translation into Naskapi, received feedback and identified issues relevant to the community.
January 25, 2012	Email	General Advisor, Translator	Requested to visit Band Council office on February 1, 2012 to see maps from Naskapi Development Corporation.
February 9, 2012	Email	General Advisor	Requested information on NNK land use, as discussed during the January 23 meetings.
March 7, 2012	Letter	Chief, General Advisor	Stated commitment to engage with the NNK throughout the EA process.
May 8, 2012	Telephone Call	General Advisor	Confirmed status of community's interest in entering into a Community Engagement Agreement. Advised matter was to be referred to Band Council in May but meeting postponed until June 11.
June 7, 2012	Letter	Chief	Provided cover letter, draft permit application for Exploration Approval and Notice of Planned Mineral Exploration Work, map and explanatory memo. Letter contained the name of a contact person to provide information and respond to questions associated with the permit application. Offered to hold a community meeting to discuss the permit application and provide a Project update. Same material faxed on June 8, 2012.

10.4 Public Consultation

Alderon has been engaging with several stakeholders groups since the acquisition of the Kami Property. Alderon's approach to public consultation is to establish and maintain a transparent and respectful dialogue with all interested parties throughout the EA process. Consistent with its *Community Relations Policy* (Section 1.1.1), Alderon recognizes the importance of providing Project information in a timely manner and listening and responding to issues and concerns of stakeholders. The following sub-sections include a description of stakeholder groups, consultation activities and issues specific to the Kami Terminal raised during these activities as well as Alderon's responses to these issues.

10.4.1 Public Stakeholders

The participant list for public stakeholders includes residents of the communities of Labrador City, Wabush, Fermont and Sept-Îles. The locations of these communities in relation to the Project area are shown on Figure 10.7. Alderon held public information sessions in the communities of Labrador City, Wabush, Fermont and Sept-Îles. Alderon has also engaged other potentially affected or interested stakeholders beyond these boundaries, including provincial and federal government agencies and departments, non-governmental organizations (NGOs), economic development organizations, and outdoor recreation users and outfitters. These stakeholders are listed in Table 10.8.

Figure 10.7 Outreach Area for Public Consultation

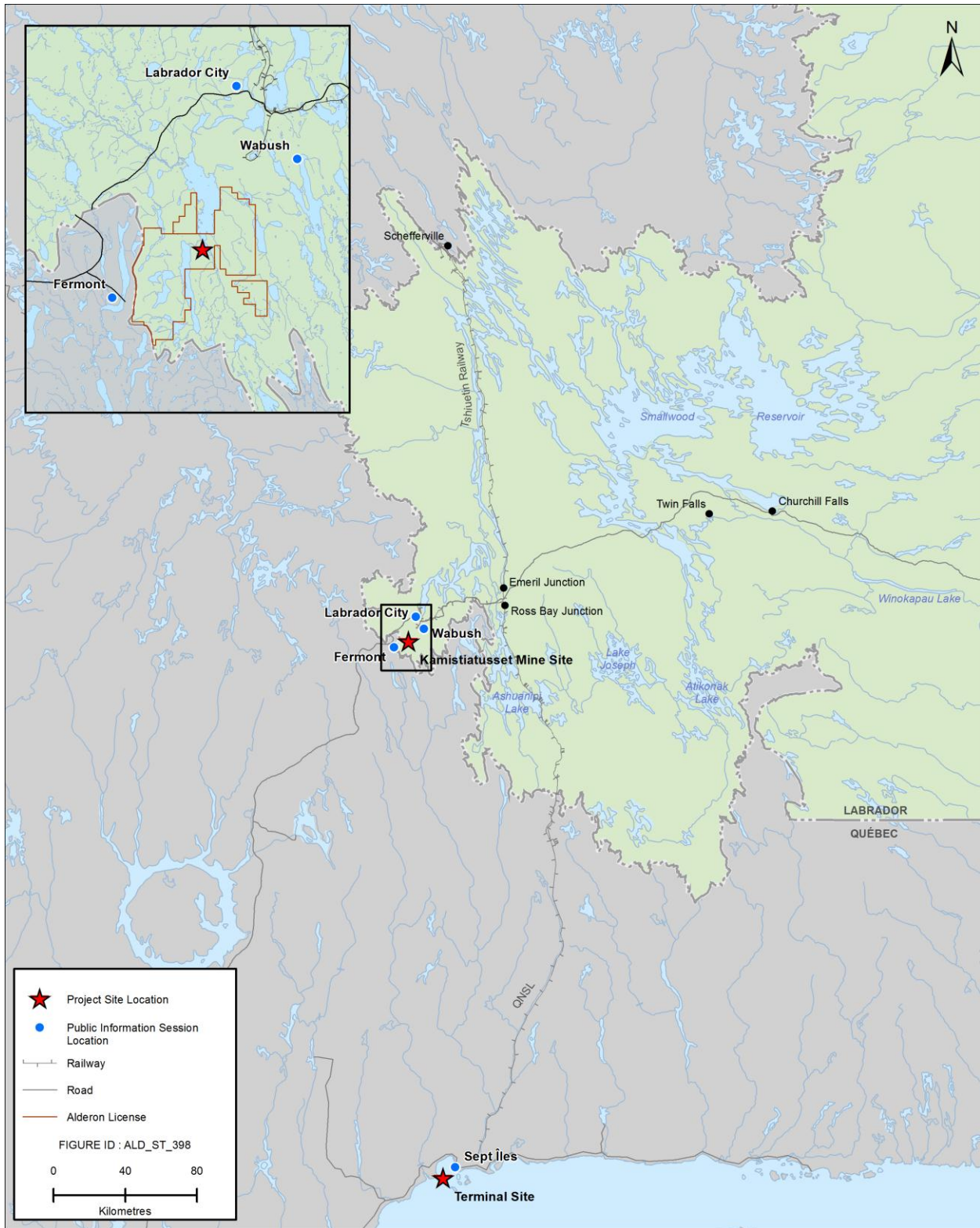


Table 10.8 Stakeholders Identified for Environmental Impact Statement Consultation Program

Category	Sub-Category	Stakeholder Group
Government	Newfoundland and Labrador (NL) Government	<ul style="list-style-type: none"> • Executive Council • Department of Advanced Education and Skills (DAES) • Department of Environment and Conservation (DOEC) • Department of Government Services and Lands (DGSL) • Department of Health and Community Services (DHCS) • Department of Innovation, Business and Rural Development (DIBRD) • Department of Justice (DOJ) • Department of Municipal Affairs (DOMA) • Department of Natural Resources (DNR) • Department of Tourism, Culture and Recreation (DTCR) • Intergovernmental and Aboriginal Affairs (IGAA) • Provincial Archaeology Office • Rural Secretariat, Labrador Region • Women's Policy Office
	Federal Government	<ul style="list-style-type: none"> • Aboriginal Affairs and Northern Development Canada (AANDC) • Atlantic Canada Opportunities Agency (ACOA) • Canadian Environmental Assessment Agency (CEA Agency) • Canadian Transportation Agency (CTA) • Environment Canada (EC) • Fisheries and Oceans Canada (DFO) • Major Project Management Office (MPMO) • Privy Council Office • Transport Canada • Port of Sept-Îles
	Québec Government	<ul style="list-style-type: none"> • Ministère du développement durable, de l'environnement et des parcs (MDDEP) • Ministère des ressources naturelles et de la faune (MRNF) • Secrétariat aux affaires autochtones (SAAA)
Municipal	NL Municipal	<ul style="list-style-type: none"> • Town of Wabush • Town of Labrador City
	Québec Municipal	<ul style="list-style-type: none"> • Town of Fermont • City of Sept-Îles

Category	Sub-Category	Stakeholder Group
Community Groups	Environment	<ul style="list-style-type: none"> • Conseil régional de l'environnement de la Côte-Nord • Corporation de protection de l'environnement de Sept-Îles • Le Mouvement citoyen de Fermont
	Economic Development	<ul style="list-style-type: none"> • CLD Caniaspicau • Conseil de développement économique d'Uashat mak Mani-Utenam • Hyron Regional Economic Development Board • Labrador West Chamber of Commerce • Labrador West Employment Corporation • Labrador West Tourism Corporation • Newfoundland and Labrador Organization of Women Entrepreneurs (NLOWE) • Town of Labrador City Economic Development Department • Women in Resource Development Corporation
	Outfitters and Recreation	<ul style="list-style-type: none"> • Cabin Owners • Newfoundland and Labrador Outfitters Association • White Wolf Snowmobile Club
	Education, Social Services, and Health	<ul style="list-style-type: none"> • College of the North Atlantic • CSSS de L'Hematite • Labrador Grenfell Health • Labrador Institute Memorial University, Labrador West Campus • Labrador West Status of Women • Labrador West Aboriginal Friendship Association • Labrador School Board • Newfoundland and Labrador Housing Corporation • Provincial Advisory Council on the Status of Women • Royal Newfoundland Constabulary

10.4.2 Public Consultation Issues Identification and Responses

An overview of all issues related to the Kami Terminal is shown on Figure 10.8. Some of the issues most frequently identified include:

- Availability of housing for workers;
- Water quality;
- Dust;
- Visual Aesthetics; and,
- Cumulative effects on community services and infrastructure

Issues and comments specific to the Kami Terminal, identified during public consultation activities, are summarized in Section 10.8 and within each VEC chapter. Responses to all questions and comments, and the location in the EIS where each issue has been addressed are also included in these locations.

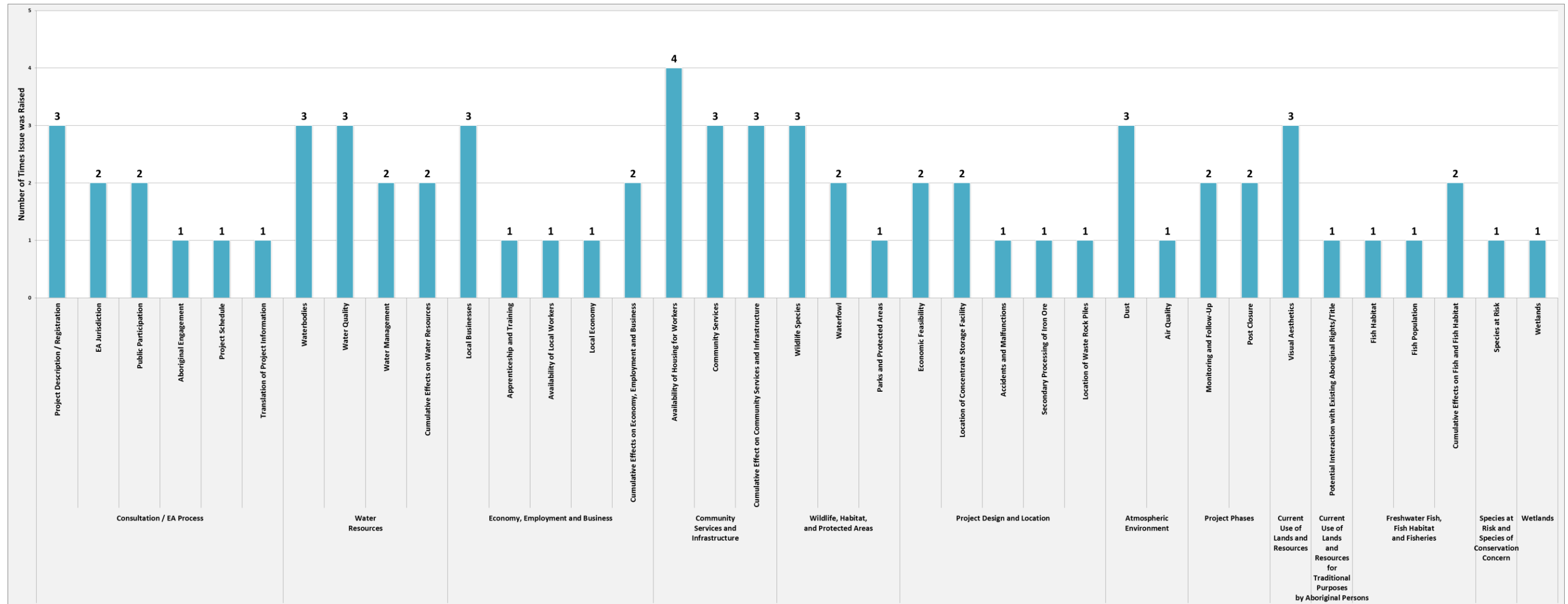
10.4.3 Public Consultation Activities

Public consultation activities include information sharing, general consultation with community members and key stakeholder meetings all with opportunities for providing feedback. Specific consultation activities included:

- Public notices were posted to announce the cabin owners meeting, the Public Information Sessions, and the cabin survey, which were held to share information with the general public and those potentially affected by the Project.
- A Project website was created to provide Project information, EA documentation, notifications, and consultation materials. Provided an area for stakeholders to submit contact information and comments.
- Public information sessions were held to provide information to the general public and other interested stakeholders and receive feedback. Sessions included information on the Project registration and the EA process, including information on community and environmental studies and potential effects. Technical experts and Alderon representatives were present at stations to hear feedback and respond to stakeholder concerns.
- Key stakeholder meetings were held to inform these stakeholders about Project design and EIS-related studies, and to identify issues with the Project that would be included in the EIS. Targeted sessions allowed specific stakeholder concerns to be explored in greater depth.

As identified in the EIS Guidelines (CEA Agency and DOEC 2012), and in addition to consultation and engagement activities undertaken by the proponent, there are several additional opportunities for public participation provided by the CEA Agency and the DOEC. These opportunities include providing EA documentation for public review during EIS development and following its submission.

Figure 10.8 Frequency of Issues Identified During Public Consultation Activities



10.5 Public Consultation and Issue Scoping

This section includes documentation of all consultation activities completed by Alderon with the general public and municipal councils and staff for the communities of Labrador City, Wabush, Fermont, and Sept-Îles, including the following information:

- A summary of completed events, including dates, attendees, information presented, and methods for feedback;
- Public notices posted for public meetings in accordance with the EIS Guidelines (CEA Agency and DOEC 2012);
- A table summarizing the key issues identified in each community; and,
- A bar graph depicting the number of times issues were identified.

All consultation activities were conducted on the Project as a whole. Details of consultation activities held with key stakeholder groups, including cabin owners, economic development organizations, environmental organizations and non-governmental organizations is provided in Section 10.5.5. A record of consultation activities undertaken by the CEA Agency is provided in Section 10.5.6. Copies of materials presented to the public during consultation activities, including presentations, information handouts, posters, maps and exit surveys are included in Appendix L. Copies of all public notices posted for public meetings are also included in Appendix L.

Issues raised by stakeholder groups in relation to the Kami Terminal are presented in the following sections. Issues related to the Project as a whole are presented in Volume 1, Chapter 10, Section 10.5.

10.5.1 City of Sept-Îles

Consultation Activities

A summary of all consultation activities undertaken with the community of the City of Sept-Îles is included in Table 10.9. Alderon met with the Mayor of Sept-Îles on May 16, 2012 to discuss the Project. A Public Information Session was held on May 16, 2012 to present residents with information about the Project, and hear their concerns.

Table 10.9 Summary of Consultation Activities with the City of Sept-Îles

Date	Activity	Participant(s)	Summary
EIS Pre-Submission			
October 18, 2011	Letter and Package	Mayor of Sept-Îles	Delivered a package containing the Project registration and description documents and 10 Project brochures. Offered an opportunity to make a presentation of the Project.
October 24, 2011	Telephone Call	Mayor of Sept-Îles	Called and left a message offering a meeting to discuss the Project.
February 22, 2012	Email	Mayor of Sept-Îles	Offered to meet with the Mayor to provide Project information, answer his questions and receive his concerns
May 16, 2012	Meeting	Mayor of Sept-Îles	Provided a Project update and discussed community engagement.
May 16, 2012	Public Information Session	Attended by 19 community members	Presented Project information, answered questions, and received feedback on the Project and the EA process.

Issues Identification

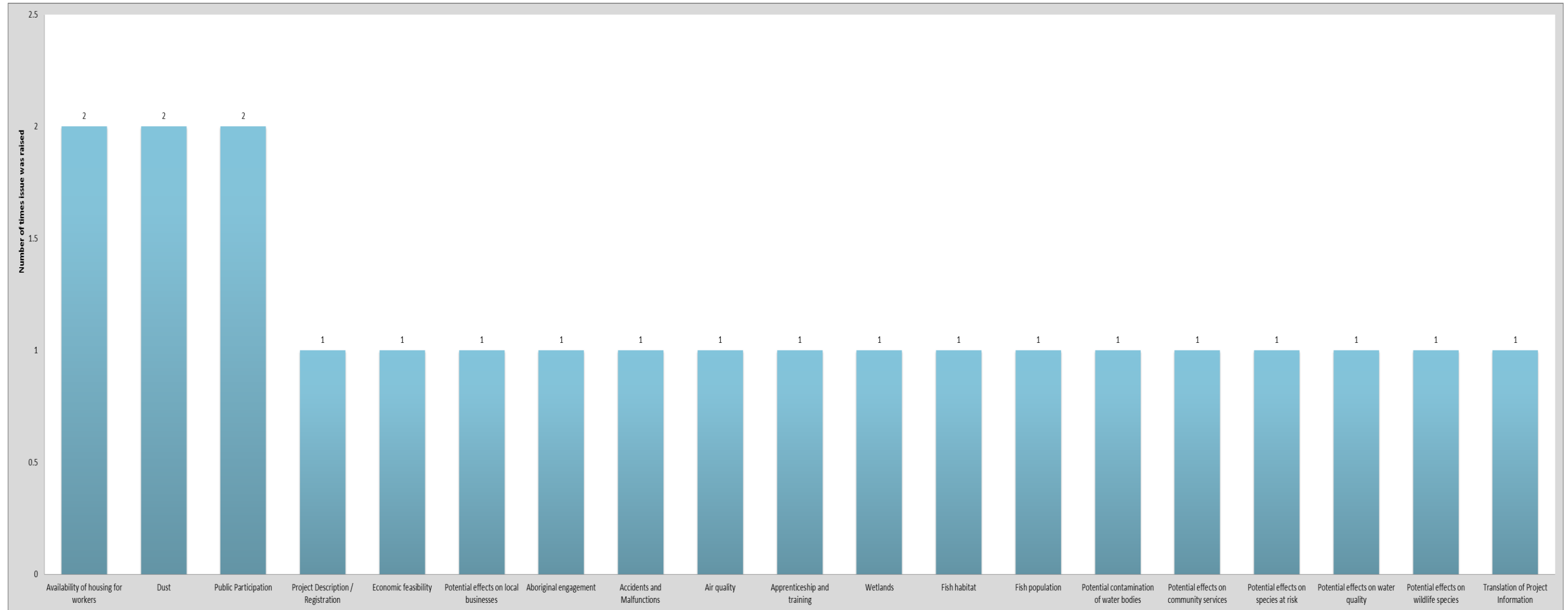
Figure 10.9 provides a summary of all the issues identified by Sept-Îles stakeholders during the EIS preparation. These issues are also included in EIS Volume 1, Chapter 10, Section 10.5.4. Issues and comments identified during public consultation are summarized in Section 10.8 and within each VEC chapter. Responses to all questions and comments, and the location in the EIS where each issue has been addressed are also included in these locations.

During consultation activities, participants identified the availability of housing for workers as an issue of concern. There is a housing shortage in Sept-Îles and there are concerns with the Kami Terminal placing further stress on existing infrastructure. Participants identified that it would be important for local businesses participate in the procurement process during construction and operations. It is recommended that a committee be established with stakeholders from the local business community. It was also requested that the impact study be translated into French.

Effects on water resources are an issue of concern. Participants indicated that many companies currently operating in the area have dumped wastewater directly into the bay. They stated that Alderon should not continue this practice. A participant wanted to know if wastewater would be treated to meet regulatory standards or if water discharged would meet the current water quality in the bay. Mitigation measures should be described to avoid red water contamination. There is concern that the Kami Terminal may affect fish habitat in ruisseau à la Baleine, and that vibrations from rail traffic may cause effects on salmon spawning habitat on the rivière Nipississ. Another issue of concern is effects on migratory birds and species at risk.

Cumulative effects on air quality from multiple industries are an issue. Information on how the cumulative effects assessment and air quality monitoring will be conducted was requested. Participants identified that there may be effects resulting from dust generation associated with the transfer of material from rail cars and to ships, and from rock cut. Measures for dust control should be identified.

Figure 10.9 Frequency of Issues Identified by Participants from Sept-Îles



Public Information Session Summary

A Public Information Session was held on May 16, 2012 from 3:00 PM to 9:00 PM at *Carrefour la Baie* in Sept-Îles. The goals of the session were to present residents with information about the Project and the EIS, and to hear their concerns. Notification for the Public Information Session was provided in *Le Nord-Cotier* and *Le Nord-Est* on May 2 and May 9, 2012. A television advertisement also ran on TVCOGECO on May 7 to 16, 2012, with 5 to 6 passes per day. Notices were also posted in the Canada Post office and the Sept-Îles City Hall on May 7, 2012.

Residents were invited to sign in upon arrival; 17 people signed in and 4 completed exit surveys. Participants were invited to circulate the room where information posters and a 3D virtual model of the Kami Terminal were set up at four stations (Welcome, Environment, Community, and Project). Alderon representatives and technical experts were present to answer questions, and record concerns. When exiting the Public Information Session, participants were given an exit survey to provide feedback regarding the Public Information Session and the Project in general.

The exit survey asked “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?” The choices provided were “not useful at all”, “not very useful”, “somewhat useful”, and “very useful” followed by space provided to list improvements and provide additional information regarding the selected response. Only two comment forms included responses to this question; these responses stated that the information presented was relatively useful and very useful.

The second and third questions asked respondents “What do you feel are important issues regarding the Kami Iron Ore Mine?”, and “What steps do you think Alderon could take to address your concerns?”. The important issues identified by participants, both verbally and through the exit survey, were involvement with local communities and businesses, and concerns about potential effects on the environment (i.e., air, water).

The fourth question on the exit survey asked participants “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?” Choices for this question were “very dissatisfied”, “dissatisfied”, “neutral”, “satisfied”, and “very satisfied” with space provided for additional comments. The respondents indicated that they were satisfied and very satisfied.

The final section of the exit survey allowed participants to provide feedback about the Public Information Session and the Project. Here respondents expressed praise for how the Project had been developed to date, specifically with regards to the measures taken to minimize dust and effects on water, which were already incorporated into the Project design.

10.5.2 Town of Labrador City

Consultation Activities

Throughout the EA process, Alderon has worked with the Town of Labrador City to keep the municipality and its residents informed of Project progress, address concerns and receive feedback. Consultation activities began during Pre-Project Registration with meetings with the Town of Labrador City Economic Development Department, the Town Council and a community member, to provide preliminary Project information. Following Project registration, a meeting was held with the Town Council to provide additional information about the Project, answer questions and identify issues.

During EIS Pre-Submission Consultation phase, another meeting was held with the Town Council to discuss issues of concern, and consultation activities. A public information session was held March 14, 2012 to present residents with information about the Project and the EIS, and hear their concerns. Following this event, Alderon met with the Town Council on several occasions to provide Project updates and discuss a workers accommodation strategy. Discussions with the Town of Labrador City are ongoing.

A summary of all consultation activities undertaken with the Town of Labrador City is provided in Table 10.10.

Table 10.10 Summary of Consultation Activities Held with the Town of Labrador City

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
June 20, 2011	Meeting	Town of Labrador City Economic Development Corporation	Discussed exploration activities and developed action plan.
September 7, 2011	Meeting	Town of Labrador City and Town Council of Wabush	Provided Project information, discuss cabin owners, consultation activities, and housing of workers.
September 7, 2011	Meeting	Community member	Discussed conservation area.
Post-Project Registration			
November 15, 2011	Meeting	Town of Labrador City Town Council	Provided Project update, discuss Project registration and proposed exploration activities, and obtained feedback.
EIS Pre-Submission			
March 14, 2012	Meeting	Town of Labrador City Town Council	Discussed drug policies, codes of conduct, safety, helicopter traffic, cabin owners, and temporary camps.
March 14, 2012	Public Information Session	Attended by 68 community members	Presented information, answer questions, and received feedback on the Project and the EA process.
March 29, 2012	Meeting	Town of Labrador City Manager and Clerk	Provided a Project update and discussed a worker accommodation strategy.
April 18, 2012	Meeting	Town of Labrador City Manager	Provided a Project update and discussed a worker accommodation strategy.
April 30, 2012	Meeting	Town Manager, Mayor	Provided a Project update and discussed information on cabin use in the Project area.

Issues Identification

The issues raised by participants from the Town of Labrador City in relation to the Project as a whole are summarized in EIS Volume 1, Chapter 10, Section 10.5.1. Participants from Labrador City have not identified any issues in relation to the Kami Terminal.

Public Information Session Summary

The public information session was held on March 14, 2012 from 3:00 PM to 9:00 PM at the Knights of Columbus Hall in the Town of Labrador City. A total of 65 people signed in and 21 people completed exit surveys. Notification for the Public Information Session was provided in the Aurora newspaper on March 5, 2012. A notice was also posted in the Canada Post office and the town hall office on March 5, 2012.

Participants were invited to sign in upon arrival Alderon delivered a Project information presentation at 4:00 PM and 7:00 PM. Following the presentation, participants were invited to circulate the room where information posters were set up at four stations (Welcome, Environment, Communities and the Project). Alderon representatives and technical experts were present to answer questions, and record concerns. When exiting the Public Information Session, participants were given an exit survey to provide feedback regarding the Public Information Session and the Project in general.

The exit survey provided at the Public Information Session included four questions. Question one asked “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?” The choices provided were “not useful at all”, “not very useful”, “somewhat useful” and “very useful” followed by space to list improvements and provide additional information. The responses to this question are summarized in Figure 10.10. The majority found the information presented at this Public Information Session to be “very useful” or “somewhat useful”. Most responses of “very useful” were not accompanied by additional comments; however, four participants provided the following additional comments:

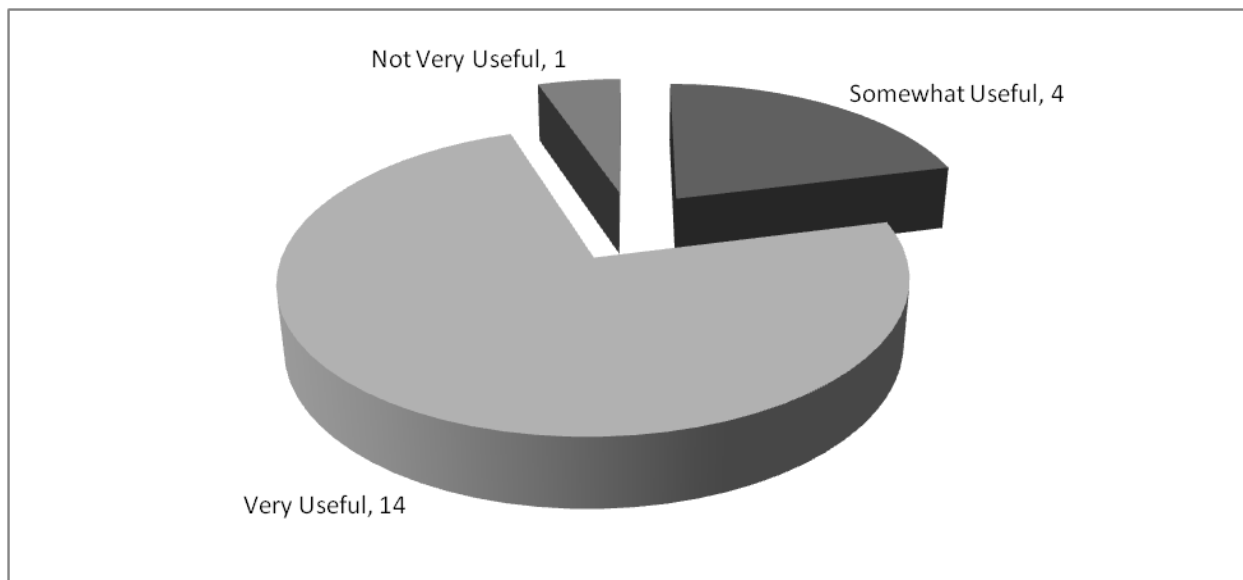
- A suggestion to start a Project Facebook page;
- Impressed with the public meeting and how concerns were discussed in a positive manner;
- Need to address housing issues for employees; and,
- A request to provide more details on the road system.

There was only one response that the information presented was not very useful; this respondent had a preference for town hall style meetings with more chairs and a question and answer session.

The second and third questions asked respondents “What do you feel are important issues regarding the Kami Iron Ore Mine?”, and “What steps do you think Alderon could take to address your concerns?”. The majority of participants identified the environment (including wetlands and wildlife) as an important issue. Other important issues included potential effects

on the community (including socio-economic impacts), effects on cabin owners and housing. Respondents recommended that Alderon could address these concerns by sharing information continuously and engaging with communities.

Figure 10.10 Labrador City Responses to “How useful was the information presented explaining the proposed Kami Iron Ore Mine?”



The fourth question on the exit survey asked participants “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?” Choices for this question were “very dissatisfied”, “dissatisfied”, “neutral”, “satisfied” and “very satisfied” with space provided for additional comments. The responses to this question are summarized in Figure 10.11. The majority of respondents were either satisfied or very satisfied with the Project as it is proposed. Most of those who felt satisfied or very satisfied did not provide additional information but those that did include:

- Alderon is taking the right approach to the environment and the community; and,
- Excellent presentation.

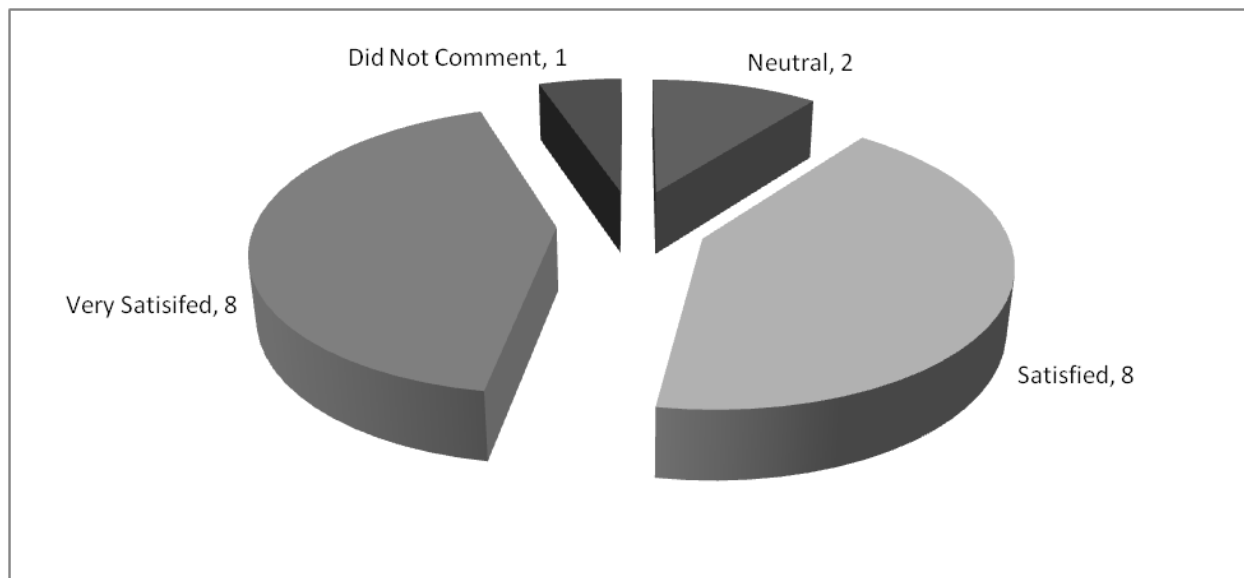
Those that answered they were neutral about the Project development as proposed indicated the following:

- They were withholding their opinions until they saw if their concerns would be addressed; and,
- They were concerned that there were no plans to store overburden to be used for remediation and tailings or rock pit cover.

The final section of the exit survey allowed participants to provide feedback about the Public Information Session and the Project. Although many chose not to provide additional feedback, many of those that did had positive comments about the Public Information Session. Concerns

were also expressed regarding potential effects on cabins, remediation plans and an increase of heavy traffic due to the Project. These issues are summarized below.

Figure 10.11 Labrador City Responses to “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?”



10.5.3 Town of Wabush

Consultation Activities

A summary of all consultation activities undertaken with the community of Wabush is included in Table 10.11. As a first step, a meeting was held with the Town Council during the Pre-Project Registration phase. This meeting included a presentation of a preliminary Project description and a discussion of potential effects. A second meeting with the Town Council of Wabush was held during this phase to provide an update on the Project. As a follow-up to this meeting, Alderon met with the Town of Wabush to discuss potential effects on cabin owners in the Project area.

Following registration of the Project, a joint meeting with the Labrador City and Wabush Town Councils was held to present a Project overview and identify issues. During the EIS Pre-Submission phase, a Public Information Session was held on March 13, 2012 to present residents with information about the Project and the EIS, and to hear their concerns. Several meetings were held with the Town Council to discuss a workers accommodation strategy.

Table 10.11 Summary of Consultation Activities with the Town of Wabush

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
June 30, 2011	Meeting	Wabush Town Council	Project update provided and made plans to meet again.
September 7, 2011	Meeting	Town Manager, Mayor, Deputy Mayor, Town of Labrador City	Delivered Project information presentation and discussed Project.
September 8, 2011	Meeting	Town Manager, Municipal Enforcement Officer	Provided update on cabin owners.
Post-Project Registration			
October 24, 2011	Email	Municipal Enforcement Officer	Confirmed receipt of the Project registration document. Town Council will get back to Alderon regarding community meeting.
October 26, 2011	Email	Municipal Enforcement Officer	Discussed plan to hold public meetings in Labrador City and Wabush in the near future.
November 16, 2011	Meeting	Town Manager, Mayor, Municipal Enforcement Officer, Deputy Mayor, Councilor	Provided an update on the Project, answer questions and discuss issues and concerns. Provided updated Project map, cabin map, and Alderon poster.
EIS Pre-Submission			
March 15, 2012	Meeting	Town Manager, Mayor, Municipal Enforcement Officer, Public Works Supervisor, two Councilors	Discussed Project and identified issues.
March 15, 2012	Public Information Session	Attended by 50 community members	Presented information, answered questions, and received feedback on the Project and the EA process.
March 20, 2012	Letter	Mayor	Thanked the Mayor for taking the time to meet at the Public Information Session and identifying issues of potential concern.



Date	Activity	Participant(s)	Summary
March 29, 2012	Meeting	Town Manager and Clerk	Provided a Project update and discussed a worker accommodation strategy.
April 30, 2012	Meeting	Town Council	Provided a Project update and discussed a worker accommodation strategy.
April 30, 2012	Meeting	Mayor and Town Manager	Provided a Project update and discussed cabin use in the Project area.
May 28-29, 2012	Meeting	Town Councillors	Provided a Project update and discussed a worker accommodation strategy.
June 19, 2012	Letter	Mayor	Provided a Project update and discussed a worker accommodation strategy.

Issues Identification

The issues raised by participants from the Town of Wabush in relation to the Project as a whole are summarized in EIS Volume 1, Chapter 10, Section 10.5.2. Participants from Wabush have not identified any issues in relation to the Kami Terminal.

Public Information Session Summary

A Public Information Session was held on March 13, 2012 from 3:00 PM to 9:00 PM at the Knights of Columbus Hall in Wabush. A total of 50 people signed in for the meeting and 13 completed exit surveys. The goals of the Public Information Session were to present residents with information about the Project and the EIS, and to hear their concerns. Notification for the Public Information Session was provided in the Aurora newspaper on March 5, 2012. The notice was also posted in the Canada Post and town offices.

Residents were invited to sign in upon arrival. The proponent delivered a Project information presentation at 4:00 PM and 7:00 PM. Following the presentation, participants were invited to circulate the room where information posters were set up at four stations (Welcome, Environment, Community, and Project). Alderon representatives and technical experts were present to answer stakeholder questions, and record concerns. When exiting the Public Information Session, participants were given an exit survey to provide feedback regarding the Public Information Session and the Project in general.

The Public Information Session exit survey asked “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?” The choices provided were “not useful at all”, “not very useful”, “somewhat useful”, and “very useful” followed by space provided to list improvements and provide additional information regarding the selected response. The responses to this question are summarized in Figure 10.12. All respondents who answered this question either found the information presented “somewhat useful” or “very useful”.

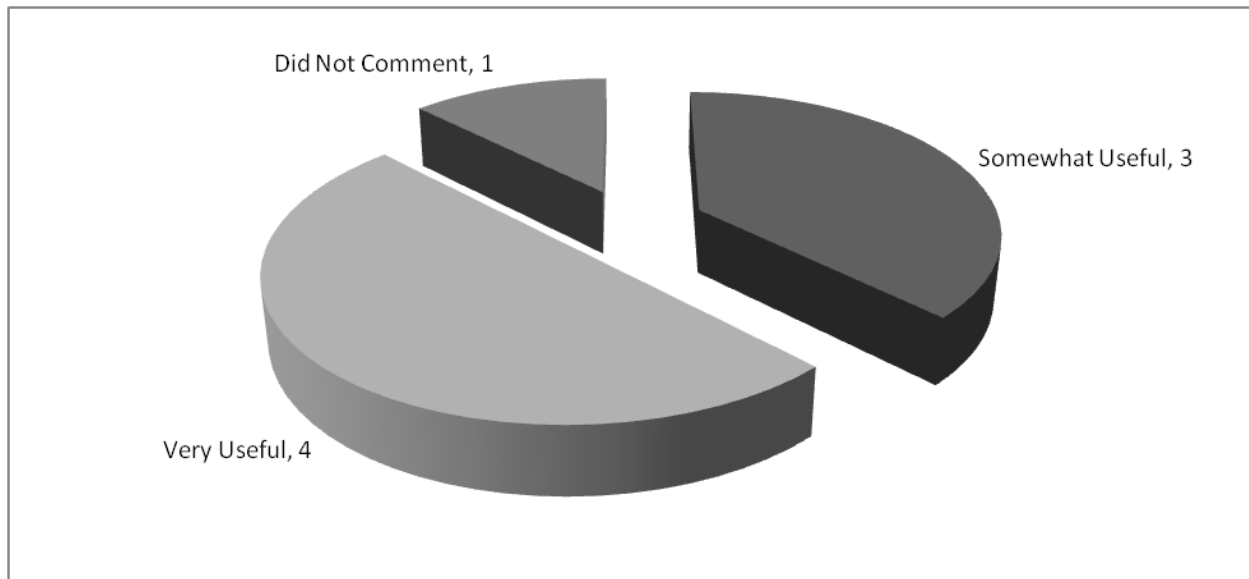
The additional information they provided regarding their answers included:

- A request to provide chairs;
- Enjoyed the open floor discussion; and,
- A request to see a place on the Project website where the questions would be answered that could not be answered at the Public Information Session are answered.

The second and third questions asked respondents “What do you feel are important issues regarding the Kami Iron Ore Mine?”, and “What steps do you think Alderon could take to address your concerns?”.

Participants identified potential environmental effects, potential effects to the community (water supply and snowmobile trails), and tailings as issues that are important to them. Responses to how Alderon can address these concerns favoured ongoing engagement with the community, as well as specific suggestions about different components of the Project (i.e., transmission line placement, wetland compensation).

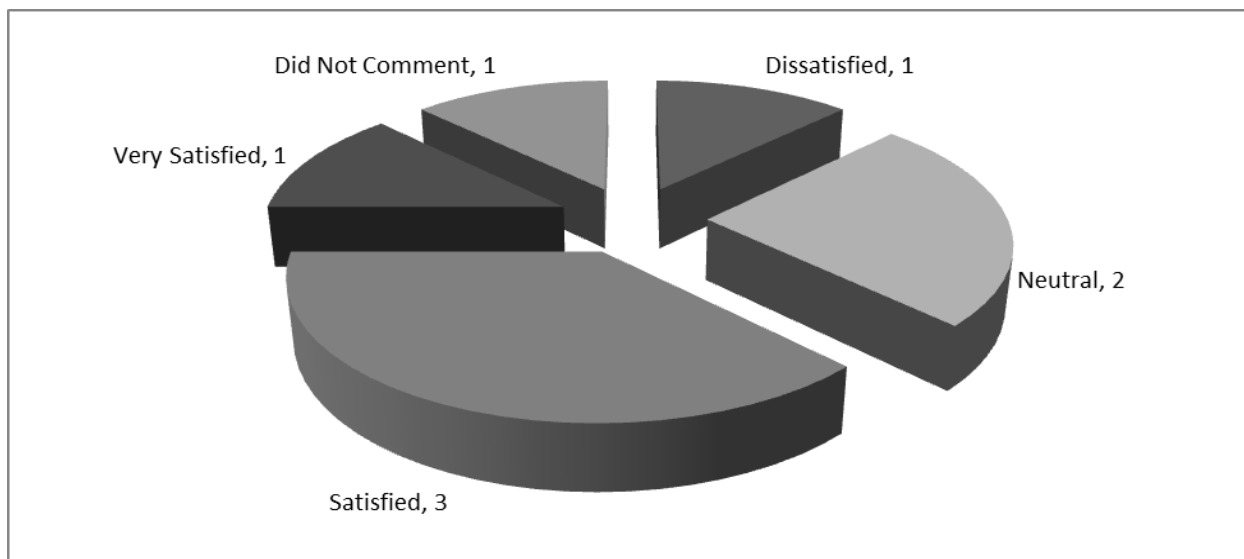
Figure 10.12 Wabush Responses to “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?”



The fourth question on the comment form / exit survey asked participants “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?” Choices for this question were “very dissatisfied”, “dissatisfied”, “neutral”, “satisfied”, and “very satisfied” with space provided to gain additional comments. The responses to this question are summarized in Figure 10.13. Those that felt “satisfied” or “very satisfied” with the Project as it is proposed wrote that they will be more satisfied when more plans are finalized for the railway, dust control, and tailings.

The one respondent that was dissatisfied with the Project development as it is proposed wrote that they want the access road to not go through Wabush due to the potential negative effects on the community, the environment, and local employment opportunities.

Figure 10.13 Wabush Responses to “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?”



The final section of the exit survey allowed participants to provide feedback about the Public Information Session and the Project. In response, a desire was expressed that finalized plans for the railway, dust control and the tailings be provided. Issues raised are included in the summary above.

10.5.4 Town of Fermont

Consultation Activities

A summary of all consultation activities completed with the Town of Fermont is included in Table 10.12. Consultation with the Town of Fermont began prior to the release of the Project registration, with a meeting with the Town Council to discuss the Project and EA process, and record their issues and concerns. Following registration of the Project, a follow-up meeting was held with the Town Council, along with representatives from Health, the MRC of Caniapiscau, and the *Centre local de développement* (CLD) de Caniapiscau to identify and discuss issues.

During the EIS Pre-Submission Consultation phase, a Public Information Session was held on March 15, 2012 to present residents with information about the Project and the EIS, and to hear their concerns. A meeting was also held with the Town Council to provide a Project and EA update.

Table 10.12 Summary of Consultation Activities with the Town of Ferment

Date	Activity	Participant(s)	Summary
Pre-Project Registration			
September 12, 2011	Telephone Call	Mayor	Contacted Town of Ferment to schedule a meeting with Town Council. Mayor is very interested in meeting and suggested September 27 or October 5.
October 5, 2011	Meeting	Town Council	Delivered Project Overview presentation, during which participants engaged in a discussion.
Post-Project Registration			
October 24, 2011	Telephone Call	Mayor	Has not received the Project registration documents. However, the next step is for Ferment to invite Alderon to deliver a presentation to community members to express their concerns about the Project.
November 15, 2011	Meeting	Town Council, representatives from Health, MRC and CLD	Discussed the Project and answer to questions and concerns.
November 16, 2011	Email	Mayor	Meeting follow-up, provided copy of French presentation.
January 17, 2012	Email	Clerk	Discussed cabin maps near Ferment and development plans for the Town.
January 17, 2012	Email	Mr. Morneau, Town of Ferment	Provided maps of the Town's development plans and showing cabins located near Ferment.
January 20, 2012	Email	Mayor	Requested to identify participants for land and resource use study.
EIS Pre-Submission			
February 9, 2012	Telephone Call	Councilor	Discussed concerns about the potential effects on the environment and land use. Interested in participating in Alderon's land and resource use studies.
February 23, 2012	Telephone Call	Mayor	Informed Town that Public Information Session would be held on March 15, 2012 from 4 PM until 9 PM Offered to meet with the Town Council prior to the meeting.
March 15, 2012	Meeting	Town Council	Provided Project update, answered questions and discussed issues and concerns.
March 15, 2012	Public Information Session	Attended by 67 community members	Presented information, answered questions, and received feedback on the Project and the EA process.
March 19, 2012	Letter	Mayor	Comments received from the Municipality of Ferment, identifying concerns with the EA process.



Date	Activity	Participant(s)	Summary
March 22, 2012	Letter	Mayor	Thanked Mayor for meeting and identifying issues of potential concern.
April 3, 2012	Email	Mayor	Followed-up to questions asked during the March 15, 2012 Public Information Session in Fermont, and provided additional information on its air quality monitoring program.
May 29, 2012	Letter	Mayor	Received letter from the Mayor requesting Alderon's participation in a monitoring and follow-up committee pertaining to the Project with Fermont and other regional stakeholders.
July 6, 2012	Letter	Mayor	Responded to the Mayor's request for Alderon's participation in a monitoring and follow up committee.

Issues Identification

The issues raised by participants from the Town of Fermont in relation to the Project as a whole are summarized in EIS Volume 1, Chapter 10, Section 10.5.3. Participants from Fermont have not identified any issues in relation to the Kami Terminal.

Public Information Session Summary

The Public Information Session was held on March 15, 2012 from 4:00 PM to 9:00 PM at the Auditorium de la *Polyvalente Horizon-Blanc* in the Town of Fermont. A total of 73 people signed in and 17 people completed exit surveys. The goals of the Public Information Session were to present residents with information about the Project and the EIS, and to hear their concerns. Notification for the Public Information Session was provided in le *Trait d'Union du Nord* Newspaper on March 5, 2012. A copy of the notices was posted in the Post Office and Town Hall, as well as run on Fermont Radio (three times per day). A television advertisement also ran on *Diffusion Fermont* from March 5 to 12, 2012 at 7:40 AM, 11:40 AM, and 3:40 PM.

Residents were invited to sign in upon arrival. The proponent delivered a Project information presentation at 4:00 PM and 7:00 PM. Following the presentation, participants were invited to circulate the room where information posters were set up at four stations (Welcome, Environment, Community and Project). Alderon representatives and technical experts were present to answer questions, and record concerns. When exiting the Public Information Session, participants were given an exit survey to provide feedback regarding the Public Information Session and the Project in general.

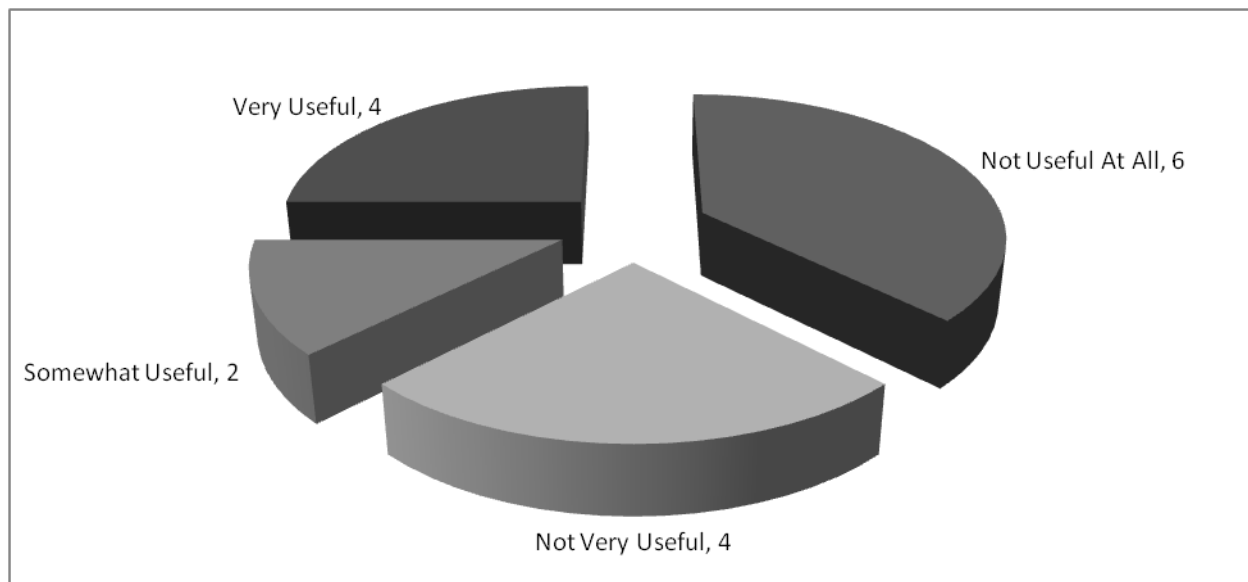
The Public Information Session exit survey asked “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?” The choices provided were “not useful at all”, “not very useful”, “somewhat useful”, and “very useful” followed by space provided to list improvements and provide additional information regarding the selected response. The responses to this question are summarized in Figure 10.14. The majority of people found the information presented at this Public Information Session to be either “not useful at all” or “not very useful”. The reasons accompanying the responses to this question included:

- Requesting more concrete facts and answers rather than speculation or studies;
- The information provided was already available on the Project website;
- Having only one copy of the EIS Guidelines for approximately 150 people was seen as inadequate; and,
- A preference for a more interactive presentation or presentation style vs. open house style of presentation.

The second and third questions asked respondents “What do you feel are important issues regarding the Kami Iron Ore Mine?”, and “What steps do you think Alderon could take to address your concerns?”. Many of the participants identified both potential environmental effects (i.e., air, water) and potential effects on quality of life (i.e., public health, visual effects) as issues that are important to them. Responses to how Alderon can address these concerns were to

cancel or move the Project to another location, continued engagement, as well as more specific responses relating to specific aspects of the Project.

Figure 10.14 Fermont Responses to “How useful was the information presented in explaining the proposed Kami Iron Ore Mine?”



The fourth question on the comment form / exit survey asked participants “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?” Choices for this question were “very dissatisfied”, “dissatisfied”, “neutral”, “satisfied”, and “very satisfied” with space provided to gain additional comments. The responses to this question are summarized in Figure 10.15. The majority of respondents felt very dissatisfied or dissatisfied with the Kami Iron Ore Mine development as it is proposed. The reasons respondents provided for these answers included:

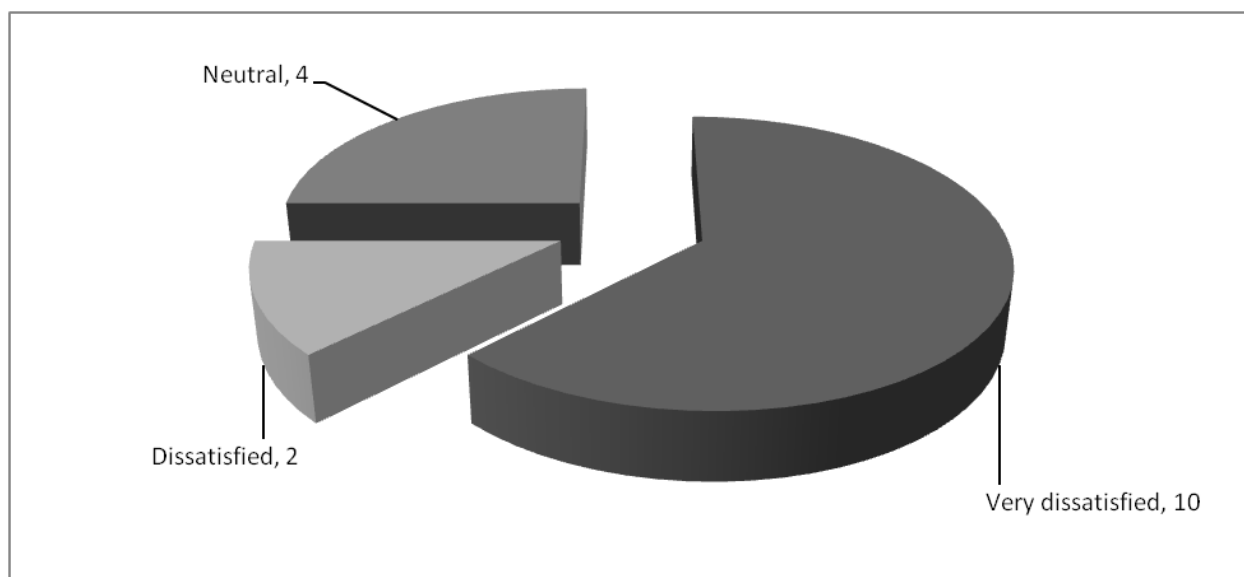
- Concerns that the Project will destroy quality of life and the environment with the visual disturbance, noise, and light generated by the Project;
- Concerns about air quality and safety;
- Concerns that the Project will negatively affect the tranquility and nature surrounding Fermont and objection to Alderon presenting the Project as a positive to the community;
- A feeling of a lack of respect for the community of Fermont by Alderon related to human health effects of the Project on the local community and the waste the Project will generate; and,
- Concern that the communities in Québec that will potentially be affected are not being consulted.

The respondents that indicated they were neutral about the development of the Project provided the following reasons:

- A request to study the alternatives for the location of waste rock stockpiles;
- A suggestion that negative effects should be well studied so they can be minimized; and,
- Felt the consultation process had good transparency and felt Alderon is showing interest in the citizens of Fermont.

The final section of the exit survey allowed participants to provide feedback about the Public Information Session and the Project. Comments here focused on potential negative effects of the Project on quality of life and the environment. Issues raised are included in the summary above.

Figure 10.15 Fermont Responses to “How satisfied are you with the Kami Iron Ore Mine development as it is proposed?”



10.5.5 Non-Governmental Organizations and Special Interest Groups

In addition to consultation activities undertaken with the general public and municipal councils and staff, Alderon consulted key stakeholder groups during the development of the EIS, including economic development organizations, cabin owners, and education and health organizations. Alderon has also been a participant in the Labrador West Regional Task Force and the Labrador West Community Advisory Panel, which are groups comprised of mining companies, municipalities, government, Aboriginal groups, community groups and NGOs. The main objective of the task force and advisory panel is to discuss issues and opportunities for sustainable development in Labrador West.

A record of the engagement activities with public stakeholders is provided in Table 10.13.

Table 10.13 Summary of Consultation Activities with Non-Governmental Organizations and Special Interest Groups

Date and Activity	Participant(s)	Summary
Post-Project Registration		
October 12, 2011 Workshop	Cabin Owners	Provided Project information to cabin owners as part of the EA consultation process and updated cabin owner information.
November 15, 2011 Meeting	Hyron Regional Economic Development Board and CLD de Caniaspicau	Provided a Project update discussed the Project registration document and the proposed exploration activities, answered questions and documented concerns.
November 21, 2011 Email	Hyron Regional Economic Development Board	Concern about conveyors and monitoring well system discussed.
EIS Pre-Submission		
February 2, 2012 Email	<i>Le Trait d'Union du Nord</i>	Notification of Public Information Sessions in Ferment, Labrador City, and Wabush tentatively scheduled for first two weeks of March 2012.
February 3, 2012 Telephone Call	<i>Le Mouvement citoyen de Ferment</i>	Additional information about the EA process requested and concerns identified.
February 7, 2012 Meeting	Labrador West Regional Task Force (includes multiple stakeholders from the Labrador West region)	Identified socioeconomic issues and pressure points arising from the development of the mining industry and advance mitigation strategies.
February 8, 2012 Email	<i>Le Mouvement citoyen de Ferment</i>	Provided diagram of the EA process.
February 21, 2012 Email	<i>Le Mouvement citoyen de Ferment</i>	Provided notification of meeting with Town of Ferment around 12 March 2012.
February 21, 2012 Presentation	Anonymous stakeholders from Sept-Îles at Canadian Institute of Mining, Metallurgy and Petroleum (CIM)	Provided presentation on Project and received questions.
February 22, 2012 Email	<i>Le Mouvement citoyen de Ferment</i>	Invitation to March 15, 2012 Public Information Session.
March 13, 2012 Letter	<i>Le Mouvement citoyen de Ferment</i>	Cover letter and report on the environmental effects associated with the Project prepared by the group. Includes information on the Town of Ferment, questions about potential environmental and social effects and mitigative measures, and regulatory information. Report approved and supported by 1,476 residents of Ferment and Québec.
April 18, 2012	Community Advisory Panel (includes multiple stakeholders in the Labrador West region)	Focused on identifying issues pertaining to socioeconomic issues and communicating them to the Labrador West Regional Task Force



Date and Activity	Participant(s)	Summary
April 20, 2012 Meeting	College of the North Atlantic	Provided Project overview and presented preliminary employment and procurement forecasts.
April 25, 2012 Meeting	Hyron Regional Economic Development Board	Provided Project overview and presented preliminary employment and procurement forecasts.
April 25, 2012 Meeting	Labrador West Status of Women	Provided Project overview and presented preliminary employment and procurement forecasts.
April 30, 2012 Meeting	NLOWE	Provided Project overview and presented preliminary employment and procurement forecasts.
May 2, 2012 Email	<i>Conseil régional de l'environnement de la Côte-Nord</i> (CRECN)	Invitation to Public Information Session in Sept-Îles on May 16, 2012 and offer to meet one-on-one to provide a Project update on May 15, 2012.
May 2, 2012 Meeting	PACSW	Provided a Project overview and discussed employment and procurement forecasts.
May 15, 2012 Meeting	<i>Conseil régional de l'environnement de la Côte-Nord</i> (CRE)	Provided a Project overview.
June 12, 2012	College of the North Atlantic	Industry Focus Group on the Mining Technician program at the Labrador West campus.
June 15, 2012	Community Advisory Panel (includes multiple stakeholders in the Labrador West region)	Focused on identifying issues pertaining to socioeconomic issues and communicating them to the Labrador West Regional Task Force
June 15, 2012	College of the North Atlantic	Toured the new Labrador West Campus facility.
June 20-21, 2012	Labrador West Regional Task Force (includes stakeholders from the Labrador West region)	Labrador West Regional Task Force meeting which identifies socioeconomic issues and pressure points arising from the development of the mining industry and advance mitigation strategies.

Issues identified by each of these groups are *described in* EIS Volume 1, Chapter 10. Section 10.5.5. Only one group, the *Conseil régional de l'environnement de la Côte-Nord* (CRECN), raised issues that were specific to the Kami Terminal. Issues raised by this group include:

- Water Quality;
- Availability of Housing for Workers;
- Community Services;
- Visual Aesthetics;
- Dust;
- Monitoring and Follow-up;
- Cumulative Effects on Fish;
- Cumulative Effects on Community Services and Infrastructure; and,
- Cumulative Effects on Economy, Employment and Business.

The detailed comments raised by CRECN as well as responses to these questions and comments, and the location in the EIS where each issue has been addressed are included in the appropriate VEC chapters of Volume 2 and Volume 1, Chapter 10.

10.5.6 Canadian Environmental Assessment Agency and Newfoundland and Labrador Department of Environment and Conservation Public Participation Activities

In addition to consultation activities initiated by Alderon, there are several opportunities for public participation provided by the CEA Agency and/or the DOEC. To date, the CEA Agency and/or DOEC have issued the following notices:

- January 27, 2012: Notice of Commencement; and,
- February 6, 2012: Public Comments Invited on EIS Guidelines and Federal Funding Available for Review.

The CEA Agency and the DOEC also provide opportunities for public review and comment on EA documentation including:

- Review of draft EIS Guidelines (February 6 – March 17, 2012).

A summary of comments received by the CEA Agency and the DOEC on the draft EIS Guidelines (CEA Agency and DOEC 2012) is provided in Table 10.14. These comments were also considered by Alderon during the development of the EIS, and have been included in the record of issues identified by participants.

Table 10.14 Summary of Comments Received on the Draft Environmental Impact Statement Guidelines

Participant(s)	Issues Identified	Summary
Innu of Uashat mak Mani-Utenam	Aboriginal engagement, cumulative effects on species at risk, cumulative effects on use of lands for traditional purposes by Aboriginal persons, cumulative effects on water resources, cumulative effects on wildlife species, water supply, caribou, traditional land, water quality, potential interaction with existing Aboriginal treaty rights or title.	Stated that the Project is entirely situated on their traditional territory and will impact way of life from a cultural, spiritual, social, community, and economic standpoint. They claim that land and resource use on their territory without their consent is illegal and unconstitutional.
Innu Nation of Labrador	Aboriginal employment and business opportunities, Aboriginal engagement, public participation, potential effects on traditional land use, diversity in the workplace.	Suggested revisions to EA methodology, Aboriginal engagement and public consultation requirements. Revisions stressed importance of consideration of potential effects to labour and employment, as well as social implications of Project effects on the environment.
Naskapi Nation of Kawawachikamach	Aboriginal employment and business opportunities, Aboriginal engagement, cumulative effects on species at risk, cumulative effects on wildlife species, dust, financial capacity for consultation, post-closure, cabins, caribou, hunting activities, local economy, traditional land use, wildlife species, potential interaction with Aboriginal rights or title, Project description / registration, reclamation and rehabilitation, translation of Project information.	Identified issues with EIS Guidelines.
MRC de Caniapiscau	Parks and protected areas.	Resolution No. 2012-02-10 from the MRC de Caniapiscau requesting the Côte-Nord Administrative Region to protect the territory around Lake Daviault and Monts Sverson in the Town of Fermeville.
Town of Wabush	Wetland stewardship areas, road traffic, water supply.	Concerns include: Proposed rail line is close to the Town of Wabush Watershed Zone, the loss of Wetland Stewardship Zones, the increase of traffic on Grenfell Drive when mine becomes operational and Cottage Use Zones.
	Availability of housing for workers, road traffic, water supply, noise, recreational activities, community infrastructure, quality of life, location of tailings impoundment, cabins, dust.	Concerns include: Effects from increased traffic, effects on recreation, water supply, noise, dust, housing for workers, cottage zones, municipal infrastructure, and tailings



Participant(s)	Issues Identified	Summary
Le Mouvement citoyen de Fermont	Water quality, wildlife species, potential effects from blasting operations, cumulative effects on atmospheric environment, cumulative effects on use of lands and resources for traditional purposes, cumulative effects on health and community health, snow and ice.	A cover letter and report on the environmental impacts associated with the Project was provided. This study was undertaken by the <i>Mouvement Citoyen de Fermont</i> . This report includes information on the Town of Fermont, lists of questions relating to potential environmental and social impact and mitigative measures associated with the Project, and regulatory information. The report has been approved and supported by 1,476 residents of Fermont and Québec.
Town of Labrador City	Wetland stewardship areas, noise, visual aesthetics , fishing activities, hunting activities, recreational activities, dust.	Concerns include: wetlands, land use (recreational activities, hunting and fishing), dust, noise and visual aesthetics.
Centre de santé et de services sociaux de l'Hématite	Water bodies, noise, visual aesthetics, human health, cumulative effects on health and community health.	Letter highlights potential negative impacts resulting from the Project. These include potential spread of contaminants in the environment and water, potential visual, auditory and general health (physical, mental and social) impacts. The organization requests that proponent take into consideration potential impacts to the Town of Fermont.
Town of Fermont	Availability of housing for workers, road traffic, railway traffic, visual aesthetics, community services, public participation, cumulative effects on economy, employment and business.	The Town of Fermont expresses environmental concerns relating to the Project, and would like impact studies to include visual assessment, effects of lighting from mining activities and from the increase in traffic on roads and trains. Additionally, impacts from noise and dust and from an increase in number of residents and pressures on existing social services are requested to be examined. The study area should specifically mention Québec, and include Fermont. The Town is concerned about cumulative effects of the number of different mining projects currently surrounding the town, and the prospect of adding an extra one. Waste rock sites should be evaluated during the environmental impact assessment. Request that a committee be formed with citizens from the town to monitor environmental impacts resulting from activities. The Town of Fermont requests to be added to the notification list during the public consultations period.
Ducks Unlimited Canada	Wetland stewardship areas.	Concern with potential degradation of protected wetland habitat. Recommend comprehensive evaluation of potential habitat loss, and identification of wetland mitigation strategy. Encourage application of wetland mitigation sequence (avoidance first, minimizations second and finally compensation).
Anonymous Comments	Wetland stewardship areas, dust, location of tailings impoundment, public participation.	Concerns about wetlands, tailings, and dust. More community involvement requested.
	Wetland stewardship areas.	Concerns about wetlands.
	Road traffic, noise, water quality, potential effects	Resident of Fermont who is against the Project. The resident asserts that the



Participant(s)	Issues Identified	Summary
	<p>from blasting operations, recreational activities, quality of life, dust, human health.</p>	<p>Project proponents are unaware of all negative impacts this may bring to their Town, well-being and quality of life. Areas of concern include visual, noise, water and air impacts. The resident uses an existing operating mine, named ArcelorMittal, located 17 km from Fermeville, to highlight the potential effects of noise vibrations resulting from dynamite used at the mine on the long-term structural stability of homes in Fermeville. The proposed Project is closer to Fermeville (6 km from Fermeville) and therefore the resident infers that effects will be worst. Other concerns include potential for ice-breaking on Lake Daviault, which resident uses for outdoor winter activities, health impacts from dust, and truck traffic resulting from construction and operating of the proposed mine.</p>
	<p>Water quality, cumulative effects on atmospheric environment, water bodies.</p>	<p>Anonymous comments from resident of Fermeville who is against the proposed mine. Resident indicates that he is a miner. Areas of concern include impacts on water resources and lakes, as well as general impacts on the ozone layer resulting from mining activities. The Respondent proposes investing in recreation and other environmentally friendly projects.</p>
	<p>Noise, water quality, potential effects from blasting operations, recreational activities, air quality, quality of life, dust.</p>	<p>The respondent is discontented with the proposed Project. The respondent indicates that the distance of the proposed mine to the Town Fermeville is of primary concern. Additionally, the respondent is concerned about the potential impacts to the protected areas of the Labrador coast. Other concerns include pollution from dust, noise, light, and wastewater discharge from mining activities and the toxic plume from blasting. Further areas of concern include the potential impact on lac Daviault, which is used for recreational activities, and the cumulative effect of currently having two operating mines in the proximity to the Town of Fermeville. The respondent would like the proponent to undertake an environmental impact study this Project may have on the Town of Fermeville including quality of life, and future of their community.</p>



Participant(s)	Issues Identified	Summary
Anonymous Comments	<p>Noise, water quality, visual aesthetics, air quality, dust, public participation, cumulative effects on health and community health, cumulative effects on landforms, soil, snow and ice.</p> <p>Quality, public participation, cumulative effects on health and community health.</p> <p>Cumulative effects on health and community health.</p> <p>Water quality, potential effects from blasting operations, recreational activities, community infrastructure, quality of life, human health, safety, parks and protected areas.</p>	<p>The respondent is against the proposed Project. The respondent is concerned with the proximity of the proposed Project to the Town of Fermont. The respondent indicates that the Town of Fermont is already exposed to dust from operating mining sites further away from the proposed Project location. The respondent draws parallel to Labrador City residue "red snow" resulting from mining activity. The respondent is concerned with potential impacts to Lake Daviault and the marina, which the respondent indicates are valuable feature to the Town. Residents use Lake Daviault for recreational sporting activities, swimming, fishing and boating.</p> <p>The respondent also indicates that the Town of Fermont does not necessarily want to stop this Project, however, it would like the proponents to take the population of Fermont into consideration, and would like the proponent to relocate the Project further away from the Town. The respondent is concerned about the deterioration of the natural environment and quality of life, visual and health impacts, and mineral exploitation.</p> <p>The respondent identified possible risks associated with the Project including health risks (increase in levels of iron in the blood, requiring blood filtration) and environmental risks (destruction of mountains and watershed, contaminated waters flowing into the lac Daviault and the rivière Moisie).</p> <p>The respondent indicated displeasure with the lack of clear responses to questions and the lack of technical experts present during the March 15 public consultation meeting. The respondent indicated that the Project does not have the social backing of the Town of Fermont.</p> <p>Email containing a link to a study on the current situation in a region of Labrador regarding the impact of mining on human health. In the email, the respondent asks Alderon to evaluate all impacts that the mine may have on the health of people of Fermont and Newfoundland and Labrador.</p> <p>Respondent is concerned about the impacts the Project may have on the Town's infrastructures, countryside surrounding the town, recreational activities at lac Daviault, and ice-breaking on the lake resulting from blasting. Resident is also concerned with the pollution of lac Daviault.</p> <p>The respondent compared potential impacts from the Project to the current state of Labrador City, and outlines current health issues as a result of mining in Labrador City. The respondent states that blood filtration is required by many in Labrador City as a result of high concentrations of iron. The respondent also questions if Alderon will be engaged in the future to treat people with health issues.</p>



Participant(s)	Issues Identified	Summary
Anonymous Comments	<p>Water quality, potential effects from blasting operations, recreational activities, quality of life, public participation.</p>	<p>Respondent resides in the Town of Fermont and is concerned about the proximity of the proposed mine site to the Town. Respondent is concerned about the impact it may have on lac Daviault, which the respondent states is used recreationally in summer and winter. Respondent is also concerned about the effects of blasting, which would affect the tranquility of the area. The respondent highlights dust impacts as the primary source of concern. Respondent suggests relocating the mine further away from the Town.</p> <p>Respondent was displeased with the public consultation meeting where it was felt that there was a lack of transparency and openness.</p>
Anonymous Comments	<p>Noise, water quality, visual aesthetics, air quality, dust, public participation, cumulative effects on health and community health, cumulative effects on landforms, soil, snow and ice.</p>	<p>The respondent was displeased with responses from the public consultation meeting in Fermont. The respondent is concerned with the proximity of the Project to the Town of Fermont. The respondent is also concerned by potential impacts changing winds may have on residents. Other concerns include: fragmentation of ice on lake during blasting, noise levels, visual impairment, and sand or dust suspension during summers, pollution from blasting, impacts on lac Daviault and the forest.</p> <p>The respondent draws parallel to Labrador City indicating that it is polluted (e.g., 'black snow') as a result of mining activities in the area. The respondent is against this proposed Project.</p>
Anonymous Comments	<p>Waterbodies, cumulative effects on atmospheric environment, dust.</p>	<p>Anonymous comments on draft EIS Guidelines.</p> <p>The respondent would like the proponent to consider cumulative impacts on the entire northern region. The respondent indicates that Fermont is already surrounded by four iron mines and adding one more would contribute to additional dust and contamination of lakes and the environment.</p>



Participant(s)	Issues Identified	Summary
Anonymous Comments	<p>Noise, water quality, potential effects from blasting operations, dust, public participation.</p> <p>Recreational activities, local economy.</p> <p>Noise, potential effects from blasting operations, cumulative effects on atmospheric environment, dust.</p> <p>Availability of housing for workers, road traffic, water supply, waterfowl, engineering and project design, wetland stewardship areas, wildlife species, wildlife habitat, location of rail, location of tailings impoundment.</p>	<p>Anonymous comments on the draft EIS Guidelines. Respondent is against the proposed Project. Respondent expresses discontent at the public information meeting, and the responses received from the proponent. Respondent is concerned about negative environmental impacts from the mine given the close proximity to the Town of Fermont. Concerns include: noise, dust, blasting, and impacts on water quality.</p> <p>Respondent is requesting the following from Alderon and the CEA Agency:</p> <ul style="list-style-type: none"> • All documents related to environmental and ethical activities undertaken by Alderon regarding the Project, and the CEA Agency are to be transmitted to future buyers; • The company take the same environmental and ethical activities towards all municipalities surrounding the Project; and, • A study on the impacts of the Project on tourism and recreational activities during the duration of the Project. <p>Respondent expresses concern at the proposed proximity of the mining site to the Town of Fermont. Respondent indicates that the environmental impact assessment focused mainly on flora, fauna and First Nation, and not so much on non-First Nation communities. Concerns expressed include effects on noise, dust, blasting, light, and deterioration of natural environment.</p> <p>Concerns include:</p> <ul style="list-style-type: none"> • Effects on mining operations on waterfowl and other migratory bird habitat area; • Habitat Conservation Agreements; • Location of rail transport infrastructure, fuel unloading station, tailings management; • Effects on nearby communities, including waste management and hazardous waste management of used oil; • Migratory birds; • Increase in traffic; and, • How will workers be housed during construction.

Sponsorships and Donations

Alderon is committed to making a positive contribution to the communities in which it operates and is committed to actively supporting these communities by providing financial support or in-kind support for various humanitarian, community, educational, and health related activities, and by partnering with various cultural, environmental, or sports events. In 2011 and 2012, Alderon supported various groups and events in Labrador and Québec.

Below is a list of the main groups and events that Alderon supported:

- Menihek Nordic Ski Club (Labrador City);
- Labrador West Music Festival (Labrador West);
- NL Search and Rescue Association (Labrador West);
- Cain's Quest (Labrador West);
- Labrador West Minor Soccer League (Labrador West);
- Innu Nation – health care (Sheshatshiu);
- Mokami Status of Women's Council – Libra House (Happy Valley-Goose Bay);
- Sept-Îles Hospital Foundation (Sept-Îles);
- Foyer des marins (Sept-Îles);
- 2012 Aboriginal Interband Games (Uashat mak Mani-Utenam); and,
- Shaputuan – National Aboriginal Day Festival (Uashat mak Mani-Utenam).

10.6 Regulatory Consultation

Consultation with federal and provincial regulatory agencies is an important component of the EA process. Alderon's approach to regulatory consultation is to establish and maintain transparent dialogue with federal and provincial regulators throughout EA process. While the provincial regulators in Newfoundland and Labrador are responsible for only the Kami Mine (Volume 1 of the EIS), they were also kept informed of proposed Project activities for the Kami Terminal (Volume 2 of the EIS). Consultation activities include ongoing information updates and meetings, including sharing stakeholder and Aboriginal issues as they arise. In addition, Alderon met with reviewing agencies during the development of the EIS to present baseline studies, study methodology and effects assessment for each component chapter. This approach is aimed at informing reviewers, and obtaining feedback early in the process. Where feasible and as required by the regulations, feedback and issues were addressed prior to submission of the EIS.

A complete record of all regulatory consultation activities is included in Table 10.15. This includes documentation of all consultation activities held with provincial and federal agencies, departments, and ministries, including meetings, teleconferences, workshops, and site visits. Key issues discussed and event outcomes are identified.

Table 10.15 Summary of Consultation Activities with Regulatory Agencies

Date and Activity	Participant(s)	Summary	Issues Identified
Pre-Project Registration			
June 29, 2011 Meeting	Port of Sept-Îles	Provided Project overview and made plans to meet again.	Project description / registration.
July 26, 2011 Meeting	DOEC, DNR	Discussed the Project and made plans to meet again.	Availability of power, traditional land use activities by Aboriginal persons, potential interaction with existing Aboriginal rights or title.
July 26, 2011 Meeting	DNR	Discussed the Project and made plans to meet again.	Availability of power, traditional land use activities by Aboriginal persons, potential interaction with existing Aboriginal rights or title, dust, quality of life, secondary processing of iron ore.
July 27, 2011 Meeting	DFO	Discussed the Project and made plans to meet again.	Fish habitat, traditional land use activities by Aboriginal persons, potential interaction with existing Aboriginal rights or title, public participation.
September 1, 2011 Meeting	DNR	Reviewed permit plan.	Aboriginal engagement.
September 6, 2011 Meeting	CEA Agency, MPMO	Discussed structure of the EA.	Aboriginal engagement.
September 7, 2011 Meeting	DOEC	Discussed conservation area.	Public participation.
September 15, 2011 Meeting	DOEC	Provided Project update.	Public participation, translation of Project Information.
September 16, 2011 Meeting	IGAA	Provided Project update.	Aboriginal employment and business opportunities, availability of local workers, diversity in the workplace, public participation.
September 16, 2011 Meeting	MDDEP	Discussed regulatory review requirements.	EA schedule, Project description and registration.



Date and Activity	Participant(s)	Summary	Issues Identified
September 19, 2011 Meeting	MDDEP	<p>Provided information about the Project.</p> <p>Determined whether the Québec components of the Project trigger an EA with the Québec provincial government under the <i>Environmental Quality Act</i></p>	Public participation.
September 21, 2011 Meeting	CEA Agency, DOEC, IAA	<p>Discussed comments on draft Project registration.</p> <p>Provided an update of the Québec components and meeting with Québec provincial government. Provided an update of consultation activities, including Aboriginal consultation.</p>	Translation of Project information.
Post-Project Registration			
October 3, 2011 Meeting	DOEC	<p>Provided an overview of the Project.</p> <p>Discussed draft Project registration and next steps.</p>	Potential effects on water quality, fish habitat.
December 1, 2011 Meeting	Port of Sept-Îles	<p>Provided a Project update and discussed EA process. Confirmed that the Port will address increase in shipping as part of their Port expansion EA and that the Alderon project scope ends at the common loading facility. The Port has communicated this approach to the CEAA.</p>	EA jurisdiction.
December 12, 2011 Meeting	CEA Agency, DOEC	<p>Provided Project update</p> <p>Discuss EA process and answered questions from government agencies.</p>	Air quality, archaeological sites, diversity in the workplace, effects on wetland stewardship areas, waterbodies, water supply, community services, wildlife species
December 14, 2011 Meeting	DNR, Women's Policy Office	<p>Provided Project overview and discussed the Women's Employment Plan for the Project.</p>	Apprenticeship and training, availability of housing for workers, community services.
EIS Pre-Submission			
January 13, 2012 Meeting	DOEC	<p>Discussed possibility of meetings with EA committee members and requirement for component studies.</p>	Cumulative effects.
January 17, 2012 Meeting	DOEC	<p>Discussed air quality and noise mitigation, monitoring and permitting strategies.</p>	Air quality.



Date and Activity	Participant(s)	Summary	Issues Identified
February 6, 2012 Meeting	EC, DFO	Provided Project update, overview of aquatic information collected to date, timeline to develop HADD strategy and plan, and consultation initiatives.	Location of tailings impoundment, fish habitat, waterbodies, water management.
February 23, 2012 Meeting	CEA Agency, DOEC	Discussed Aboriginal engagement, Public participation and EIS Guidelines.	Aboriginal engagement, public participation, EIS Guidelines.
March 1, 2012 Meeting	DOEC	Advised regulators of baseline work completed to date with regards to wildlife, wetland and rare plant surveys. Discussed Wetland Stewardship Agreements, and reviewed the approach that will be applied to assessment of terrestrial VECs in the EIS.	Wetland stewardship areas, parks and protected areas, wildlife species.
March 5, 2012 Meeting	DNR	Provided Project update and discussed DNR requirements for Benefits Plan.	Apprenticeship and training, diversity in the workplace, community services, secondary processing of iron ore.
March 26, 2012 Meeting	DOMA, Town of Wabush, CBRE Real Estate Brokerage, Kendall Engineering Ltd, Plan Tech Environment, Town of Conception Bay South	Discussed proposed expansion of the Wabush Industrial Park and possibility of locating a temporary construction camp within the newly expanded park.	Community infrastructure, local businesses, local economy, water quality.
April 2, 2012 Meeting	DOAE, DOMA, DTCR	Provided Project update and discuss socio-economic assessment methods.	Apprenticeship and training, availability of housing for workers, availability of local workers, cumulative effects.
April 17, 2012 Conference Call	MDDEP	Provided an overview of the Project and update on the latest progress in the environmental assessment, public and Aboriginal engagement.	Air quality.
April 18, 2012 Incoming Letter	DFO	Response to Alderon's proposed tailings management facility preparation plan submitted in September 2011. DFO concluded that Alderon's proposal is likely to result in effects on fish and fish habitat, and requested additional information.	Cumulative effects on fish and fish habitat, fish population, fish habitat, fishing activities.



Date and Activity	Participant(s)	Summary	Issues Identified
April 18, 2012 Meeting	DOEC	Provided Project update, summary of baseline atmospheric environment information collected to date and overview of assessment methods.	Air quality, dust, potential effects from blasting operations, noise, quality of life.
April 19, 2012 Meeting	DNR	Provided Project update, summary of assessment approach for the Landform and Soils VEC, and discuss acid rock drainage.	Acid rock drainage.
April 19, 2012 Meeting	DOEC	Discussed water resources baseline data and assessment approach. Provided Project and public and Aboriginal engagement update.	EA schedule, water bodies, water supply, water quality.
April 20, 2012 Meeting	DNR	Provided updated employment and procurement forecast information, as a follow-up to the meeting held on March 5, 2012.	Apprenticeship and training, availability of local workers, diversity in the workplace, local businesses, local economy, secondary processing of iron ore.
May 1, 2012 Letter	DAES	Letter informing the Minister that Alderon will participate in a provincial task force pertaining to education, training, recruitment and retention of skilled trades workers.	Apprenticeship and training.
May 16, 2012 Meeting	MDDEP	Provided Project update.	Water quality.
May 20, 2012 Meeting	DOEC, DTCR	Presented Stage 1 Historic and Cultural Resources Overview Assessment results, and discussed EA approach.	Archaeological sites, land use activities, waterfowl.
June 22, 2012 Meeting	DAES	Meeting with Assistant Deputy Minister regarding the task force on the skilled trades in NL.	Apprenticeship and training.
June 28, 2012 Meeting	DFO	Provided an overview and draft copy of the baseline study for Fish, Fish Habitat and Fisheries. Discussed preliminary stream crossing information.	Fish population, location of rail, potential effects on fishing activities.

10.7 Consultation and Engagement Approach Post Environmental Impact Statement Submission and Post Environmental Assessment Approval

Following submission of the EIS, Alderon will continue Aboriginal engagement, and public and stakeholder consultation activities. Alderon will continue efforts to engage with potentially affected Aboriginal communities, including outreach to Band Councils, capacity building, and community meetings where identified as appropriate by Aboriginal leaders. A second round of Public Information Sessions will be scheduled in the Towns of Labrador City, Wabush and Fermont. Alderon will also continue its engagement efforts with other stakeholders, including municipalities, NGOs, community groups and regulators. Engagement and consultation initiatives will continue following EA approval and throughout the life of the Project.

Alderon’s approach for ongoing Aboriginal engagement and public consultation during the post EIS submission and post EA approval phases is detailed in the *Aboriginal Engagement Action Plan* (Appendix J) and the *Kami Project Public Consultation Action Plan* (Appendix K).

As described in the EIS Guidelines (CEA Agency and DOEC2012) the EIS and Plain Language Summary will be made available for public review and comment by the CEA Agency and the DOEC for 50 days upon submission of the EIS to reviewing agencies.

10.8 Comments and Responses Tables

During its Aboriginal engagement and public consultation activities, Alderon documented all issues and comments from participants. The issues and comments related to the Kami Terminal are summarized in Tables 10.16 to 10.24 below. Responses to all questions and comments, and the location in the EIS where each issue has been addressed are also included.

Table 10.16 Issues Raised by Stakeholders Relating to Atmospheric Environment

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Dust	Sept-Îles	Two residents enquired about dust emissions associated to rail car dumpers	Rail cars will be emptied inside a building, and emissions will be treated by a dust collector. More information is available in Section 14.6 .
	Sept-Îles	One resident enquired about dust emissions associated to rock cutting	Effects of dust emissions associated to the construction will be short-term and activities will be carried out according to construction standards and industry best practices. More information is available in Section 14.6 .
	Sept-Îles	Two residents enquired about dust emissions associated to the loading of boats	Product loading of ships will be managed by the Port, which will comply with all applicable laws and regulations.

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
	Sept-Îles	Two residents asked what mitigation measures were planned to control fugitive dust from the concentrate stockpile	Measures to control fugitive dust at the concentrate stockpile include adjusting the height of the stacker-reclaimer, and use of water as and when needed. Additional information is provided in Section 14.6 .
Cumulative impacts of multiple industries on air quality	Sept-Îles	One resident indicated its concern about cumulative effects, due to the presence of other industries. A reference to an air quality committee was made, by indicating that it has yet to decide where to install its air quality monitors. Another resident asked if Alderon is installing air quality monitors in Sept-Îles.	Alderon will participate to the air quality monitoring effort initiated in Sept-Îles. Additional details are available in Section 14.6 .

Table 10.17 Issues Raised by Stakeholders Relating to Wetlands

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Wetlands	Sept-Îles	There is a protected wetland in the Pointe-Noire area	Review of aerial maps and field work revealed no wetlands were identified within the PDA at the Pointe-Noire Terminal and for that reason is not further assessed.

Table 10.18 Issues Raised by Stakeholders Relating to Freshwater Fish, Fish Habitat, and Fisheries

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Cumulative Effects on Fish and Fish Habitat	CRE/CPESI	There is a lot of pressure around the bay, concerned about cumulative effects. It would be great if elements of the Kami Terminal could be located further to the shore.	Alderon assessed several alternatives when choosing a site for the Terminal. The selected site was the most economically and technically feasible. More information regarding site selection can be found in Section 2.8 . Alderon will minimize its influence on the baie of Sept-Îles including treatment of final effluent treatment will meet or surpass standards. More information can be found in Section 16.6 .

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Fish Population	Sept-Îles	Resident asked about the potential effects of the Kami Terminal on fish in ruisseau a la Baleine.	In response to concerns raised regarding the presence of fish at the Terminal site, Alderon conducted a fish and fish habitat survey. The findings of this survey are provided in Chapter 18 and in Appendix E .
Fish Habitat	Sept-Îles	Resident voiced concern about impact of increasing rail traffic on the rivière Nipississ, particularly its effect on salmon spawning grounds. Discussed how the vibrations from the rail traffic would destroy salmon spawning.	Rail operations in the vicinity of the rivière Nipississ are beyond the scope of the Kami Terminal. This activity is the mandate of the QNS&L Railway and all operations are required to comply with all applicable provincial and federal regulations regarding fish and fish habitat.

Table 10.19 Issues Raised by Aboriginal Groups and Stakeholders Relating to Birds, Other Wildlife and Their Habitat, and Protected Areas

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Parks and protected areas	Sept-Îles	There is a protected wetland in the area.	The Project does not overlap with any protected or designated areas. The assessment of the Project on protected areas is provided in Section 19.6 .
Potential effects on wildlife species	CRE	The baie des Sept-Îles is an important conservation zone for migratory birds and concerned about the potential effects of the dust generated from the project on the bay.	Alderon conducted dispersion modelling for the Project, the results of which indicate that no substantive changes in air quality are expected on local or regional scales due to emissions from the Project. The modelling results are presented in Section 19.2 and in Appendix G .
	Sept-Îles	Resident raised issue of migratory birds and bird species at risk	As part of the EIS, field surveys were conducted to identify habitat and species potentially affected by the Project. These surveys did not identify any rare or unique habitats that will be affected by the Project. Additional information on bird species, including migratory birds, is provided in Section 19.5 .

Table 10.20 Issues Raised by Aboriginal Groups and Stakeholders Relating to Species at Risk and Species of Conservation Concern

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Potential effects on Species at Risk	Sept-Îles	Resident raised issue of migratory birds and bird SAR	In response to concerns related to the presence of bird species, including migratory species, at the Project site, field surveys were conducted to identify species presence. Although the Project site does overlap with the geographic range of some bird species at risk, the field surveys did not identify any rare bird species in the vicinity of the Project. Additional information on the distribution of bird species at risk, including migratory birds, is provided in Section 20.5 .

Table 10.21 Issues Raised by Stakeholders Relating to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons

Issue	Community	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Potential interaction with existing Aboriginal rights/title	Uashat	Uashat do not consider themselves as Québec Innu and they want to be involved in the entire Project, and not only the Québec components in the Port of Sept-Îles.	Alderon has been engaged with Aboriginal groups on an ongoing basis on the Project as a whole (mine site, port infrastructure). Alderon will continue to engage Aboriginal groups throughout the life of the Project. Information on Aboriginal engagement is provided in Sections 10.2 and 10.3 .

Table 10.22 Issues Raised by Aboriginal Groups and Stakeholders Relating to Other Current Use of Lands and Resources

Issue	Community	Summary of comments raised during consultation and engagement activities	Response / Location in the EIS
Visual Aesthetics	Sept-Îles	Visual effects of the port facilities, including stockpile	No impacts on visual aesthetics (viewscales) are anticipated for residential areas of Sept-Îles as they are located on the opposite side of the Bay from the Pointe-Noire Terminal, at a distance of approximately 7 km. They will represent a minimal visual change from other existing industrial port facilities. Additional information can be found in Sections 23.4 and 23.6

Table 10.23 Issues Raised by Stakeholders Relating to Community Services and Infrastructure

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Cumulative effect on Community Services and Infrastructure	CRE	Cumulative socio-economic effects	Construction activities associated with the Terminal site will require a workforce in the order of 200 to 300 workers over the next few years. Cumulative effects on the housing market and on traffic congestion are considered to be short-term and will be significant. The assessment of cumulative effects on Community Services and Infrastructure is provided in Section 24.7 .
	CIM Conference	Aren't you concerned that the QNS&L railway is becoming over utilized?	The capacity of the QNS&L has been studied for many different potential future traffic volumes, both with and without the proposed Alderon traffic. Infrastructure improvement strategies have been identified from these studies that will maintain acceptable levels of service for all traffic on QNS&L and these strategies have been incorporated into the negotiations for a rail haulage contract.
Availability of Housing for Workers	Sept-Îles	Resident asked where people working on this project would be housed. Followed up with concerns about repercussions on housing in the community. Asked if accommodations will be built to lodge the workers.	In order to manage the impact of Project construction activities on regional housing supply Alderon will engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed. The assessment of Project effects on housing is available in Section 24.6 .
		Noting that housing is an issue, a resident outlined a number of initiatives that have been completed or are being planned to deal with the increase in the housing demand.	
	CRE	Access to housing and service industry in Sept-Îles during construction of port facilities.	
Railway Traffic	Labrador City	The actual railway line and its railway are issues of concern. Has Alderon consulted with QNS&L about the projected total rail traffic in 2015-2020?	The capacity of the QNS&L has been studied for many different potential future traffic volumes, both with and without the proposed Alderon traffic. Infrastructure improvement strategies have been identified from these studies that will maintain acceptable levels of service for all traffic on QNS&L and these strategies have been incorporated into the negotiations for a rail haulage contract.

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
	M-LJ	Increased traffic from the Project may slow down the passenger train and delivery of goods (food and fuel) from Sept-Îles to Schefferville.	
Community Services	Sept-Îles	Resident talked about issues with community services.	<p>In order to manage the impact of Project construction activities on regional housing supply Alderon will engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed. By virtue of the characteristics of the required workforce, it is considered unlikely that these workers would exert additional demand on local employment and social services, health services and social programs, training and education services and programs, public safety and security services, municipal administrative capacity, or municipal services and infrastructure.</p> <p>The assessment of Project effects on community infrastructure and services is available in Section 24.6.</p>
	CRE	Access to housing and service industry in Sept-Îles during construction of port facilities.	<p>In order to manage the impact of Project construction activities on regional housing supply Alderon will engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed. The assessment of Project effects on housing is available in Section 24.6.</p>

Table 10.24 Issues Raised by Stakeholders Relating to Economy, Employment, and Business

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
Cumulative effects to economy, employment and business	CRE	Cumulative socio-economic effects	Construction activities resulting from various Projects in the area will require an overall workforce in the order of 2,000 to 3,000 workers over the next few years as well as hundreds of additional employees over the life of several projects. Regional businesses are likely to benefit from contracts for materials and services both in the short-term and the long-term. Additional information on cumulative effects to economy, employment and business is provided in Section 26.10 .
Apprenticeship and Training		The Mayor suggested that Alderon contact the Education/Training institutions in the region	Alderon is committed to build and maintain positive and long term relationship with stakeholders. Alderon will engage with all interested parties. Additional information on consultation completed to-date is provided in Chapter 10 .
Availability of local workers		Are you going to use local workers for operations or go FIFO?	Alderon is committed to promoting regional subcontracting and employment, including local and Aboriginal opportunities. In addition, Alderon will collaborate with the regional economic forum to maximize local employment. Section 26.6 contains the assessment of Project effects on employment and business.
Local businesses	CIM Conference	Many indications of interest by regional suppliers and contractors. In this regards, I believe we should hold information forums in St. John's and Sept-Îles when our contracting strategy is firmed up.	Alderon is committed to promoting regional subcontracting and employment, including local and Aboriginal opportunities. In addition, Alderon will collaborate with the regional economic forum to maximize local employment. Section 26.6 contains the assessment of Project effects on employment and business.
	Sept-Îles	Involvement of the local communities and businesses in the procurement process for the construction and operation of the mine. State the company's intentions concerning local procurement	

Issue	Community / Organization	Summary of Comments Raised During Consultation and Engagement Activities	Response / Location in the EIS
	Sept-Îles	The Mayor suggested that Alderon contact the CLD which is an entity that supports small and medium size businesses. He also suggested Alderon contact the local Chamber of Commerce and offers to speak at one of their functions. He also recommended a meeting with the Sept-Îles Economic Development Agency that looks after major industries.	As outlined in its <i>Community Relations Policy</i> , Alderon is committed to build and maintain positive and long term relationship with stakeholders. Alderon will engage with all interested parties. Alderon will collaborate with the Regional economic forum. Additional information on consultation is provided in Chapter 10 .
Potential effects on local economy		At the end of the predicted mine life, what are you going to do with your employees?	The workforce will be kept informed of Project plans and, as with any other project, will be down-sized as the Project plans warrant.

11.0 ECONOMIC AND SOCIAL BENEFITS OF THE PROJECT

11.1 Introduction

The economic and social benefits of the Kami Iron Ore Mine and Rail Infrastructure is provided in Chapter 11 of Volume 1. This chapter provides an overview of the economic and social benefits of the Kami Terminal for the residents and businesses of the region of Sept-Îles, the Côte-Nord Administrative Region, and the province of Québec as a whole. The chapter provides 1) a description of the regional economic and social context, including conditions prevailing in the Innu communities of Uashat and Maliotenam; 2) a summary of the economic benefits accruing from the Kami Terminal; and 3) a summary of the social benefits accruing from the Kami Terminal following implementation of economic and social enhancement measures and of a socio-economic monitoring program by Alderon.

11.2 Economic Conditions

Côte-Nord Administrative Region

With a population of approximately 96,000 in 2009, Québec's Côte-Nord Administrative Region accounted for 1.2 percent of the population of the province of Québec. The region's main resource processing centers, Baie-Comeau and Sept-Îles, account for a large share of the population. The region's principal resources include:

- Boreal forests, which cover close to three quarters of the region;
- Fisheries resources, which abound in the Saint-Lawrence River estuary and in a number of rivers and lakes;
- Mineral resources, which mainly include iron, but also ilmenite (titanium), graphite and other potential resources; and,
- Recreation and tourism resources based upon outdoors activities.

The main sources of employment in the region are manufacturing, health care and social assistance, retail trade, public administration, education, accommodation and food services as well as mining. Besides the region's hydroelectric complexes, which include some of the largest in Canada (e.g., Manic-Outardes complex, La Romaine complex under construction), the principal resource-based industries are based on the extraction and processing of mineral and forestry resources:

- Aluminum smelters, including two of the largest in Canada (Alcoa in Baie-Comeau and Aluminerie Alouette in Sept-Îles);
- Iron ore and ilmenite processing plants (IOCC and Cleveland Cliffs in Sept-Îles, ArcelorMittal in Port-Cartier, QIT Fer et Titane close to Havre-Saint-Pierre, etc.); and,
- Pulp and paper mills (including Abitibi-Bowater mills in Baie-Comeau).

Natural resource industries are highly cyclical. While the pulp and paper industry is currently in difficulty, the mineral extraction and processing industry is undergoing rapid expansion. According to provincial statistics [Institut de la Statistique du Québec (ISQ) 2011], this is reflected in increased numbers of employment among adults between the ages of 25 and 64 in the Municipalité régionale de comté (MRC) de Sept-Rivières, which includes Sept-Îles and Port-Cartier (+4.8 percent between 2009 and 2010). The distribution of businesses by size in the Côte-Nord and Nord-du-Québec regions in 2009 was similar to the province of Québec as a whole. Each region had 44.5 small and medium enterprises (SMEs) per 1,000 residents in 2009 [Canada Economic Development (CED) 2012]. The provincial average was 37.6 SMEs per 1,000 residents (CED 2012).

In 2007, the Côte-Nord and Nord-du-Québec regions had 30 exporting companies and the value of exports was \$3,351.7 million, accounting for 4.7 percent of provincial exports (CED 2012). During 2004 to 2009, public investment in the Côte-Nord region declined at an average annual rate of 0.1 percent, compared with a 12.4 percent increase in the province of Québec (CED 2012). During the same time, private investment in the Côte-Nord region declined at an average annual rate of 3.2 percent, compared with a 0.9 percent decrease in the province of Québec (CED 2012).

MRC de Sept-Rivières and City of Sept-Îles

Between 2009 and 2010, the number of employed workers in the MRC de Sept-Rivières increased from 14,731 to 15,435, the employment ratio increased from 73.4 percent to 77.5 percent, and the median salary increased from \$42,567 to \$45,411 (ISQ 2011). Over the same period, provincial employment increased from 72.6 to 73.5 percent and the median salary increased from \$36,304 to \$37,173. This indicates more favourable employment and income characteristics for the region of Sept-Îles than for the province of Québec as a whole.

In 2009, the city of Sept-Îles had a population aged 15 and over of 24,700. The labour force numbered 16,900 individuals, of which 15,500 were employed. The unemployment rate was 8.8 percent. The median salary for full-time male workers was estimated at \$53,023 and the median salary for full-time female workers was estimated at \$32,249 (Ville de Sept-Îles 2012).

The service sector is the most important sector in the city of Sept-Îles for employment and income. It is represented by 862 companies employing 10,897 persons (Ville de Sept-Îles 2012). The most important service sector employers include retail (1,835 persons), regional health and social services (1,459 persons), the regional school board (1,136 persons), federal, provincial and municipal administrative offices (995 persons), and accommodation and food services (975 persons).

In line with the importance of mineral extraction and processing industries to the economy of the region, the mining sector plays an important role in employment and income in Sept-Îles. The main employers include IOCC with 510 employees in 2008 and Cliffs Resources (Wabush Mines) with 350 employees in 2009. The industrial sector also plays an important role, providing 1,642 jobs in 2007 (Ville de Sept-Îles 2012). The main employers in the manufacturing sector, according to the number of employees, include the Aluminerie Alouette aluminum smelter with 970 employees as well as 14 other companies with 642 employees.

The construction industry accounted for only 5.2 percent of the labor force in Sept-Îles in 2006 (Statistics Canada 2012). However, since 2010, the number of man-hours worked in the construction industry in the Cote-Nord region has increased considerably due to a number of new large-scale engineering and roadwork projects (Roche 2012). From 2006 to 2010, the number of residents of Sept-Îles employed in the construction industry rose from 2,688 to 3,533 people (Roche 2012). This represents a 31.4 percent increase over four years and translates to an increase in local capacity in terms of diversified trades and jobs in the construction industry.

Innu Communities of Sept-Îles

Traditional activities still play an important role in the Innu communities of Uashat and Maliotenam. These include salmon fishing, fur trapping, and hunting (e.g., caribou and waterfowl) and are described in Chapter 22.

High unemployment rates are a significant concern in the two communities. According to federal census data, the activity rate for adults aged 20 and over in Uashat and Maliotenam was estimated at 53.5 percent in 2006. That same year, the employment rate was at 34.4 percent, while the unemployment rate reached 35.7 percent. Average income for employed community members was estimated at \$19,517. Roughly, 34 percent of this income was covered by government transfers [Aboriginal Affairs and Northern Development Canada (AANDC) 2012].

The main employer in the Uashat mak Mani-Utenam is the Band Council, providing jobs directly through the Band Office and its various departments (e.g., economic development, social services, employment and training) and indirectly through related service providers (e.g., health and social services, school board) and companies. Approximately 50 companies are active in the two communities and economic activities are concentrated in forestry, fishing, trapping, construction, outfitting, art and handiworks.

Service companies in which the Band Office has an interest include the *Galeries Montagnaises* shopping center on Highway 138 as well as a number of transportation and construction firms that have developed through work on regional projects such as Hydro-Québec's Sainte-Marguerite-3 hydro-electric dam. For example, experience on the hydroelectric project has enabled a local Innu firm to be contracted by the Ville de Sept-Îles for the collection of municipal domestic waste and recyclable materials.

One of the biggest challenges facing the community is ensuring that younger generations have access to jobs in the region. A number of training programs have been put into place for community members in collaboration with the *Commission de la Construction du Québec* (CCQ) in order to enable them to acquire marketable skills in the construction sector in areas such as carpentry and heavy machinery operation.

11.3 Economic Benefits from the Kami Terminal

Alderon is a key participant in the development and support of regional infrastructure. Alderon recently signed an agreement with the Sept-Îles Port Authority to fund a portion of the cost of the new multi-user dock facility that the Sept-Îles Port Authority is constructing.

Construction Phase

Total employment during the Kami Terminal construction phase represents 940,000 person hours of work and an estimated \$56 million in salaries. It is considered likely that a large part of the workforce of up to 300 persons required for the two-year construction phase will have to be recruited from outside the region due to the limited availability of qualified workers in the Sept-Îles area. However, the construction phase will offer employment opportunities for unemployed workers or young apprentices from the surrounding regions of Eastern Québec (e.g., Côte-Nord, Lac Saint-Jean, Gaspésie) and elsewhere that are affected by high levels of unemployment.

An estimated amount of \$132 million in capital expenditures will be required for the construction Kami Terminal. It is considered likely that it will be possible to source a certain amount of the materials and equipment required for construction from businesses located in the MRC de Sept-Rivières. However, the construction phase will also offer potential business opportunities to contractors and suppliers from elsewhere in the Province of Québec and beyond.

Operations and Maintenance Phase

Staffing requirements for the Kami Terminal during the operations and maintenance phase are estimated to be less than 20 workers. However, even if the level of expenditures for the operations and maintenance phase of the Kami Terminal in the Pointe-Noire Terminal area is unknown at the present time, it should represent important potential sources of income for businesses located in the MRC de Sept-Rivières, in the surrounding regions of eastern Québec or elsewhere in the province of Québec.

From the rail side, at the terminal, the anticipated major contracts during normal operations will involve rail transport and rail car maintenance which will require long-term contracts with CFA (for rail transport) and with a local rail car maintenance contractor. For terminal operations, the anticipated major contracts during normal operations would be as follows:

- Leasing contract with the Port of Sept-Îles;
- Operating contract with Logistec or similar shipping entity;
- Maintenance contracts for mechanical and electrical systems;
- Spare parts contracts for major equipment;
- Electric power contract with Hydro-Québec;
- Wastewater treatment chemical supply contracts;
- Cleaning and custodial services contracts;
- Water supply contract with the Ville de Sept-Îles; and,
- Supply and maintenance of vehicles and mobile equipment.

Decommissioning and Reclamation Phase

The works required at the Kami Terminal site during this phase are limited to site clean-up and transfer of equipment to the Port or a third party. Therefore, no major benefits are anticipated for regional employment or businesses.

11.4 Social Benefits from the Kami Terminal

Concerns have been raised during the public consultations conducted for the Kami Terminal in Sept-Îles regarding involvement of local communities and businesses in the procurement process for the construction and operation of the Kami Mine. Requests have been made that the company state its intentions concerning local procurement. The Innu community of Uashat mak Mani-Utenam has stated that it also want companies and members of the community to benefit from the Kami Terminal. Concerns have been expressed about the potential effects of the Kami Terminal on local housing.

In order to address regional concerns related to local spinoffs generated by the Kami Terminal, Alderon will collaborate with a newly created regional economic forum in view of finding the most appropriate approaches to optimizing regional employment and business opportunities during the construction and operation phases of the Kami Terminal, including the Innu of Uashat mak Mani-Utenam. Alderon will also implement the following enhancement measures during the lifetime of the Kami Terminal:

- Promote opportunities for local and Aboriginal businesses and workforce; and,
- Promote regional subcontracting for materials and services.

In order to avoid putting additional pressure on the regional housing market, Alderon will also collaborate with local authorities and major industrial and mining operators in developing temporary housing solutions.

Overall, it is expected that the Kami Terminal will contribute positively to the economic and social well-being of the residents and businesses of the region of Sept-Îles, the Côte-Nord Administrative Region and the Province of Québec as a whole. It is also expected to contribute positively to the economic and social well-being of the Innu communities of Uashat and Maliotenam. Kami Terminal construction and operations activities will lead to major short-term and long-term regional direct and indirect employment benefits and benefits for regional businesses. They will also contribute to the ongoing expansion of economic activity and industrial capacity in the Sept-Îles region as well as to the ongoing implementation of a regional infrastructure and services improvement program.

The region is currently undergoing a period of rapid economic growth related to the expansion of mining operations in northern Québec and Labrador. This expansion is related to increased overseas demand for minerals, which is forecasted to last for a number of years.

As a result, a number of foreseeable future large-scale industrial, mining, and infrastructure projects at the Port of Sept-Îles are likely to be built including:

- Pointe-Noire Port Expansion;
- CFA and QNS&L;
- Aluminerie Alouette Aluminum Smelter (Aluminerie Alouette);
- Second Port-Cartier Pellet Plant (ArcelorMittal Mines Canada);
- Bloom Pointe-Noire Terminal (Cliffs Natural Resources); and,
- Arnaud Apatite-Magnetite Mine.

In the current context, the Kami Terminal is one among several large-scale industrial and mining projects that are contributing to a significant expansion of economic activity and industrial capacity in the Sept-Îles region as well as to a significant regional infrastructure and services improvement program. In addition to planned improvements to port and rail infrastructure, a number of other programs have been put into place to improve the regional road network and the supply of housing, educational services and health and social services for residents and for workers attracted to the region. A number of regional committees have recently been set up to enhance local business and employment benefits and to support the development of housing services to accommodate an expanding population.

12.0 BENEFITS OF THE EA TO CANADIANS

As a planning tool, EA is being used by Alderon to integrate issues and concerns raised by Aboriginal groups and stakeholders into the planning and design of the Kami Terminal. Wherever feasible, the Kami Terminal has been designed to avoid or mitigate adverse environmental effects. Alderon is committed to developing the Kami Terminal in a sustainable manner thereby contributing to a healthy environment, economy and communities. In accordance with Section 4.14 of the EIS Guidelines, a discussion of how the EA process for the Kami Terminal benefits Canadians has been undertaken, and is presented for the following aspects:

- Environmental benefits;
- Sustainable development;
- Public participations;
- Technological innovations;
- Scientific knowledge; and,
- Community and social benefits.

12.1 Maximized Environmental Benefits

Careful design and planning of the Kami Terminal has resulted in the minimization of adverse environmental effects and the maximization of positive environmental effects. Examples of this include the following:

- The Kami Terminal conveyor systems are enclosed to minimize dust generation as well as noise;
- The rail loop was located adjacent to the future Cliffs Québec Iron Mining Limited (formerly Consolidated Thompson) rail loop in order to minimize the combined footprint of both infrastructure; and,
- The length of the rail loop was minimized and located almost entirely on highly artificialized port land.

12.2 Supporting Sustainable Development

Sustainable development, as defined in CEAA, means development that meets the needs of the present, without compromising the ability of future generations to meet their own needs. Environmental assessment is an effective way to integrate environmental factors into the planning a decision-making process in a manner that promotes sustainable development.

Alderon is committed to develop the Kami Terminal within a sustainable development framework. As part of this, the Kami Terminal is being designed and will be constructed and

operated in consideration of maximizing the future value of the facility for eventual transfer at the end of the life of mine. Decisions at every stage are made in consideration of their effects on final clean-up of land and on transfer of equipment to a third party.

In the socio-economic environment, the Kami Terminal will provide workers and companies with new experience and capabilities that will make them competitive for employment and business opportunities on other projects and, in some cases, other industries. Related to the Kami Terminal, there will also be investments in infrastructure, education, training and possibly research and development that will facilitate and fuel the sustainable economic development of the Province as a whole.

12.3 Public Participation

Alderon is committed to engaging Aboriginal groups, municipalities, and other public stakeholders, in all aspects of the project, and will continue to do so throughout the EA process and all phases of the Kami Terminal.

Public input has influenced the design of the Kami Terminal in several ways:

- Stakeholders raised issues with regards to noise and dust generation, as a result the Kami Terminal conveyor system will be enclosed; and,
- Potential water contamination has been raised by stakeholders as an issue of concern, as a result, Alderon will construct a stormwater retention pond and will use liners to gather runoff and ensure effluent is treated prior to discharge into the environment.

Throughout the EA process, Alderon's consultation and engagement activities aim to inform and seek input and information from Aboriginal groups, stakeholders and the public. These activities and key issues that were identified are described in Chapter 10. Through on-going public engagement initiatives, Alderon has provided an opportunity for the public to become informed and to provide feedback on the proposal to develop the Kami Terminal.

12.4 Technological Innovations

The Kami Terminal is similar to other facilities in the region and proven measures will be used to mitigate environmental effects. The requirement for innovative technological solutions is not anticipated at this time but will be considered as applicable in the future.

12.5 Increases in Scientific Knowledge

The understanding of the existing environment within and surrounding the Kami Terminal area has been greatly augmented as a result of environmental studies conducted in support of the EA. These studies have documented both biophysical and socio-economic existing conditions, increasing the scientific understanding of the environment in and around the Kami Terminal area. Environmental studies conducted include:

- Air Quality Modelling and Noise Monitoring and Modelling;

- Archaeological Survey;
- Aquatic Baseline Surveys (fish and fish habitat, including water quality);
- Rare Plant Survey;
- Herpetile Survey; and,
- Forest Songbird Survey.

Additional details are provided in Chapters 14 to 26, and in the baseline studies submitted in association with this EIS.

12.6 Community and Social Benefits

Alderon is a key participant in the development and support of regional infrastructure. Alderon recently signed an agreement with the Sept-Îles Port Authority to fund a portion of the cost of the new multi-user dock facility that the Port is constructing. Other community and social benefits include:

- Opportunities for local and Aboriginal businesses and workforce;
- Opportunities for regional subcontracting of materials and services;
- Employment and personal and family income in eastern Québec and Canada as a whole;
- Increased personal self-reliance and personal and family well-being;
- Associated business expertise and experience, including that related to health, safety, environment and business practices, resulting in increased capabilities, competitiveness and likely entrepreneurship; and,
- Provincial and municipal government revenues through corporate, employment and business taxes.

13.0 ASSESSMENT SUMMARY AND CONCLUSIONS

Alderon is proposing to construct and operate an iron ore mining project in western Labrador with an associated terminal and rail loop in Sept-Îles, Québec (the Project). In Québec, Alderon is planning to build a concentrate unloading, stacking, storage and reclaiming facility and, associated rail infrastructure (rail loop) (Kami Terminal). The Kami Terminal will be located at the Pointe-Noire Terminal at the Port of Sept-Îles in Sept-Îles, Québec. The Kami Terminal has been designed and will be carried out to mitigate adverse environmental effects to acceptable levels. The Kami Terminal will result in positive effects to the local and provincial economy, employment and businesses.

The Kami Terminal is subject to the CEEA. EIS Guidelines were provided on June 26, 2012 (CEA Agency and DOEC2012).

Alderon has been involved in an extensive program of consultation with Aboriginal groups and a variety of stakeholders, including the three municipalities adjacent to the Project, cabin owners, and the general public. Consultation efforts include both the recording and discussing of issues and the provision of Project information. Alderon has integrated issues and concerns raised by Aboriginal groups and stakeholders into Project planning and design. The frequency of issues raised by stakeholders was recorded during engagement activities. Figure 13.1 shows the issues raised for each VEC for the Kami Terminal on a proportionate basis. The most frequently raised topics were:

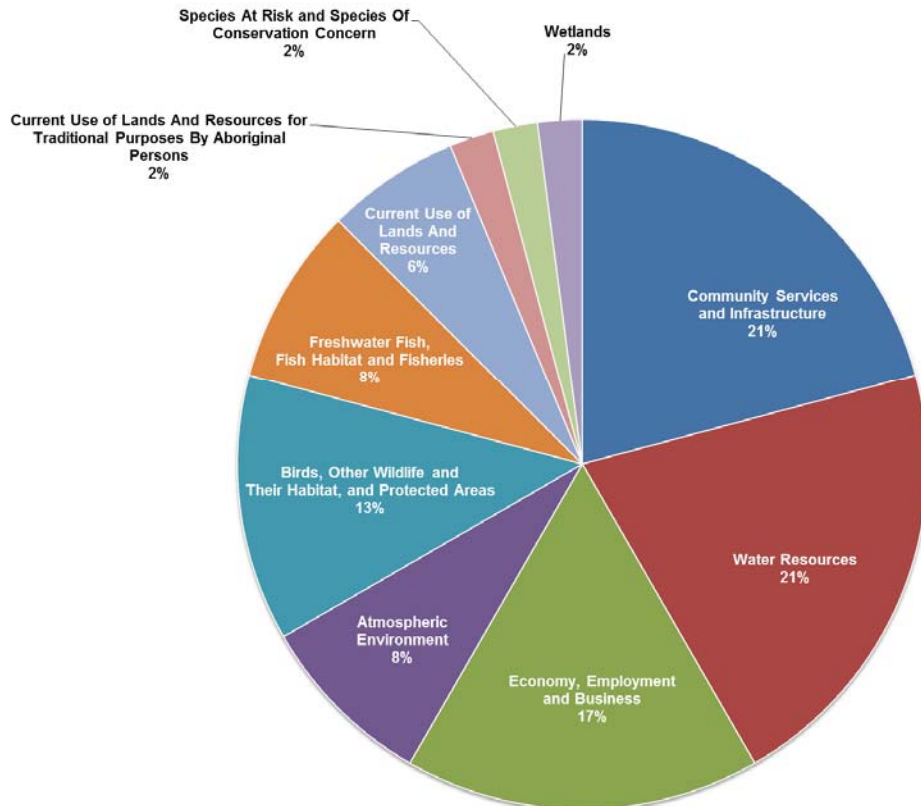
- Community Services and Infrastructure (e.g., housing, traffic);
- Water Resources (e.g., contamination of waterbodies);
- Economy, Employment and Business (e.g., local workforce, local businesses);
- Birds, Other Wildlife and their Habitat, and Protected Areas (e.g., migratory birds); and,
- Atmospheric Environment (e.g., dust, noise, air quality, vibration);

The issues raised for each VEC, as well as Alderon's responses and proposed mitigation measures, are summarized in the following sections. Detailed comments and responses are provided in Chapter 10 and in Chapters 14 to 26.

Concerns that have raised by Aboriginal groups and the public, and the requirements prescribed in the EIS Guidelines have been addressed by assessing the environmental effects that will or may result from the construction, operation and maintenance, and decommissioning and reclamation phases of the Project. To focus the environmental assessment, effects have been assessed for identified VEC. The detailed effects assessment for each VEC is presented in Chapters 14 to 26. In summary, the Kami Terminal will not result in likely adverse residual effects, in isolation or cumulatively with other projects and activities. Accidents and malfunctions, should they occur, may result in significant effects for some VECs; however these

are not likely to occur given the planning that has been undertaken, and the standards that have been prescribed.

Figure 13.1 Proportion of Issues Identified During Aboriginal Engagement and Public Consultation Activities



The findings of the environmental assessment are summarized in Tables 13.1 to 13.9. For each VEC, the following is provided:

- The Kami Terminal's potential adverse environmental effects;
- Proposed mitigation and compensation measures;
- Proposed follow-up;
- Potential residual effects;
- Potential cumulative effects;
- Potential effects of accidents and malfunctions;
- Applicable standards or guidelines;
- Comments from the public, including responses;

- Comments from Aboriginal groups or individuals, including responses;
- Relationship of the VEC to an Aboriginal group's potential or established Aboriginal and Treaty right; and,
- Commitments made by the Alderon, including timing and responsibility of each.

13.1 Atmospheric Environment

This assessment drew largely from the detailed characterization of baseline conditions for air quality and greenhouse gas (GHG) emissions provided in the Air Quality Dispersion Modeling Study (Appendix G, Stantec 2012a).

Atmospheric Environment is a VEC due to:

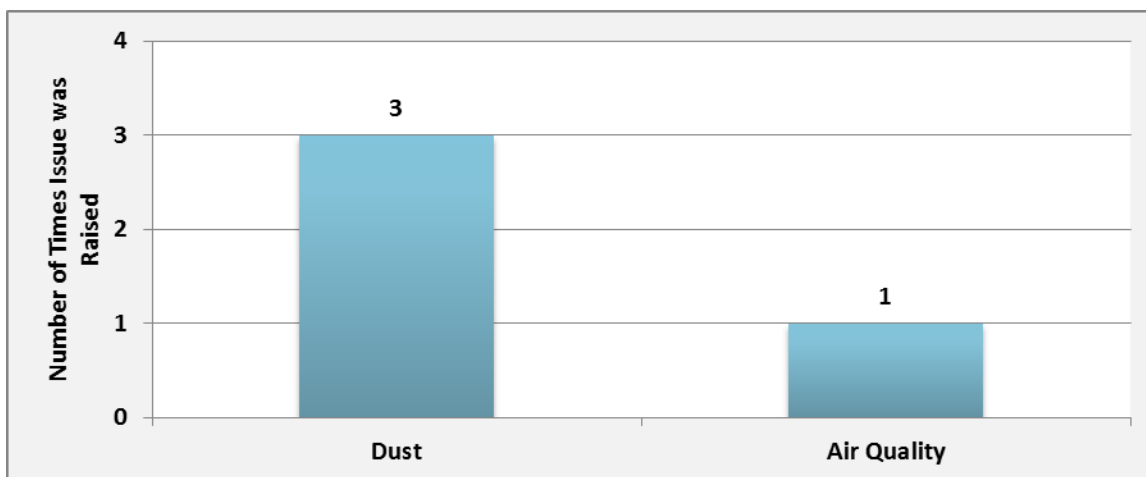
- Protection of human health and safety, as well as ecological health and aesthetics;
- Potentially sensitive human and wildlife receptors;
- Provisions of the *Canadian Environmental Protection Act (CEPA)* and *Québec Clean Air Regulation (QCAR)*; and,
- The potential for GHG emissions.

The detailed assessment of the effects of the Kami Terminal on Atmospheric Environment is presented in Chapter 14 of this EIS.

Issues

Air quality was also selected as a VEC due to potential issues of concern that emerged from consultations. Issues relating to the atmospheric environment are shown on Figure 13.2. These issues include comments and questions raised by participants during public consultation and Aboriginal engagement activities. Dust was the main issue of concern. Participants asked whether dust would result from rock cut and whether dust would go into the bay when transferring concentrate from the rail cars to the boat. Alderon was asked to identify mitigation measures to be used to control dust from stockpiles. Participants were also concerned about cumulative impacts of multiple industries on air quality in the area. Information was requested on how Alderon will evaluate the cumulative effects. In response to these issues, Alderon is implementing various mitigation measures to control fugitive dust emissions during construction and operations, including enclosed conveyors and dust collectors. Alderon will also participate in the air quality monitoring effort that originated in Sept-Îles.

Figure 13.2 Frequency of Issues Raised Related to the Atmospheric Environment



Methodology

Assessment of the effects related to the Kami Terminal on the Atmospheric Environment employs two LSAs. The first LSA includes the PDA and any adjacent areas where environmental effects related to the Kami Terminal may reasonably be expected to affect air quality, GHG emissions, vibrations, and ambient light. It is defined as an area that is 30 km (east-west) by 30 km (north-south) extending from the center of the Kami Terminal related activities. The LSA incorporates the town of Sept-Îles, Québec. A second LSA was defined to assess the effects on the acoustic environment. This LSA is smaller, extending 20 km by 20 km from the Kami Terminal related activities. The boundaries for both LSAs are presented in Figure 13.3.

Two RSAs are also described for the Atmospheric Environment VEC. One defines the area for assessment of effects related to the Kami Terminal on the acoustic environment, vibrations and ambient light. It includes an area that incorporates the nearby First Nation reserves and other current and proposed projects considered in the cumulative assessment. The RSA boundaries are presented in Figure 13.3. A second RSA is defined for air quality and GHG emissions, which extends to the province as a whole (Figure 13.4).

Administrative boundaries vary by VEC component. The protection and management of air quality fall under both provincial and federal jurisdiction. Important policies and regulations include the QCAR, *Canada-wide Standards* (CWS 1998) and *National Ambient Air Quality Objectives* (NAAQO) (1999). Reporting of GHG emissions is subject to both provincial and federal regulations through Québec's *Regulation Respecting Mandatory Reporting of Certain Emissions of Contaminants into the Atmosphere* under the *Québec Environmental Quality Act* (QEQA) and Article 46(1) of CEPA, if emissions from designated activities are above reporting thresholds. With respect to the acoustic environment, Health Canada and the Province of Québec have both issued guidelines on noise levels. These guidelines are applicable to all receptors surrounding the Kami Terminal site. With respect to vibrations, projects may follow guidelines provided in standards such as the criteria in Federal Transit Administration to

minimize the potential for annoyance. Ambient light quality is not regulated directly, but the Kami Terminal will follow guidelines set out by the CIE.

Existing Environment

The Sept-Îles climate is subarctic, marked by long and cold winters and short and mild summers. The presence of the Gulf of St. Lawrence brings its maritime influence, with increased humidity, fog and colder weather, especially in summer when winds are coming from the south.

Ambient air quality is characterized by the presence of industrial activities including the Aluminerie Alouette aluminum smelter, the Wabush Mines / Cliffs iron pellet plant, the Lake Bloom / Cliffs shipping terminal, the IOC-Rio Tinto shipping terminal and the Imperial Oil petroleum products tank farm. Ambient air quality is also affected by typical urban pollution sources such as road traffic and wood heating.

The Kami Terminal will be located south of the baie des Sept-Îles, in the vicinity of the Cliffs port facilities and the Aluminerie Alouette aluminum smelter at Pointe-Noire with similar noise emission levels. Surrounding areas are best described as rural or coastal.

There are no known vibration generation sources identified near the line, other than traffic for other purposes. The existing vibration is expected to be generally from nature with some minor influence from distance industrial activities.

Figure 13.3 Local Study Area for Atmospheric Environment and Regional Study Area for Noise, Light, and Vibrations

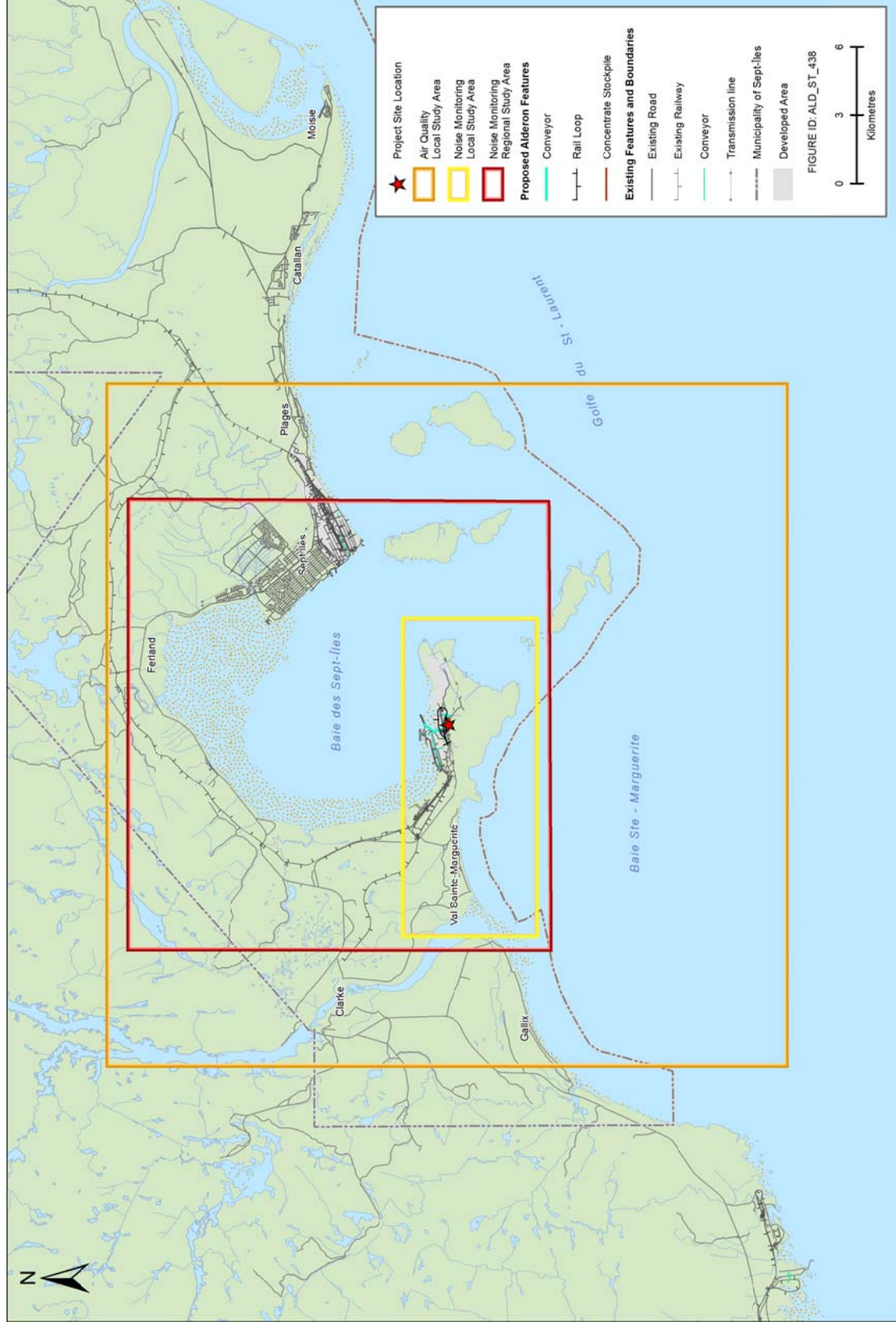


Figure 13.4 Regional Study Area for Air Quality and GHG Emissions



Effects Assessment

Assessment of environmental effects on the Atmospheric Environment considered all Kami Terminal activities. Environmental effects are primarily expected during the construction and maintenance phases. During the construction phase:

- Potential changes to air quality are primarily associated with the blasting and rock-crushing activities. The cumulative ground level concentrations of all air quality contaminants and averaging periods are predicted to remain below the applicable criteria at the special receptor sites.
- Potential changes in GHG emissions are primarily associated with fuel consumption and emissions from heavy equipment and vehicular traffic on site. The environmental effects are not expected to be substantive. Potential acoustic emissions may result from activities such as blasting, welding, infrastructure erection and transportation of materials on-site. These noise emissions will be intermittent in nature and are unlikely to significantly affect the nearest dwelling to the site that is over 1 km away.
- Potential changes in vibrations may result from off-site and on-site activities including site clearing, construction using typical machinery and controlled blasting. Blasting will be periodic and will be designed to be barely perceptible, if at all. Because construction activities are not expected to occur simultaneously and the typical vibration from construction equipment is expected to diminish below perceptible level within a few metres of the site, effects from construction are to be not significant.
- Potential changes in light emissions include glare and sky glow resulting from portable lighting.

The operation phase will also incur environmental effects related to the Atmospheric Environment.

- Potential changes in air quality during this phase are primarily associated with dust emissions from rail transportation and transfer. Modelling results show that while some dust emissions may disperse to receptor sites under certain meteorological conditions, they will be localized in extent and short-term in duration. The highest concentrations will be observed over neighbouring uninhabited properties zoned for industrial uses, mainly the high point of the Marconi Peninsula. Potential GHG emissions resulting from operations will be associated with the transportation of the concentrate from the mine site to the shipping terminal by diesel locomotives. GHG emissions incurred by the Kami Terminal will fall below the provincial and national thresholds of 0.01 percent of the provincial total GHG emissions, and less than 0.001 percent of the national total GHG emissions respectively.
- Potential changes in the acoustic environment are likely to be more continuous in frequency and greater in extent during the operation phase than the construction phase. Most emissions are expected to occur at each concentrate transfer point as well as resulting from the operation of conveyors and railway traffic both leading up to the port site and at the rail loop on-site. While noise emissions will occur, cumulative noise

emissions will not exceed a level of 2.2 percent high annoyance (HA) at the most affected site (Cran-de-Fer) and will remain well below the 6.5 percent HA threshold established by Health Canada for dwellings.

- Potential vibrations may be associated with rail traffic, however estimated vibration and ground-borne noise will have no perceptible effect on the nearest residences and the environmental effect of rail-induced vibration will be not significant.
- Potential changes to light emissions may result from permanent lighting fixtures for the facility and lighting from locomotives. Light emissions from facilities lighting will be minimal owing to the use special fixtures, distance, and topographic shielding. Lighting from trains that will be used for Kami Terminal is less easy to control, as safety and efficient operation will require effective lighting. Train lights may have a potential adverse environmental effect on residences located across the baie des Sept-Îles and along the railway.

Avoidance and Mitigation Measures

To control changes in air quality, avoidance and mitigation measures will include:

- Use approved dust suppressant and road watering, as needed;
- Enforceable low speed standards on-site;
- Using drilling machinery equipped with dust collectors or water dust suppression;
- Use CO monitors during blasting activities at nearby receptors;
- Adjust blast surface, as required;
- Enclosed conveyor system;
- Enclose car-dumping in building equipped with dust collector;
- Equip transfer points with dust collectors;
- Using a stacker with adjustable height to minimize the height of free fall for the material;
- Routine inspections of dust collectors; and,
- Spraying water over ground surface to minimize wind erosion as needed.

To control levels of GHG emissions resulting from the Kami Terminal, avoidance and mitigation measures will include:

- Use low CO₂ hydroelectricity for infrastructure operation.

To control changes to the acoustic environment resulting from the Kami Terminal, avoidance and mitigation measures will include:

- Enclosing the conveyor system;
- Enclosing conveyor transfer points;

- Vegetation buffers;
- Proper muffler installation; and,
- Comprehensive and regular maintenance of vehicles.

To minimize effects on ambient light quality, mitigation measures will include:

- Using only as much lighting as is necessary;
- Retain tree cover;
- Use of full horizontal cut-off fixtures;
- Locate lateral lighting fixtures on south side of facility; and,
- Direct lateral lighting away from the baie des Sept-Îles.

Cumulative Effects Assessment

Potential cumulative effects may occur as a result of overlap between the Kami Terminal and other projects, either existing or foreseeable, in the Kami Terminal vicinity. While no interaction is expected with the Port-Cartier Pellet Expansion due to its distance from the Kami Terminal, interactions between the Kami Terminal and the remaining five projects are anticipated.

In terms of cumulative effects on air quality, the Kami Terminal will generate dust. However the nature of the activities as well as the integration of mitigation measures in the facility's design implies that the estimated annual air contaminant emissions will be significantly lower than those already occurring in the region. The Kami Terminal is expected to contribute relatively little to overall regional emissions of other atmospheric contaminants and additional emissions will be close to neutrality. Additional rail traffic associated with the Kami Terminal will not increase ambient air concentrations, but instead increase the frequency of short-term emissions associated with passing trains.

Cumulative effects on GHG emissions are also expected to be low, representing less than 0.01 percent of the provincial total GHG emissions, and less than 0.001 percent of the national total GHG emissions.

Kami Terminal activities could potentially interact with existing IOCC and Cliffs rail operations leading to cumulative acoustic effects. However, noise modeling results indicate the residual environmental effects on the acoustic environment from the Kami Terminal will result in a negligible increase in sound pressure for all nearby sites. In all cases, the Health Canada criteria and Québec noise guidelines will not be exceeded and thus, cumulative effects of noise emissions are expected to be not significant.

Vibrations from Kami Terminal construction activities are expected to be rare in frequency, short in duration, and local in extent and unlikely to interact with vibration sources from the Cliffs or IOCC port sites significantly. Vibrations resulting from the railway are not expected be detectable within 80 m and will therefore not affect the nearest residence, which is situated 800 m from the PDA. The cumulative effects of vibrations are deemed not significant.

Poorly designed lighting can cause obtrusive or hazardous light emissions as well as substantially increasing the presence of light in the night sky. Glare and light trespass are highly localized and thus little interaction is expected. Some interaction may occur in terms of increased sky glow as a result of interaction between the three ports. With the implementation of proposed mitigation measures, the Kami Terminal's contribution to residual cumulative effects is expected to be not significant.

Accidents and Malfunctions

Trail Derailment

A train derailment could interact with the Atmospheric Environment through a sudden and large increase in noise emissions during the actual derailment. Subsequent noise emissions would originate from heavy machinery used in the clean-up. Noise emissions and the potential for fugitive dust emissions would last until completion of the clean-up. GHG emissions would result from the use of equipment powered with fossil fuels, such as diesel. Emissions of air contaminants and GHGs associated with accidents and malfunctions will be small and localized, and for short durations. The environmental effects are therefore likely to be not significant. No interactions with vibration and light environments were identified in the assessment.

Forest Fire

The Kami Pointe-Noire Terminal is located next to a forest area. Although unlikely, Kami Terminal activities involving the use of heat or flame could result in a fire. The extent and duration of a resulting fire would be dependent on response efforts and meteorological conditions. However, generally speaking it is likely to be relatively easy to control given the shape of the peninsula and short response time owing to continuous human presence at the port. Emergency response measures in case of a fire will be integrated into the existing Port of Sept-Îles, the City of Sept-Îles and the Sopfeu ERPs. The environmental effects on air quality resulting from a forest fire are therefore likely to be not significant.

No significant interactions were identified with acoustic, vibration and light environments.

Significance of Residual Adverse Environmental Effects

The criteria used to determine significance of residual adverse environmental effects are outlined below:

Air Quality: a significant adverse residual environmental effect is defined as an environmental effect related to the Kami Terminal that degrades the quality of the ambient air such that the maximum ground-level concentration related to the Kami Terminal that is being assessed frequently exceeds the respective provincial air quality objective, guideline or standard. "Frequently" is defined as once per week for 1-hour objectives and once per month for 24-hour objectives.

GHG Emissions: Consistent with CEA Agency guidelines (2003), GHG emissions are assessed by:

- Conducting a preliminary scoping of GHG emissions;
- Determining jurisdictional considerations (including GHG policies or plans);
- Determining the industry profile (where possible); and,
- Considering the magnitude, intensity and duration of Kami Terminal emissions as directed by the CEA Agency guidance (CEA Agency 2003).

Acoustic Environment: a significant adverse residual environmental effect is defined as an environmental effect related to the Kami Terminal that results in sound pressure levels at the nearest residential receptors or sensitive receptors (i.e., daycares, schools, hospitals, places of worship) that cause a change in calculated percent HA from baseline greater than 6.5 percent, or which exceed provincial guidelines, where applicable.

Vibrations: a significant adverse residual environmental effect would be associated with intermittent levels that are high in magnitude, or persistent vibrations with medium-term duration that occur at sensitive receptor buildings.

Ambient Light: a significant residual adverse environmental effect is defined as an increase in Kami Terminal related light emissions such that the CIE guidelines for light trespass and glare are exceeded and where the Kami Terminal related sky glow would be typical of an urban environment

The significance of residual adverse environmental effects for the Atmospheric Environment is determined in Chapters 14. Although significant residual adverse environmental effects may occur in some instances of accidents and malfunctions, the likelihood of these events occurring is low. The Kami Terminal is not likely to result in significant adverse environmental effects under normal operating conditions.

A summary of the findings of the EIS are presented in Table 13.1. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Atmospheric Environment VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.1 Summary of the Findings of the Environmental Impact Statement – Atmospheric Environment

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up and Monitoring	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Alderon
Change in air quality	<ul style="list-style-type: none"> Use approved dust suppressant or road watering as needed; Enforceable low speed standards on-site; Use of drilling machinery equipped with dust collectors or water dust suppression; Use CO monitor during blasting activities at nearby receptors; Adjust blast surface as needed; Proper muffler installation; Enclosed conveyor; Equip transfer points with dust collectors; Enclose car dumping in building equipped with a dust collector; Use a stacker with adjustable height to minimize the height of free fall for the material; Routine inspections of the dust collectors. Spraying water over ground surface to minimize wind erosion as needed. 	<ul style="list-style-type: none"> Monitor CO emissions from blasting near Kami Terminal site with portable monitors; Participate in air quality monitoring program initiated in Sept-Îles. 	<p>Construction and decommissioning activities will generate some air contaminants, but the environmental effects will be limited to the LSA. During the operation phase, emissions will be associated to the transportation of concentrate by rail, and the handling and storage at the site. The sector likely to be affected is close to the site, in industrialized or uninhabited lands. The frequency of occurrence for high concentrations is low.</p> <p>With the application of mitigation measures, the environmental effects on air quality are expected to be not significant.</p>	<p>The Kami Terminal will take place in an area that is already subject to industrial activities, generating a variety of air contaminants, including dust (TPM, PM10 and PM2.5). Atmospheric emissions associated with the Kami Terminal are very small compared to the other local sources of air contaminants. New emission limits introduced in the Clean Air regulation may lead to some improvements for the existing industrial activities in the coming years. The environmental effects are expected to be not significant.</p>	<p>Emissions of air contaminants associated to accidents and malfunctions will be small and localized, and of short durations. The environmental effects are expected to be not significant.</p>	<p>Québec Clean Air Regulation National Ambient Air Quality Objectives Canadian Wide Standards.</p>	<p>Comments and concerns related to:</p> <ul style="list-style-type: none"> Dust emissions associated with the rail car dumpers; rock cut and fill; boat loading; and the concentrate stockpile; Cumulative effects of multiple industries on air quality; and Air quality monitoring. 	<p>Develop mitigation and environmental effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.</p>
Change in GHG emissions	<ul style="list-style-type: none"> Use low CO2 hydroelectricity for infrastructure operation 	None recommended	<p>Construction activities will generate some GHG emissions, but the quantities will be small and typical of any construction activity.</p> <p>During the operation phase, the majority of the GHG emissions will be associated with the transportation of the iron concentrate. Rail is the most efficient mean of transportation over land, in terms of GHG emissions.</p> <p>GHG emissions are expected to be not significant.</p>	<p>Considering the Québec cap-and-trade program, which aims at a global reduction of Québec's GHG emissions, the cumulative effects associated with other projects in the Sept-Îles area are expected to be not significant.</p>	<p>GHG emissions associated to accidents and malfunctions will be small. The environmental effects are therefore expected to be not significant.</p>		<p>Comments and concerns related to cumulative effects of multiple industries on air quality</p>	<p>Develop mitigation and environmental effects management measures after release from the EA process, to be implemented at the appropriate Kami Terminal phase.</p>

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up and Monitoring	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Alderon
Change in acoustic environment	<ul style="list-style-type: none"> Enclosing the conveyor system Enclosing conveyor transfer points; Vegetation buffers; Comprehensive and regular maintenance of vehicles. 	Noise monitoring	<p>Construction activities are expected to be short in duration, limited to the LSA, and rare in frequency.</p> <p>During operations and maintenance, measureable increases in sound pressure level will occur for some nearby sensitive receptors, but will not exceed Health Canada percent HA criteria.</p> <p>The environmental effects are expected to be not significant for the acoustic environment.</p>	<p>Noise emissions will overlap with existing infrastructure, but the increase in noise is not significant. Future developments would also result in a negligible increase in noise due to the separation distances of receptors.</p> <p>The residual cumulative effect of the Kami Terminal on the noise environment is expected to be not significant.</p>	Noise emissions from clean-up will be of similar magnitude as those during construction. Emissions will be temporary, short-term in duration, local in geographic extent, and will cease at the conclusion of the clean-up.	Health Canada's Suggested Information Needs for Consideration of Human Health in Environmental Assessments	None reported	Develop mitigation and environmental effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.
Change in vibrations	None recommended	None recommended	Blasting will be the main sources of vibrations during construction. Due to the extensive separation distances to Sept-Îles (10 km) and to Plage Sainte-Marguerite (5 km), the blasting will be barely perceptible.	Due to the extremely localized nature of vibration effects, the cumulative effects of the Kami Terminal on existing or proposed developments are expected to be not significant.	Train derailment, forest fire and pond breach would not likely result in vibrations.	Federal Transit Administration	None reported	Develop mitigation and environmental effects management measures after release from the EA process, to be implemented at the appropriate Kami Terminal phase.
Change in light emissions	<ul style="list-style-type: none"> Using only as much lighting as is necessary Retain tree cover Use of full horizontal cut-off fixtures. Locate lateral lighting fixtures on the south side of the facility Direct lateral lighting away from the baie des Sept-Îles 	• None recommended	<p>Construction and decommissioning activities are expected to be short in duration, limited to the LSA, and rare in frequency.</p> <p>Sky glow during operations will be mitigated.</p> <p>The environmental effects to the light environment are expected to be not significant.</p>	Proposed mitigation for the Kami Terminal will result in negligible changes in light spill, light glare, or sky glow within the LSA. The cumulative effects are expected to be not significant.	Train derailment, forest fire and pond breach would not likely result in light emissions.	<i>Commission Internationale de L'Éclairage (CIE)</i> , also known as the International Commission on Illumination, has developed sets of maximum values for both light trespass and glare that should not be exceeded.	None reported	Develop mitigation and environmental effects management measures after release from the EA process, to be implemented at the appropriate Kami Terminal phase.

13.2 Landforms, Soils, Snow, and Ice

Information regarding this VEC is provided in Chapter 15. Landforms, Soils and Snow and Ice (LSSI) are listed as a VEC in the EIS Guidelines. The rationale for inclusion is the VEC's importance to planning and the potential for interactions between landforms, soils, snow, and Project activities mostly in relation to the proposed mine site in Labrador. Landforms, terrain stability, soil quality and quantity, snow and ice, and acid rock drainage and metal leaching are indicated as discussion points for the assessment. No issues or concerns were raised by the public or stakeholders in regards to LSSI. Much of the information that is requested is included in other VECs such as atmospheric environment and water resources. It is important to note that within the PDA, most of the soils were perturbed by industrial activity. Natural undisturbed soils are virtually absent from the PDA apart from the hillside where part of the concentrate unloading, stacking, storage, and reclaiming facilities are proposed. Surficial material in the PDA is relatively stable and normal erosion control measures to be included in the EPP will ensure good conditions.

13.3 Water Resources

Water Resources include the quality and quantity of groundwater and surface water resources in the vicinity of the VEC. It has been selected as a VEC because:

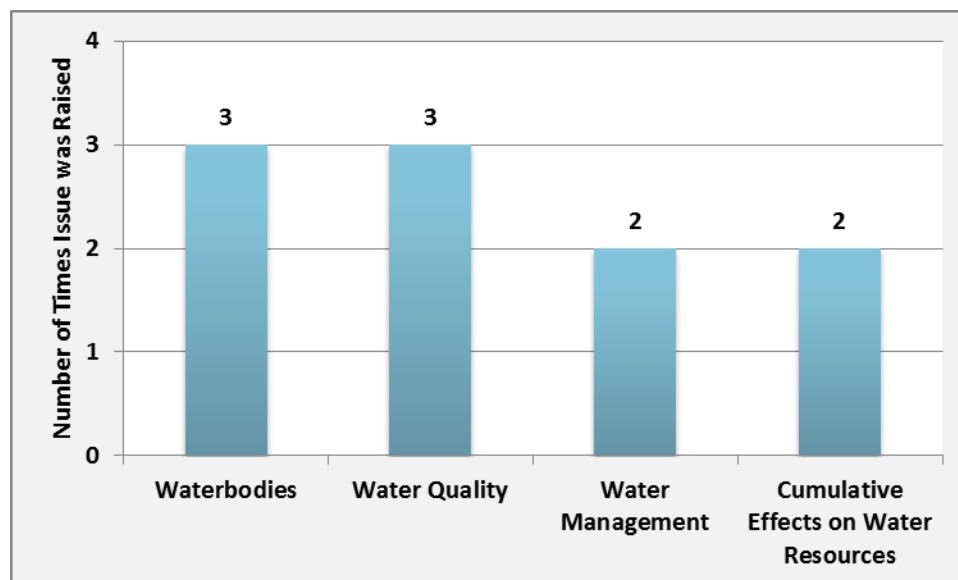
- Its importance to ecosystem and human use;
- Concerns regarding potential release of hazardous materials on site and potential contamination associated with water management; and,
- Effects on surface water / groundwater interactions.

A detailed characterization of the Water Resources VEC is provided in Chapter 16. A detailed characterization of baseline conditions is provided in the Water Resources Baseline Study (Appendix F).

Issues

The issues identified by participants related to water resources during the EIS consultation and engagement program are shown in Figure 13.5. Participants identified effects on water bodies—including baie des Sept-Îles—as an issue of concern. Pressure around the bay, has been stated by participants as an issue for cumulative effects. Information on the mitigation measures that will be used to avoid red water contamination of baie des Sept-Îles should be provided. One participant asked if Alderon would treat water discharge to meet standards and regulations or to maintain water quality at its present level. In response to these issues associated with water contamination, Alderon will seal the concentrate storage area with a liner. Water runoff within the concentrate storage area will be directed toward a stormwater retention pond (with liner) where it will be treated before release to the environment. Final effluent treatment will meet or surpass Directive 019 criteria and will ensure that receiving water within the effluent mixing zone will not exceed the applicable CCME water quality guideline for the protection of aquatic life.

Figure 13.5 Frequency of Issues Raised Related to Water Resources



Methodology

The LSA for Water Resources includes the PDA and any adjacent areas where environmental effects related to the Kami Terminal may reasonably be expected to occur, which are defined as the anse à la Baleine sub-watershed (Figure 13.6).

The RSA is the area within which cumulative effects for the Water Resources may occur, depending on physical and biological conditions and the type and location of other past, present, and reasonably foreseeable projects. The RSA takes into account the area of influence limited to the baie des Sept-Îles (Figure 13.7).

Administrative boundaries for Water Resources exist at both federal and provincial levels. At the federal level, the Canadian Council of Ministers of the Environment (CCME) has published Canadian recommendations for water and sediment quality with the aim of protecting aquatic life (CCME 1999). The CCME has determined two reference values for more than 145 substances in freshwater and marine environment: short-term exposure and long-term exposure. The CCME has also determined two reference values for some thirty substances in freshwater and marine sediments: a threshold effect level (TEL) and a probable effect level (PEL) (CCME 1999). Environment Canada and the MDDEP have jointly established sediment quality assessment criteria for the St. Lawrence (Environment Canada & MDDEP 2007.). These criteria constitute a screening tool for assessing the chemical contamination of sediments. They are based on the approach of the CCME. In all, five thresholds have been defined: two threshold values developed by the CCME (1999) and three additional criteria derived using the same database and method, in order to meet sediment management needs specific to Québec. They are the rare effect level (REL), the occasional effect level (OEL), and the frequent effect level (FEL).

Figure 13.6 Water Resources Local Study Area

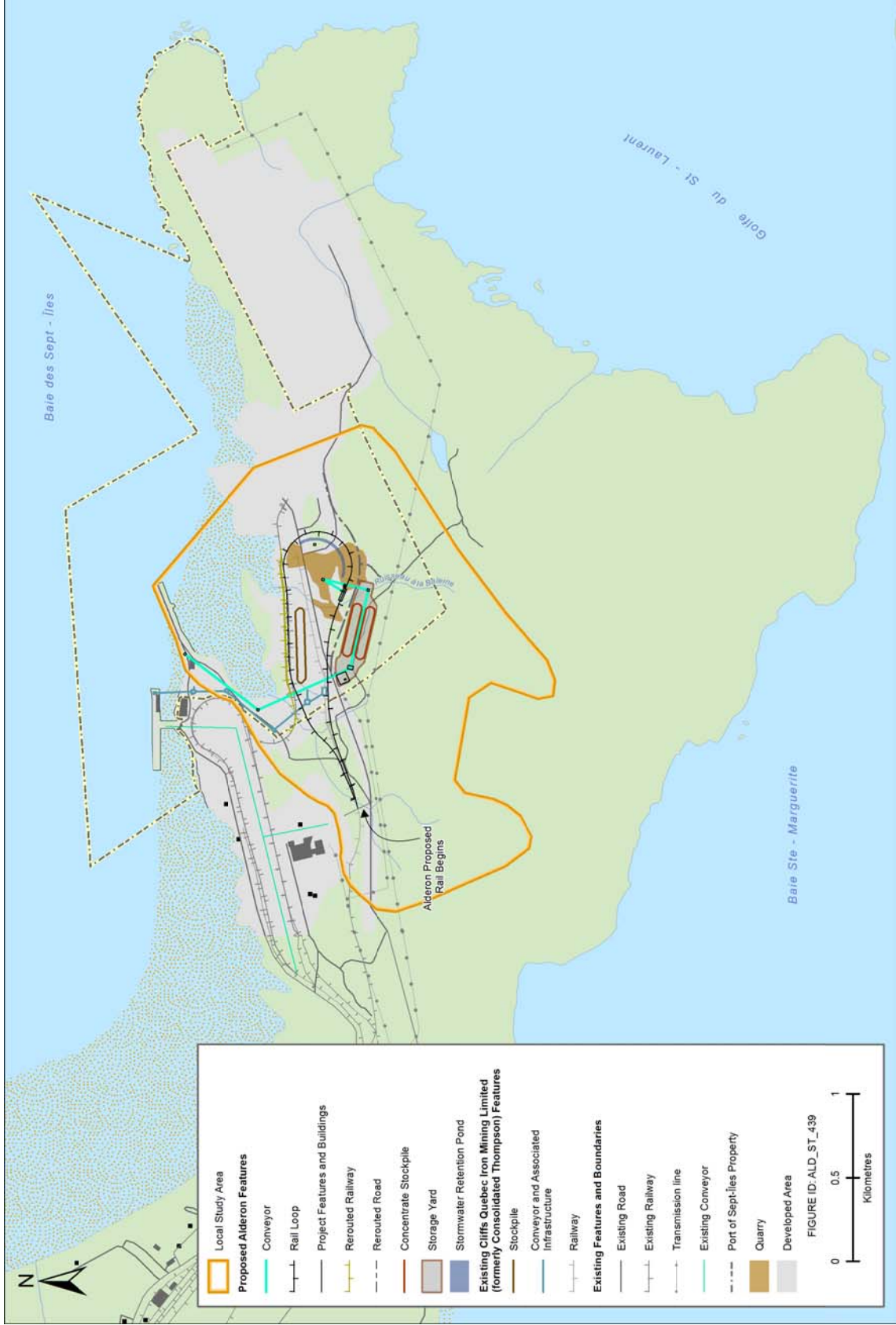
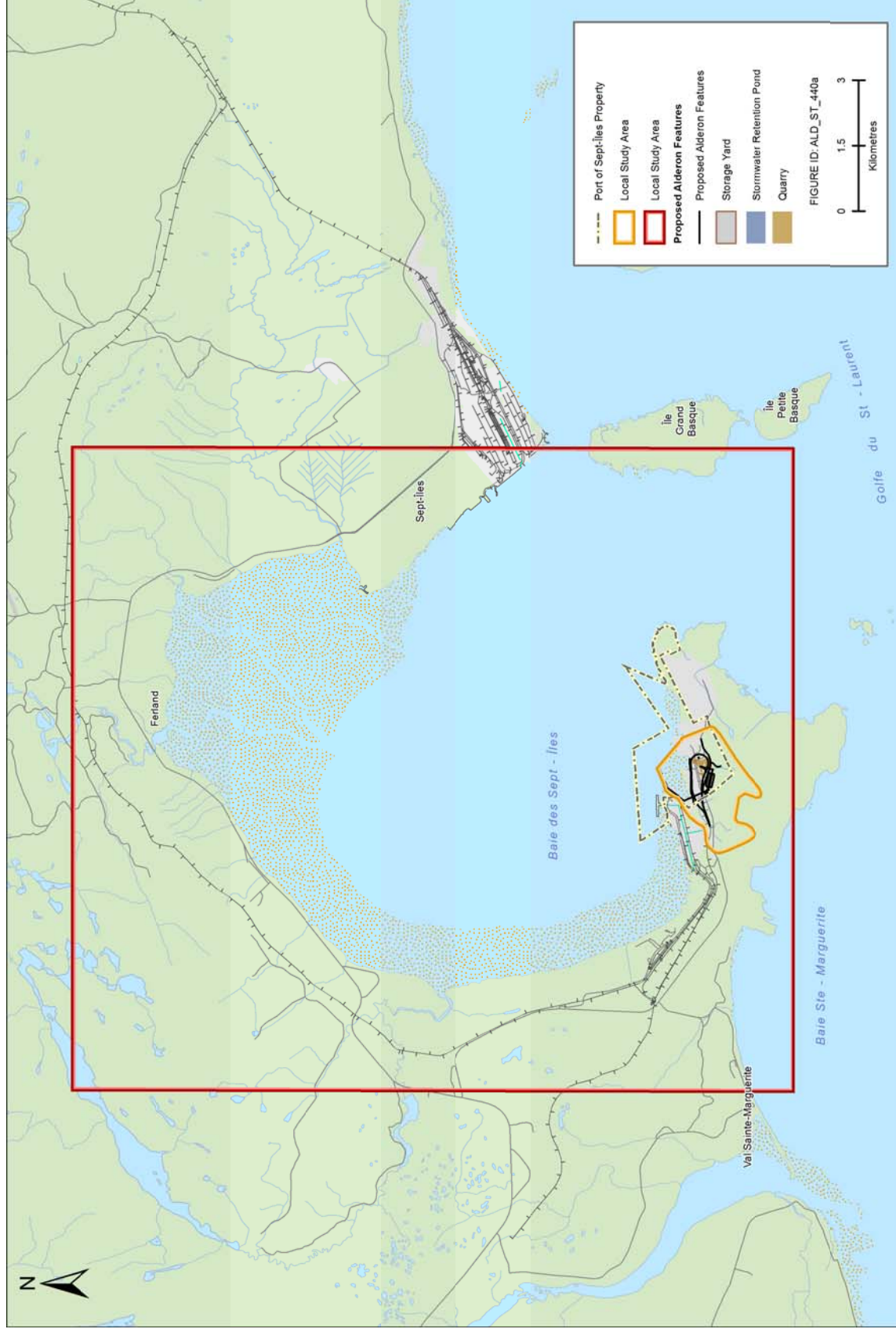


Figure 13.7 Water Resources Regional Study Area



At the provincial level, the MDDEP Directive 019 for the mining industry sets guidelines for the issuance or renewal of certificates of authorization required under the QEQA. Representatives from the Port of Sept-Îles advised that Directive 019 needs to be respected by Alderon. This directive is not a regulatory document but rather a guide that specifies the MDDEP expectations on the main mining activities. The directive sets requirements, notably for final effluents.

Surface water samples were collected from two streams, as well as from the baie des Sept-Îles. The samples were analyzed for the following parameters: pH; total dissolved solids; total suspended solids; colour; turbidity; hardness; extractable metals; total alkalinity; acidity; total cyanide; total phosphorus; nitrogen; and hydrocarbons. Results of the study are presented in Chapter 16 and in Appendix F.

Existing Environment

The Kami Terminal is located on Pointe-Noire of the Marconi Peninsula, which extends eastward into the Gulf of St. Lawrence. Drainage on the peninsula appears to flow north, towards baie des Sept-Îles or south towards baie Sainte-Marguerite with the eastern extremity of the peninsula draining eastward into the Gulf of St. Lawrence. Ruisseau à la Baleine, an intermittent stream, crosses the Kami Terminal. The watercourse is fed by runoff waters from the upstream surrounding areas and flows northward into baie de Sept-Îles.

Effect Assessment

Environmental effects resulting from activities related to the Kami Terminal were assessed. Construction phase activities will require a stream diversion and installation of watercourse crossings. The rerouting will change locally the drainage pattern over a short distance, however no significant environmental effect is anticipated. Installation of the culverts at the water crossings tied to the construction of the rail loop is likely to generate an increase in suspended materials in the water column. The typical environmental effects associated with this source of disturbances are an increase in turbidity in the water column, resulting in deterioration of water quality.

Testing of geologic materials was conducted to assess the potential for ARD / ML resulting from site preparation activities such as blasting and the expansion of the quarry. Results from the testing suggest that ARD will not likely arise from the expansion of the quarry or use of materials from the site. Furthermore, metal leaching from the rock will not likely cause any significant change in the concentrations of elements of potential concern in surface water and sediments.

Kami Terminal activities during the operations and maintenance phase that may result in environmental effects on Water Resources include the storage of concentrate in stockpiles. Static tests of concentrate and tailings samples conducted at the Rose Lake deposit (Volume I) concluded that concentrate and tailings will be non-acid generating. Furthermore, potential concentrations of iron, aluminum and cadmium present in tailings would likely be lowered by the removal of most suspended solids prior to discharge and prior to transportation of the concentrate to the Kami Terminal site. Nonetheless, the outdoor (uncovered) storage of iron ore concentrate can potentially generate “red water” when exposed to precipitations. Red water is the term used for water which contains fine precipitated iron oxide/hydroxide. Without proper

mitigation, the red water from the concentrate ore stockpile could infiltrate in the ground or drain in nearby waterbodies downstream, affecting the surface and groundwater quality as well as sediment quality.

Avoidance and Mitigation Measures

To control adverse environmental effects on Water Resources resulting from activities related to the Kami Terminal, avoidance and mitigation measures will include:

- Apply standard and best practices and general environmental protection measures.
- Use of silt fencing downstream of the work area and at the limits of the work zone to reduce the carriage of silt and fines in any water runoff from the area.
- Avoid unnecessary encroachments in the riparian habitat on either side of streams.
- No debris will be disposed in the aquatic environment and any debris introduced will be removed as soon as possible.
- No earth-moving or excavation work will be carried out near streams during high water periods or heavy rains.
- Use machinery that is in proper operating condition in order to avoid any oil or fuel leaks.
- Clean, maintain and store work site machinery and vehicles on a site designated for this purpose at a distance of over 30 m from streams and ensure an on-site supply of absorbent materials in case of accidental spills as well as properly identified sealed recipients for collecting petroleum products and waste materials.
- Stabilize slopes as soon as possible using recognized bioengineering techniques that take into account instability, sensitivity to erosion, slope and height of the embankment.
- Concentrate storage area will contain a liner in conformance with Port requirements.
- Stormwater collection in the concentrate storage area and drainage directed toward a retention pond with liner.
- Water treatment before release to the environment to respect *Directive 019* and ensure that receiving water will not exceed the CCME water quality guideline for the protection of aquatic life.

Cumulative Effects Assessment

In association with the Kami Terminal environmental effects, an assessment of the potential cumulative effects has been conducted for other projects and activities that have potential to interact with the Kami Terminal.

Aluminerie Alouette is located in the RSA. It does not presently discharge industrial effluent in the environment; all process water is recirculated or evaporated. Runoff is channelled to a settling basin before being discharged into the Gulf of St. Lawrence. Domestic sewage is channelled to a wastewater treatment plant (aerated ponds) built by the City of Sept-Îles for the aluminum works (Environment Canada 1998). Their effluent discharge criteria are defined by

the industrial depollution attestation issued by the MDDEP. Although no technical details are available on the plant new expansion phase, it is assumed that Aluminerie Alouette will continue to recycle its process water after expansion.

In the case of the expansion of the Port of Sept-Îles, a multi-user deep water dock with two ship loaders and two conveyer lines will be built. Construction activities in baie des Sept-Îles will follow requirements from DFO for the protection of fish, fish habitat and therefore water resources.

No information presently exists on railway changes that will need to be made on the CFA and QNS&L railways to accommodate new users. It is expected that new rail spurs will be constructed and that numerous crossing may have to be built. No overlapping is expected with Kami Terminal activities.

Cliffs Natural Resources is planning to improve its railway and port infrastructure at the Pointe-Noire terminal in Sept-Îles. It is expected that the infrastructure to be built for that project would be similar to the Kami Terminal infrastructure within the Pointe-Noire Terminal and that Cliffs Natural Resources will have to implement erosion control measures and also meet regulatory standards for red water runoff from its own iron concentrate storage area.

The second pellet plant in Port-Cartier proposed by ArcelorMittal Mines Canada is not located within the RSA.

Mine Arnaud proposes the development of an apatite and magnetite mine with a production capacity of 23,000 tons per day. It will be located approximately 15 km west of Sept-Îles, Québec near the baie des Sept-Îles. Wastewater management will include the discharge of treated effluent in ruisseau Clet. This stream flows into the western section of baie des Sept-Îles. According to the environmental impact study carried out for the apatite mine, pH of the effluent is anticipated to be more alkaline than background levels in ruisseau Clet (pH between 5 and 5.2). Aluminum levels are also expected to be higher than background but the effluent will have to respect the environmental standards before being discharge. The applicable discharged standards are defined by the MDDEP Directive 019 and Metal Mining Effluent Regulations (MMER). Effluent discharge objectives (EDO) applicable to mining effluent will also be defined as part of the project approvals (certificate of authorization). EDOs are normally based on the provincial surface water criteria (MDDEP), which are usually more stringent than the Directive 019 standards.

As a result of the above factors, any cumulative effects on this VEC as a result of the Kami Terminal and other projects and activities are likely to be not significant.

Accidents and Malfunctions

Train Derailment

A train derailment could result in the depositing of iron ore concentrate on the ground or in water at stream crossings. Based on experience with other train derailments on the QNS&L, the

reasonable worst-case is the loss of 60 to 75 cars in derailment. Fuel spill would be limited to the amount of fuel contained in the locomotive.

Measures to prevent derailment include manual inspection of all railway components, electronic wayside inspections during transport, and both manual and electronic track inspections. The implementation of ERPs and contingency plans will minimize adverse environmental effects and enable rapid rehabilitation and effective recovery.

Forest Fire

The Pointe-Noire Terminal is located next to a forest area. Although unlikely, Kami Terminal activities involving the use of heat or flame could result in a fire. The burning of the forest cover and scorching of the forest floor would remove the interception capacity of trees. Therefore, a forest fire would affect water balance by increasing overland flows. The deposition of volatile organic compounds, ash and other burning residuals could affect local water quality. Runoff from a burn would carry burn residual material to receiving waters and would degrade surface water quality. Natural regrowth or planned reforestation would reverse water quantity and quality environmental effects. The extent and duration of a resulting fire would be dependent on response efforts and meteorological conditions. Emergency response measures in case of a fire will be integrated into the existing Port of Sept-Îles, the City of Sept-Îles, and the Sopfeu ERPs.

Stormwater Retention Pond Breach

A stormwater retention pond will be created in order to collect and treat red water generated from precipitation water runoff from the iron ore stockpiles. The pond is being designed to accommodate the 100-year storm. However, in the unlikely event of a breach or overflow at the stormwater retention pond, red water could be released to the downstream environment. In such an event, it is expected that TSS levels would exceed regulated release criteria. It is anticipated that baie des Sept-Îles could rapidly recover.

Significance of Residual Adverse Environmental Effects

A significant residual adverse environmental effect on Water Resources is defined as an environmental effect related to the Kami Terminal that results in any of the following:

- Changes in water quality such that:
 - Effluent quality exceeds Directive 019 criteria;
 - Effluent mixing zones exceeds acute toxicity criteria;
 - The boundary of effluent mixing zones exceeds chronic toxicity criteria or exceeds baseline or *Canadian Water Quality Guidelines for the Protection of Aquatic Life*; or,
 - Effluent receiving waters is exceed their assimilative capacity;
- Changes in sediment quality such that sediment quality is degraded below baseline quality or the Canadian Sediment Quality Guidelines; or,

- Changes to the aquifer such that the aquifer is physically or chemically altered to the extent that interaction with local surface water results in stream flow or surface water chemistry changes that adversely affect aquatic life.

The significance of residual adverse effects for Water Resources is assessed in Chapter 16. Given the planned mitigation, and the analyses presented in this assessment, the Kami Terminal is not likely to result in significant adverse environmental effects under normal operating conditions.

A summary of the findings of the EIS are presented in Table 13.2. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Water Resources VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.2 Summary of the Findings of the Environmental Impact Statement - Water Resources

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Alderon
<p>Change in Surface Water Quality</p> <p>Change in Surface Water Drainage Patterns</p> <p>Change in Groundwater Quality</p>	<ul style="list-style-type: none"> Apply standard and best practices and general environmental protection measures. Use of silt fencing downstream of the work area and at the limits of the work zone to reduce the carriage of silt and fines in any water runoff from the area. Avoid unnecessary encroachments in the riparian habitat on either side of streams. No debris will be disposed in the aquatic environment and any debris introduced will be removed as soon as possible. No earth-moving or excavation work will be carried out near streams during high water periods or heavy rains. Use machinery that is in proper operating condition in order to avoid any oil or fuel leaks. Clean, maintain and store work site machinery and vehicles on a site designated for this purpose at a distance of over 30 m from streams and ensure an on-site supply of absorbent materials in case of accidental spills as well as properly identified sealed recipients for collecting petroleum products and waste materials. Stabilize slopes as soon as possible using recognized bioengineering techniques that take into account instability, sensitivity to erosion, slope and height of the embankment. Concentrate storage area will contain a liner in conformance with Port requirements. Stormwater collection in the concentrate storage area and drainage directed toward a retention pond with liner. Water treatment before release to the environment to respect Directive 019 and ensure that receiving water will not exceed the CCME water quality guideline for the protection of aquatic life. 	<p>Monitoring of water quality of the stormwater retention pond discharge to ensure compliance with the MDDEP Directive 019 guidelines, CCME water quality requirements for the protection of aquatic life and Québec surface water criteria for the protection of aquatic life.</p>	<p>Construction activities can potentially generate erosion and sedimentation in nearby waterbodies and introduce deleterious substances affecting surface and groundwater quality. No ARD / ML issues anticipated from use of blasted or cut rocks on-site and storage of concentrate ore. Concentrate handling and stockpiling has potential to generate water laden with particles, including iron affecting surface water quality in local drainage areas and groundwater quality. Decommissioning and reclamation activities expected to be similar to construction phase. With application of best management practices and mitigations measures, environmental effects to water resources are expected to be not significant.</p>	<p>Similarly to the Kami Terminal, other mining projects identified in the RSA will also discharge water/effluent in baie des Sept-Îles. They will be required to treat red water or effluent prior their discharge in the environment as per the applicable regulations or conditions imposed by regulators. The Kami Terminal construction schedule will overlap with the port expansion construction. Together, they can potentially generate erosion and sedimentation that will be mitigated with the implementation of standard mitigation measures and implementation of the EPP.</p>	<p>A forest fire, a train derailment or a stormwater retention pond breach could affect surface and groundwater quality. The application of prevention measures and the implementation of an ERP will minimize adverse environmental effects and enable rapid rehabilitation and effective recovery.</p>	<p>Canadian recommendations for water and sediment quality with the aim of protecting aquatic life (CCME 1999) Sediment quality assessment criteria for the St. Lawrence (Environment Canada & MDDEP 2007) Criteria for surface water quality (MDDEP 2012b) Canadian Sediment Quality Guidelines</p>	<p>Comments related to waterbodies, including baie des Sept-Îles; water quality, including concerns about red water; water management; and cumulative effects on water resources.</p>	<p>Develop mitigation and environmental effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.</p>

13.4 Wetlands

Wetlands are identified in the EIS Guidelines in recognition of the potential for interactions between Kami Terminal activities and the wetland environments and the relationship of those wetlands with wildlife and other biological and physical environments, as well as in recognition of the federal and provincial policies regarding wetlands. Wetlands were raised as an issue once during the consultation process.

Wetlands cover a sizable proportion of the natural landscape and are a major constituent of the undisturbed boreal ecosystem, where they provide a number of ecological (physical, chemical, and biological) and socio-economic functions that are of value to regulatory agencies, the public, and ecosystems. However, no wetland was identified within the Kami Terminal PDA within the Pointe-Noire Terminal and for that reason wetlands are not part of the assessment.

13.5 Freshwater Fish, Fish Habitat, and Fisheries

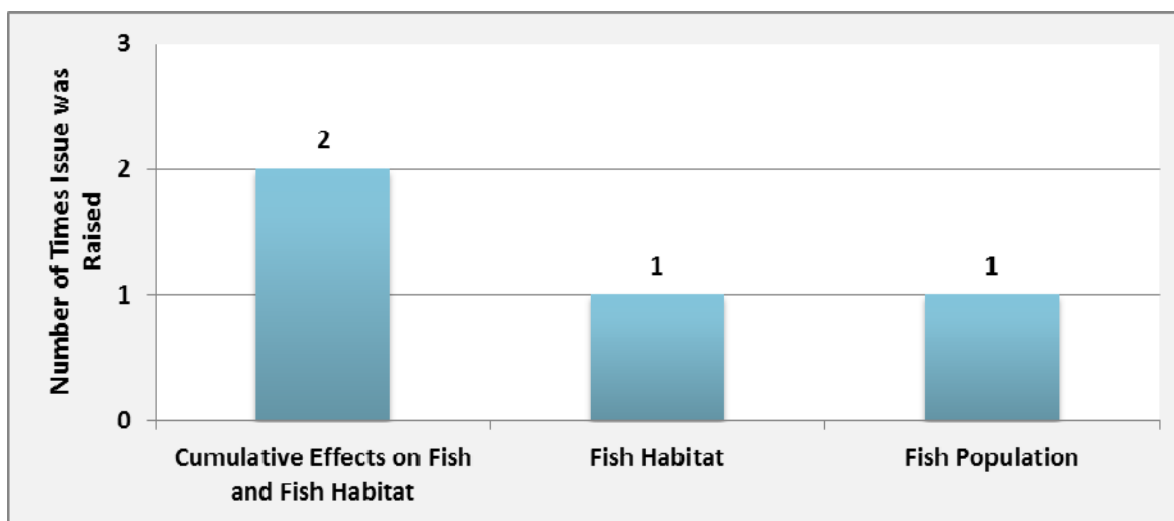
Freshwater Fish, Fish Habitat and Fisheries were selected as a VEC because of their importance as a resource, and the potential for interactions with the Kami Terminal. The effects induced by the Kami Terminal will be addressed under the requirements of the *Fisheries Act*, which governs the protection of fish, fish habitat, and fisheries.

A detailed characterization of the Freshwater Fish, Fish Habitat, and Fisheries VEC is provided in Chapter 18.

Issues

The frequency of issues identified relating to fish and fish habitat is shown in Figure 13.8. Issues were identified by participants during consultation activities. A participant voiced concern about impact of increasing rail traffic on the rivière Nipississ, particularly its effect on salmon spawning grounds. They identified that vibrations from the rail traffic could destroy salmon spawning. Another participant asked about the potential effects of the Kami Terminal on fish in ruisseau à la Baleine. It was identified that there are a lot of pressures on fish populations around the bay, and there is concern about cumulative effects. In response to these issues, Alderon conducted a fish and fish habitat survey, the results of which are summarized below.

Figure 13.8 Frequency of Issues Raised Related to Freshwater Fish, Fish Habitat, and Fisheries



The EIS Guidelines state that Freshwater Fish, Fish Habitat and Fisheries must be considered as a VEC. Freshwater fish and fish habitat means freshwater fish species and the habitat upon which they depend. In accordance with Section 2 (1) of the revised *Fisheries Act*, fish habitat is defined as “spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes”.

Two freshwater streams are located in the local study area: ruisseau à la Baleine and an unnamed stream located west flowing in anse à Brochu. Neither of these streams provide habitat that supports freshwater fish populations. Both streams have barriers to upstream fish passage (i.e., aggregate at the mouth of the stream and the steep topography of upstream sections) and the upstream reaches of both watercourses are steep and intermittent.

Fish community sampling was conducted in June 2012 (Appendix E, Stantec 2012c). No fish were collected or observed in ruisseau à la Baleine. A total of four individual threespine stickleback (*Gasterosteus aculeatus*) were captured in the unnamed stream upstream of the culvert. Threespine stickleback can be found in both freshwater and marine environments and are not strictly freshwater fish. It is likely that the four individuals recorded in the unnamed stream have been isolated because of the existing barrier at the mouth of the stream.

Based on the existing conditions described above, Freshwater Fish, Fish Habitat and Fisheries do not occur in the LSA.

13.6 Birds, Other Wildlife and Their Habitats, and Protected Areas

Birds, Other Wildlife and their Habitats refers to migratory and non-migratory species that are potentially feeding, breeding, moving or migrating through the Kami Terminal area. This includes migratory and non-migratory birds, amphibians, small mammals, ungulates, furbearers, and their habitats, and protected areas.

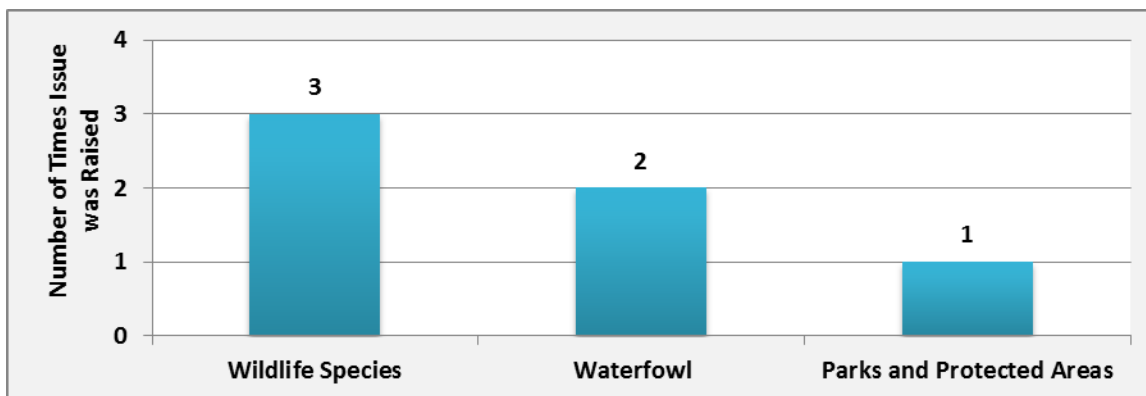
Protected Areas include existing or planned designated areas (e.g., national, provincial and regional parks; protected natural areas and watersheds; ecological reserves). Protected Areas are important to local residents, regional stakeholders, and regulatory authorities (i.e., municipal, provincial and federal) for recreation, economic and/or management considerations.

The detailed assessment of the environmental effects of the Kami Terminal on Birds, Other Wildlife and Their Habitats, and Protected Areas is presented in Chapter 19.

Issues

The rationale for selecting Birds, Other Wildlife and their Habitats, and Protected Areas as a VEC is based on the need to protect ecosystems, species diversity, important habitats and ecosystems. Furthermore, during consultations, a local resident expressed concerns about Kami Terminal effects on migratory birds. The frequency of issues identified relating to birds, other wildlife, their habitat and protected areas is shown in Figure 13.9. Participants identified the baie des Sept-Îles as an important conservation zone for migratory birds. There is concern that there will be effects on the bay from dust generated by the Kami Terminal. In response to these issues, Alderon conducted field surveys to identify habitat and species potentially affected by the Kami Terminal. Alderon will also implement mitigation measures to minimize dust emissions.

Figure 13.9 Frequency of Issues Raised Related to Birds, Other Wildlife and Their Habitats, and Protected Areas



Methodology

The environmental assessment of Birds, Other Wildlife and their Habitat, and Protected Areas is focused on changes to habitat; distribution and movement; mortality risk; health; and protected areas.

For the purposes of the assessment, the LSA for Birds, Other Wildlife and their Habitat, and Protected Areas includes wildlife habitats within 500 m of the PDA (Figure 13.10). The RSA includes wildlife habitats within Marconi Peninsula extending west to rivière Sainte-Marguerite, and baie des Sept-Îles (Figure 13.11).

Figure 13.10 Birds, Other Wildlife and Their Habitats, and Protected Areas Local Study Area

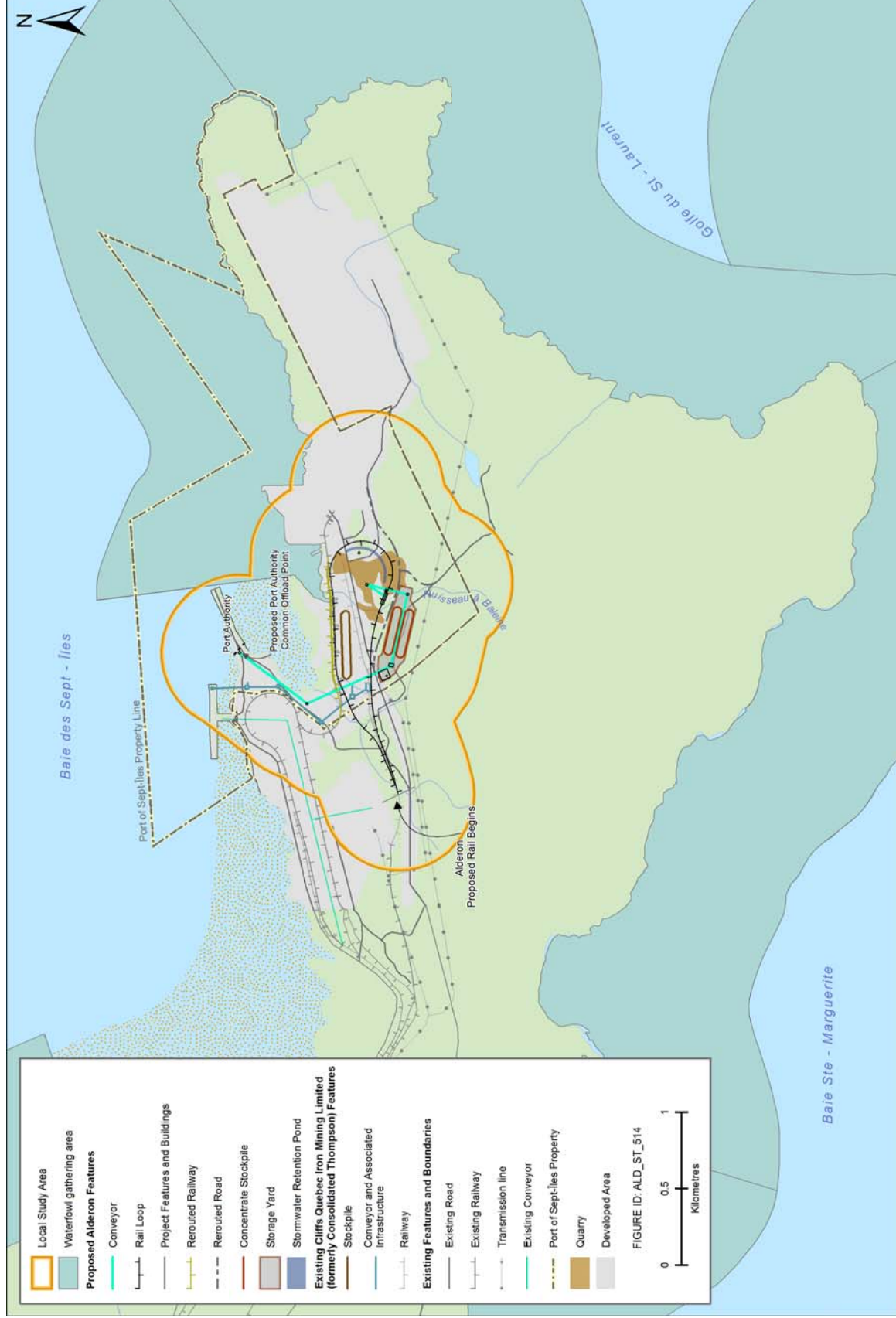
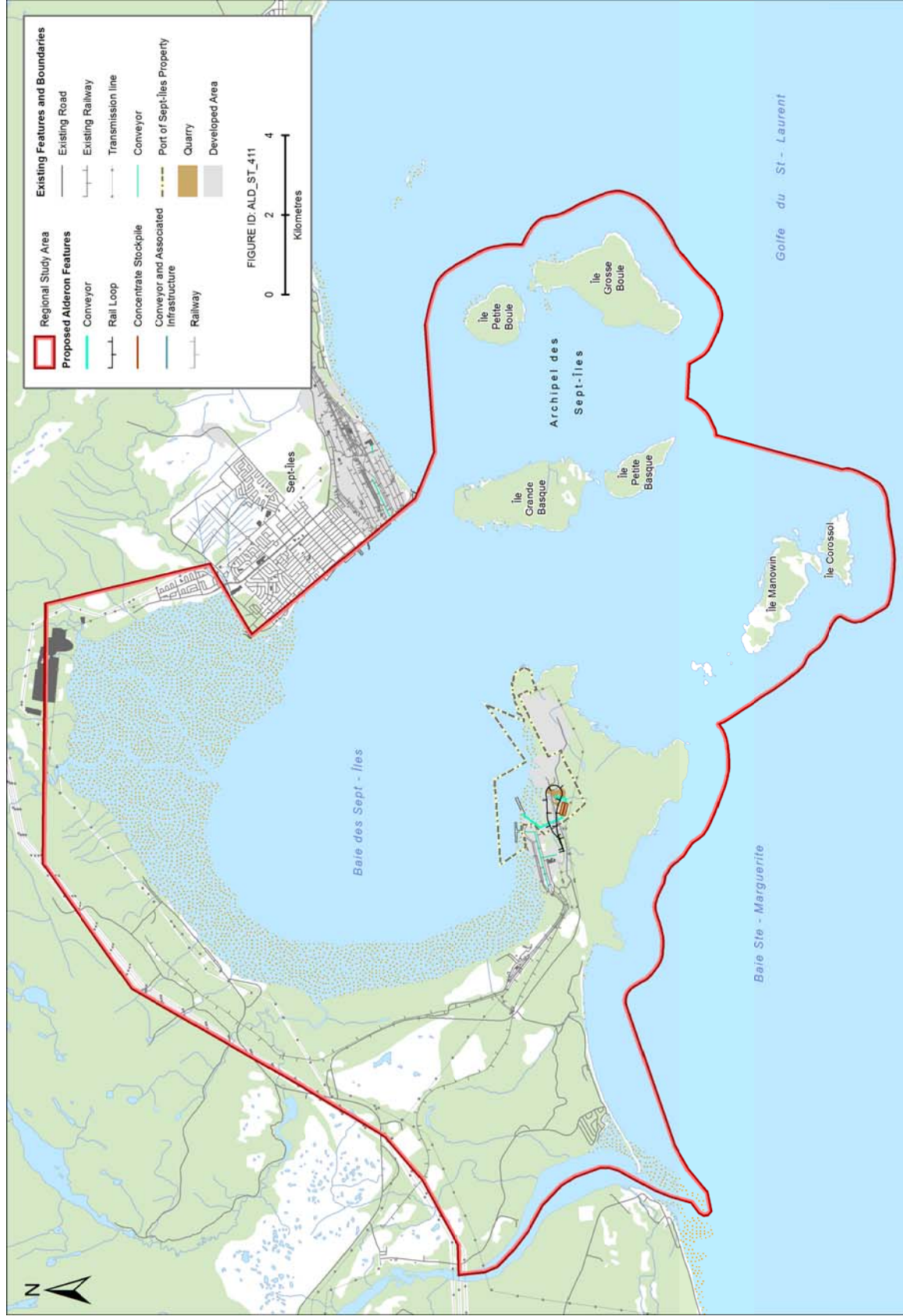


Figure 13.11 Birds, Other Wildlife and Their Habitats, and Protected Areas Regional Study Area



Birds, Other Wildlife, and their Habitat, and Protected Areas are protected under federal and provincial legislation, regulations, policies and guidelines published by the governments of Québec and Canada.

Dedicated surveys for avifauna were conducted in 2011. These surveys included point count surveys, linear transects, walking surveys, and nocturnal surveys. Herpetile surveys were also conducted to confirm the presence of amphibians and reptiles and their use of habitat. Desktop regional information was compiled from the theoretical distribution of Québec mammals and the description of their habitat.

Existing Environment

Most of the northern part of the Marconi Peninsula has been cleared of vegetation as a result of past and ongoing industrial activity. Existing vegetation on the peninsula as a whole is boreal coniferous and boreal mixed forests. Lists of migratory bird species, non-migratory bird species, herpetiles, and mammals (ungulates, furbearers and small mammals) likely to be present within the LSA or RSA are provided in Section 19.5.

Effects Assessment

An assessment of environmental effects of the Kami Terminal on Birds, Other Wildlife and their Habitats, and Protected Areas determined that several environmental effects could exceed acceptable levels without the implementation of specific mitigation. Most of the anticipated environmental effects will result from Kami Terminal activities during the construction phase, particularly activities related to site preparation. There are no protected areas within the PDA, with the nearest protected area being a waterfowl gathering area, located in baie des Sept-Îles.

Site preparation will result in the most important adverse effects of the Kami Terminal on wildlife through the loss or alteration of habitat for wildlife species, or the direct loss of individual animals. Clearing and grubbing during site preparation will remove existing vegetation

Change in habitat may result in adverse environmental effects on wildlife species through a loss of breeding, nesting, rearing, or other habitats. Due to the loss of preferred habitats, bird and wildlife species may move to other habitats and habitats of potentially lower quality resulting in crowding and increased competition for resources. Construction activities may also result in a change in habitat through fragmentation leading to the reduction in the freedom of movement between patches of habitat. Change in habitat through fragmentation is likely to be limited for species that are found in the vicinity of the Kami Terminal Area and currently move through and within the Kami Terminal Area to access preferred habitat, given the proximity to existing disturbances.

Indirect effects resulting from site preparation activities such as logging include changes in the quality of the habitat along the edge of the Kami Terminal footprint as a result of increased side lighting or drying of what was previously forest interior habitat. This may enable more light-tolerant and disturbance-tolerant species to penetrate into adjacent forest habitat. Vegetation located within the footprints of various Kami Terminal components will be removed during the construction phase of the Kami Terminal.

Site preparation may also result in changes in distribution and movement of birds and wildlife due to the direct loss of habitat, and displacement of individuals. Initial site preparation poses the greatest potential for leading to changes in the distribution and movement of wildlife: the remaining construction activities will also have environmental effects, but it will result from sensory disturbance from noise and dust. Distribution and movement may also be affected by habitat fragmentation, which may contribute to a loss of freedom of movement between habitat patches. This could be particularly problematic for species that are found in the vicinity of the PDA and currently move through and within the Kami Terminal Area to access preferred habitat. However, given the location and scale of the Kami Terminal, fragmentation will be minor and the movements of few, if any, species are expected to be disrupted in a substantive way. Noise associated with construction and later, operation and maintenance activities may cause the displacement of individuals to less productive habitats, and may affect the flight patterns of migratory birds.

Site preparation and other construction activities related to the Kami Terminal may result in the direct loss of individual animals, particularly small species such as herpetiles, small mammals, and the eggs or flightless young of birds. Potential increases in forest edges associated with construction clearing activities may also result in increased predation on birds and small mammals. Depending on the timing of these activities, direct mortality or disturbance to nesting wildlife, especially birds, can occur, in violation of the MBCA or Sections 16 and 17 of QARTVS. Most birds and mammals would leave the cleared and grubbed areas and would move to adjacent undisturbed habitats. Indirect mortality could occur to these animals if they are unable to find suitable unoccupied habitat.

Some wildlife species are attracted to open disturbed sites such as those created by clearing and grubbing. Birds such as common nighthawk and killdeer use habitats such as this for nesting. Subsequent construction of infrastructure on these sites can result in the destruction of the eggs and unfledged young of these species.

Airborne contaminants emitted during construction and operations and maintenance could potentially cause changes in health of birds and wildlife. Site preparation and road construction can cause physiological effects on birds and wildlife due to contamination, potentially lowering fitness of breeding animals, affecting reproductive output and success.

Avoidance and Mitigation Measures

To minimize these effects, a set of mitigation measures are proposed including standard practices and general environmental protection measures for construction projects. General measures will be addressed through the EPP. Specific measures include:

- Apply standard and best practices and general environmental protection measures.
- Environmental monitoring during construction.
- Avoid clearing during the breeding bird season, where feasible.
- Develop an avifauna management plan.
- Flag boundaries of sensitive areas or buffers.

- Proper muffler installation.
- Comprehensive and regular maintenance of vehicles.
- Site erosion protection and sediment control measures.
- Survey area for presence of sensitive wildlife prior to blasting.
- Direct stormwater, wastewater or surface water away from wildlife habitat.
- No harassment of wildlife.
- Provincial and federal regulations will be followed in the storage and handling of materials.
- Implement EPP.
- Implement forest fire prevention and response plan
- Oil Spill Contingency planning.
- Product spill contingency planning up to the proposed Port authority common load-out point.
- Provide employee training.

Cumulative Effects Assessment

The cumulative effects assessment revealed that while no interaction is expected with the Second Port-Cartier pellet plant located approximately 30 km southeast of the Kami Terminal, there was the possibility of interaction with the remaining five projects either planned or underway. The remaining five projects will affect land within the RSA. Nonetheless, as the projects are expected to construct on developed land or along disturbed or edge habitats, environmental effects on habitat will be limited without any substantive cumulative losses of natural terrestrial habitat. All development is expected to keep close to existing development, similar to the Kami Terminal, with no encroachment on interior forest habitat. One possible exception is the future expansion of Aluminerie Alouette aluminum smelter, which may affect some fragmented forest habitat.

While direct construction effects on natural terrestrial habitat are likely to be limited, indirect effects of added noise, light and dust are likely to increase locally with the project expansions. This may conceivably result in changes to species distribution or movement within the RSA.

Mitigation measures include developing site-specific EPPs for environmentally sensitive areas; awareness training of on-site workers, as well as implementing measures described in the EPP. The residual cumulative effects are rated as not significant. With mitigation measures, the residual cumulative effects are expected to be not significant.

Accidents and Malfunctions

Trail Derailment

While a train derailment could have adverse effects on Birds, Other Wildlife and their Habitats, and Protected Areas, the residual adverse environmental effects are predicted to be not significant, due to disturbed nature of the environment immediately surrounding the rail loop, and the expected low consequences of such an unlikely event.

Forest Fire

The residual adverse environmental effects of a forest fire caused by the Kami Terminal on Birds, Other Wildlife and their Habitats, and Protected Areas as a result of accidents and malfunctions are predicted to be potentially significant. This is due to the potential high magnitude and potential regional geographic extent of the environmental effects. However, with implementation of provincial and federal regulation /guidelines; EPPs, ERPs, contingency planning, and employee training, these unplanned or unintended events are unlikely to occur and are likely to be contained to the Kami Terminal site.

Significance of Residual Adverse Environmental Effects

The criteria used to determine significance of residual adverse environmental effects are outlined below:

Birds, Other Wildlife and Their Habitats: effects that result in the degradation, alteration or loss of critical or important habitat (physical loss, noise, light and other stimuli) within the LSA, either physically, chemically, or biologically, in quality or extent, in such a way as to cause a change or decline in the distribution or abundance of birds or other wildlife that are dependent upon that habitat, such that the likelihood of the long-term viability or survival of the populations within the RSA is reduced as a result; or

Protected Areas: effects that results in the degradation, alteration or loss (e.g., physical loss, noise, light and other stimuli) in the quantity and quality of Protected Areas, either physically, chemically, or biologically; in quality or extent, in such a way as to cause a change or decline in the effectiveness of that protected status, such that the likelihood of the long-term viability or designated function of the Protected Areas within the RSA is substantially reduced.

If the proposed mitigation measures are followed, changes in habitat, distribution and movement, mortality risk and health of birds and other wildlife, and changes to protected areas are expected to be not significant. The effects will be of low magnitude, short in duration and restricted to the site or the LSA while being continuous throughout the construction phase and irreversible. Residual adverse environmental effects are therefore deemed to be not significant.

A summary of the findings of the EIS are presented in Table 13.3. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Birds, Other Wildlife and Their Habitat, and Protected Areas VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.3 Summary of the Findings of the Environmental Impact Statement – Birds, Other Wildlife and Their Habitats, and Protected Areas

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Proponent
Change in Habitat Change in Distribution and Movement Change in Mortality Risk Change in Health	<ul style="list-style-type: none"> Apply standard and best practices and general environmental protection measures. Environmental monitoring during construction. Avoid clearing during the breeding bird season, where feasible. Develop an avifauna management plan. Flag boundaries of sensitive areas or buffers. Proper muffler installation. Comprehensive and regular maintenance of vehicles. Site erosion protection and sediment control measures. Survey area for presence of sensitive wildlife prior to blasting. Direct stormwater, wastewater or surface water away from wildlife habitat. No harassment of wildlife. Provincial and federal regulations will be followed in the storage and handling of materials. Implement EPP. Implement forest fire prevention and response plan Oil Spill Contingency planning. Product spill contingency planning up to the proposed Port authority common load-out point. Provide employee training. 	On-site monitoring for compliance with the EPP.	The PDA is largely located within an existing and active industrial site. Disturbance of existing wildlife habitat for the concentrate unloading, stacking, storage, and reclaiming facility only. This is not considered critical or important for any wildlife species identified in the area, given its fragmented and disturbed structure and proximity to an industrial area. The habitat is common and widespread in the RSA and used by species that are also common and widespread. The effects on birds and other wildlife are expected to be not significant.	Other projects identified in the Marconi Peninsula will affect land but construction is expected to largely occur on developed land or other disturbed or edge habitats.	With implementation of prevention plan and ERP, the effects of a forest fire caused by the Kami Terminal are unlikely to occur and are likely to be contained to the Kami Terminal site. The effects of a train derailment within the Pointe-Noire Terminal caused by the Kami Terminal are predicted to be not significant, due to disturbed nature of the environment immediately surrounding the rail loop, and the expected low consequences of such an unlikely event.	Québec Act Respecting the Conservation and Development of Wildlife Migratory Birds Convention Act	Comments and concerns related to: <ul style="list-style-type: none"> Issues with protected areas (conservation zone for migratory birds); Potential effects on wildlife species. 	Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.

13.7 Species at Risk and Species of Conservation Concern

Species at Risk and Species of Conservation Concern (SAR and SOCC) were selected as a VEC because of the potential for interactions between Kami Terminal activities and flora or fauna that are considered as SAR and SOCC. These species contribute to overall species diversity in an area. And, vascular plant species are often found in unusual or uncommon habitats; thus, the occurrence of many rare plants may reflect the presence of rare habitats. Therefore, recognition of rare plant species can help in the identification of those habitats requiring special attention.

A detailed assessment of the effects of this VEC is provided in Chapter 20 of this EIS.

Issues

One participant identified bird species at risk as an issue of concern. In response to concerns related to the presence of bird species, including migratory species, at the Kami Terminal site, field surveys were conducted to identify species presence. The field surveys did not identify any rare species in the vicinity of the Kami Terminal.

Methodology

For the SAR and SOCC VEC, the LSA includes the PDA in its entirety and habitats within 500 m of the PDA. The RSA is limited to and includes habitats within Marconi Peninsula extending west to rivière Sainte-Marguerite, and the baie des Sept-Îles. The LSA and RSA for the SAR and SOCC are shown in Figures 13.12 and 13.13, respectively.

Figure 13.12 Species at Risk and Species of Conservation Concern Local Study Area

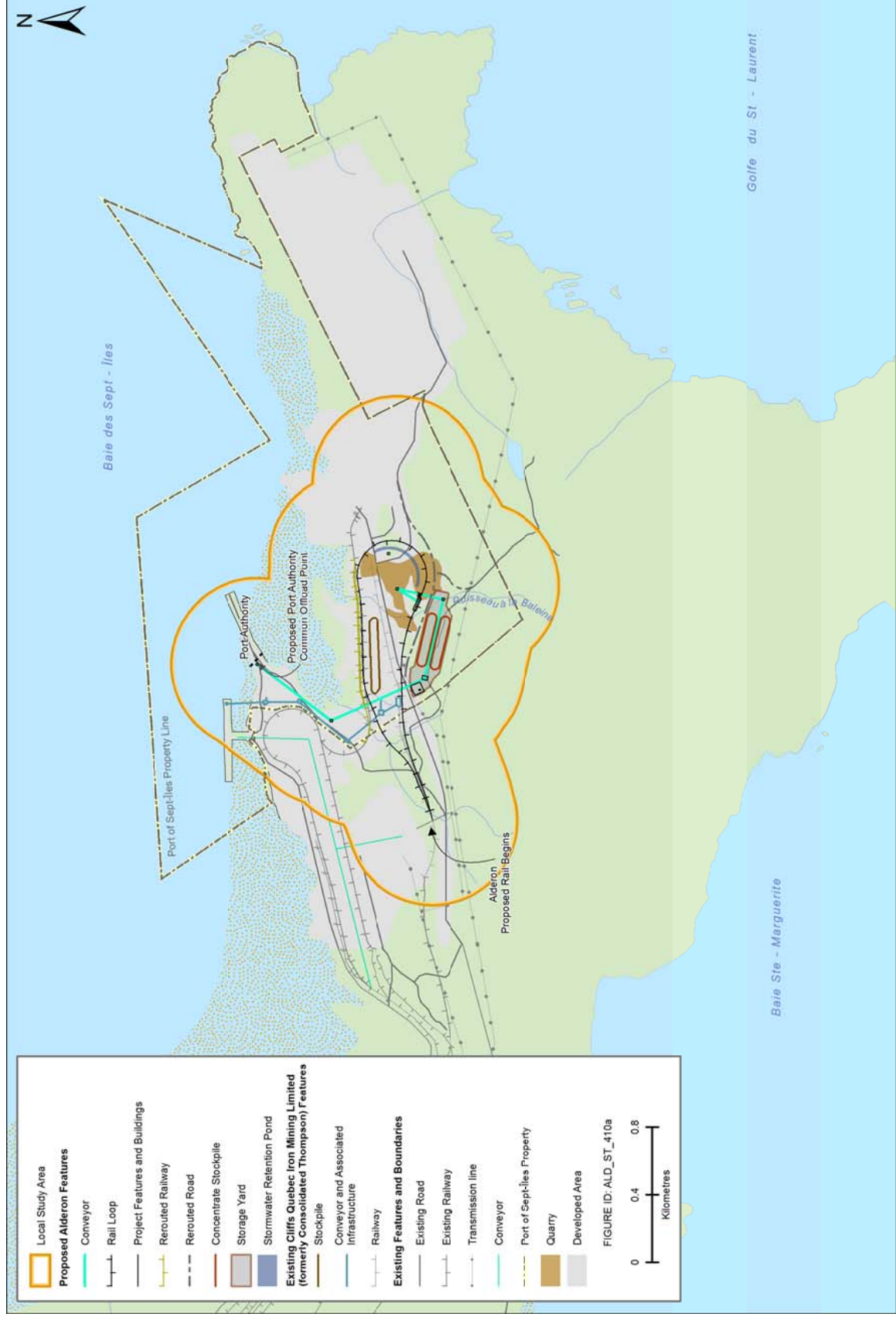
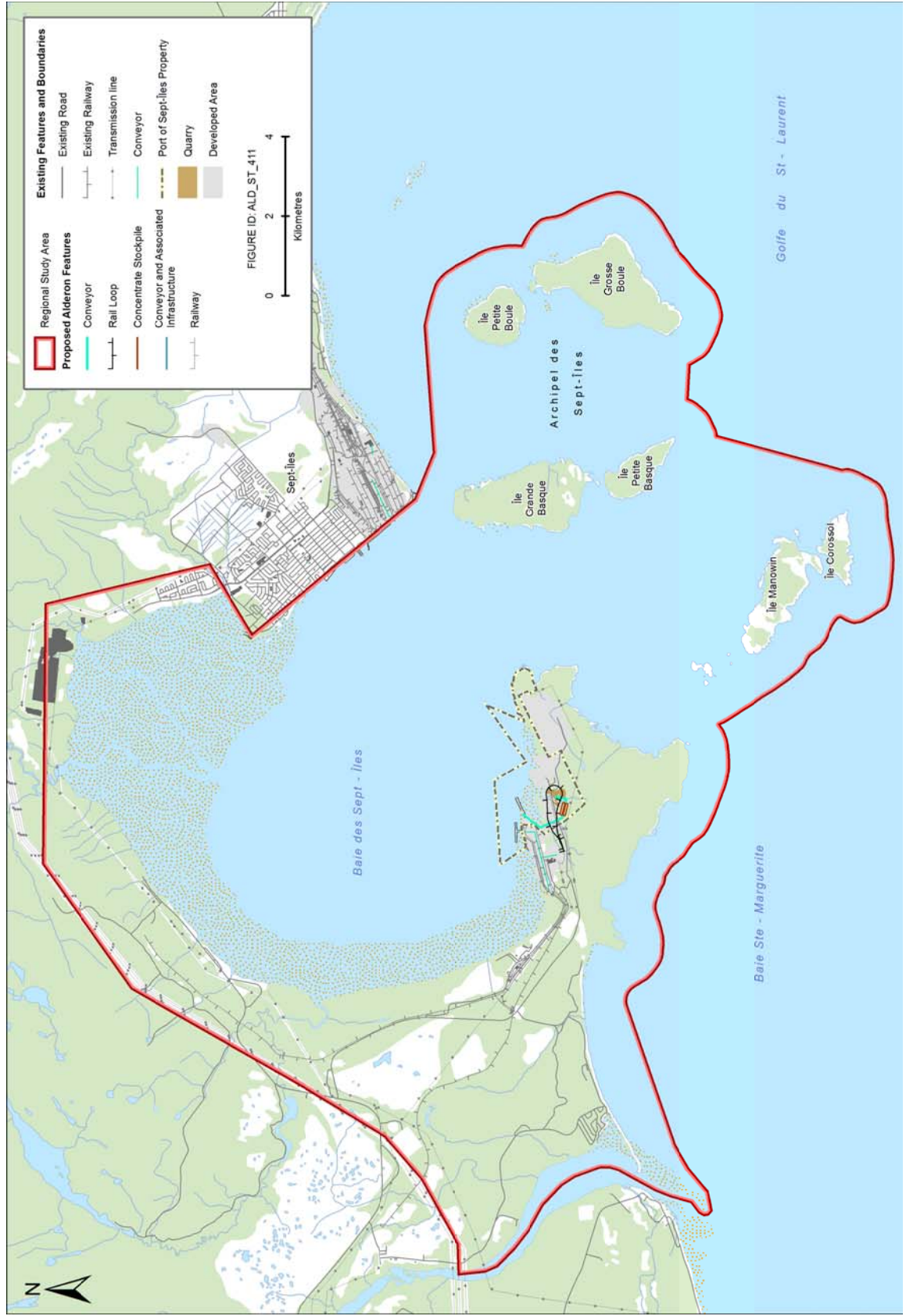


Figure 13.13 Species at Risk and Species of Conservation Concern Regional Study Area



SAR and SOCC are protected under federal and provincial legislation, regulations, policies, and guidelines published by the governments of Québec and Canada. Therefore a thorough assessment of effects related to the Kami Terminal on SAR and SOCC, and their significance, is required under CEAA, and all appropriate mitigation measures will be identified. This VEC will be developed in accordance with applicable provincial and federal acts and associated regulations and may include the following:

- *Québec Act Respecting Threatened or Vulnerable Species (QARTVS);*
- *Québec Act Respecting the Conservation and Development of Wildlife (QARCDW);*
- *Canadian Environmental Assessment Act (CEAA);*
- *Species at Risk Act (SARA); and,*
- *Canada Wildlife Act.*

In addition to regulatory requirements, the Kami Terminal will also be subject to the applicable federal, provincial, and non-governmental policy and guidelines:

- Committee on the Status of Endangered Wildlife in Canada (COSEWIC) management and recovery plans;
- *Accord for the Protection of Species at Risk;* and,
- Canadian Endangered Species Conservation Council (CESCC) General Status Ranks.

Other provincial and national programs that can incorporate SAR and SOCC VEC as the main feature include:

- CDPNQ Status Rankings; and,
- Assessment back to COSEWIC for further information or consideration.

According to the CDPNQ database, no flora species with special status or special status fauna species have reported in the Kami Terminal area or near the LSA. A few species at risk have been reported in the region including, the Canada warbler, Barrow's goldeneye, woodland caribou, least weasel, rock vole, southern bog lemming, pygmy shrew, however habitat conditions in the Kami Terminal affected area are not suitable for these species.

Two of the fish species reported in baie des Sept-Îles are considered as species at risk, namely the American eel and Atlantic cod Laurentian North population. However, they do not have a status under the *Species at Risk Act*. Atlantic Cod reside in marine waters, which are unlikely to be affected by the Kami Terminal. American eel is unlikely to be present in either watercourse potentially affected by the Kami Terminal; American eel was not detected during electrofishing surveys conducted in June 2012.

To date, no vascular plant or fauna Species of Conservation Concern have been recorded in the vicinity of the LSA. There are some 23 vascular plant SAR and SOCC that have some potential

(although are unlikely) to occur in the LSA; however none of these are considered as species at risk under the federal legislation.

Existing Environment

According to the CDPNQ database, no flora species are recorded near the LSA. Wildlife surveys to date have not confirmed the presence of any fauna species at risk. A bird species survey was conducted by Stantec in 2011. Surveys specifically targeting mammals have not been conducted within the LSA, however, incidental observations were noted during other fieldwork. Habitats in the Marconi Peninsula are fragmented as a result of industrial activities at the Port. Habitat conditions are far from being optimum for native plants and wildlife, especially considering present encroachments and high noise levels associated with industrial activities. Fish habitat is not present within the LSA.

The CDPNQ lists 54 plant species at risk to be present or potentially present in the Côte Nord region (CDPNQ 2008). A total of 31 of these species are calcareous (associated with limestone substrate). The presence of limestone substrate is unlikely in the Kami Terminal area as the bedrock consists of gabbro rocks. None of the 23 plant species that are not calcareous are considered as species at risk under the federal legislation. These species have been reviewed for their habitat preferences by a botanist who has visited the site; however, none are likely to be found in the habitats within the PDA or LSA.

Effects Assessment

Potential environmental effects related to the Kami Terminal primarily concern construction phase activities, specifically site preparation activities including clearing, grubbing, blasting and infilling. Changes to habitat will occur as a result of clearing and grubbing during site preparation that will remove existing vegetation. In addition, a number of indirect effects can result from these site preparation activities. Clearing of forested areas can change the quality of the habitat along the edge of the Kami Terminal footprint as a result of increased side lighting or drying of what was previously forest interior habitat. This may enable more light-tolerant and disturbance-tolerant species to penetrate into adjacent forest habitat. Vegetation located within the footprints of various Kami Terminal components (concentrate unloading, stacking, storage, and reclaiming facilities, rail loop, stream diversion, access road and waterline realignment and other infrastructure such as security fencing and office and storage buildings) will be removed during the construction phase.

Site preparation activities also have the potential to disturb wildlife SAR and SOCC (if present) as a result of increased noise and dust levels. Loss of plant SAR and SOCC is considered to be equivalent to a change in distribution.

Change in mortality for wildlife may result from certain species breeding in open disturbed sites. Subsequent construction of infrastructure on these sites can result in the destruction of the eggs and unfledged young of these species, including the threatened Common Nighthawk. Construction activities in the PDA have the potential to disturb habitat and cause direct mortality of vascular plants or fauna through off-road vehicle activity.

Changes in health may result from airborne contaminants released during site preparation and road construction. These contaminants can cause physiological effects in both plants and animals from contamination, potentially lowering fitness of breeding animals, affecting reproductive output and success.

Avoidance and Mitigation Measures

In addition to the list measures proposed for Birds, Other Wildlife and their Habitats, and Protected Areas, mitigation measures specific to the SAR and SOCC, if the latter are present, will be implemented. These include:

- Comply with existing legislated mitigation;
- Avoid activities near or/ at sensitive species and/or habitats, where possible;
- Develop protection measures and environmental management techniques based on site-specific conditions;
- Rehabilitate or restore affected environment;
- Provide substitute resources or environments through seed collection / sowing, direct transplantation or diaspore dispersal;
- Provincial and federal regulations should be followed in the storage and handling of materials;
- Implement EPP;
- Implement forest fire prevention and response plan; and,
- Provide employee training.

Cumulative Effects Assessment

The cumulative effects of overlapping project effects in the RSA are similar to those characterized for the Birds, Other Wildlife and Their Habitats and Protected Areas VEC. Apart from the Second Port-Cartier pellet plant, which is located approximately 30 km southeast of the Kami Terminal, the remaining projects will all affect land within the RSA. Nonetheless, their effects on habitat will be relatively small as they are expected to be constructed largely on developed land or other disturbed or edge habitats. There would therefore not likely be any or substantive cumulative losses of natural terrestrial habitat. There is a possibility that the Aluminerie Alouette aluminum smelter project may cause a loss of terrestrial habitat, however as with the other projects no interior forest would likely be affected, and limited forest habitat may be lost. More notably, the Kami Terminal will not contribute to cumulative effects, as no SAR and SOCC have been identified within the PDA or LSA.

Accidents and Malfunctions

Trail Derailment

A train derailment within the Pointe-Noire Terminal is a highly unlikely scenario given the low speeds, and the limited amounts of hazardous materials that could be released (i.e., engine fuel and lubricants). The low speeds would also likely limit the damage to the environment should such an event occur. No SAR and SOCC are likely present in the vicinity of the proposed railway loop as a result interactions are highly unlikely.

Forest Fire

A forest fire caused by the Kami Terminal has the potential to affect SAR and SOCC by burning forested habitat that has some potential to harbour rare plant species. A small isolated population of such plants, if present, could be lost as a result of such an event, depending on the species. The significance of such an event depends largely on the status, population size, range and extent of species, if present. However, there is low a likelihood of a forest fire related to the Kami Terminal to occur.

Significance of Residual Adverse Environmental Effects

The criteria used to determine significance of residual adverse effects are outlined below:

Species at Risk: a significant adverse residual environmental effect is one that affects all flora or fauna listed federally under Schedule 1 of SARA as “Endangered” or “Threatened” or provincially under QARTVS as “Threatened” or “Vulnerable” and results in a non-permitted contravention of any of the prohibitions stated in Sections 32-36 of SARA, or in contravention of any of the prohibitions stated in Sections 16 and 17 of QARTVS.

Species of Conservation Concern: a significant adverse residual environmental effect for is defined as an environmental effect related to the Kami Terminal on flora or fauna species not currently under the protection of SARA or the QARTVS (i.e., listed as “Special Concern” in Schedule 1 of SARA; listed in Schedule 2 or 3 of SARA); ranked as S1, S2 or S3 by CDPNQ for vegetation; or ranked “May Be At Risk”, “Sensitive” or “Undetermined” by the CESSC, and is one that:

Although there are no thresholds to assess the potential alteration or loss of individual listed plants or plant populations, an accepted guideline in the collection of vascular and non-vascular plant voucher specimens is that an immediate population can withstand the loss of 1 in 20 individuals or 5 percent of a population (Alberta Native Plant Council [ANPC] Native Plant Collection and Use Guidelines 2000). For the purposes of this assessment, 5 percent will be used as a benchmark to address the magnitude of effects on rare plant populations.

The significance of residual adverse effects for Species at Risk and Species of Conservation Concern is assessed in Chapter 20. In consideration of the existing disturbances at the Port of Sept-Îles, the limited direct disturbance to natural habitats within the PDA, and the apparent low potential for and lack of known SAR and SOCC, the overall Kami Terminal effects are expected

to be not significant for SAR and SOCC with proper design and following standard and proven mitigation.

A summary of the findings of the EIS are presented in Table 13.4. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Species at Risk and Species of Conservation Concern VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.4 Summary of the Findings of the Environmental Impact Statement - Species at Risk and Species of Conservation Concern

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Proponent
<p>Change in Habitat</p> <p>Change in Distribution and Movement</p> <p>Change in Mortality Risk</p> <p>Change in Health</p>	<ul style="list-style-type: none"> Comply with existing legislated mitigation. Avoid activities near or/at sensitive species and/or habitats, where possible. Develop protection measures and environmental management techniques based on site-specific conditions. Rehabilitate or restore affected environment. Provide substitute resources or environments through seed collection / sowing, direct transplantation or diaspore dispersal. Provincial and federal regulations should be followed in the storage and handling of materials. Implement EPP. Implement forest fire prevention and response plan. Provide employee training. 	<p>On-site monitoring for compliance with the EPP.</p>	<p>Construction activities will occur in habitats that are not considered critical or important for any wildlife or plant SAR and SOCC, given their largely fragmented and disturbed structure and proximity to an active industrial area. Also, no SAR and SOCC have been identified on the site. While it is likely used by birds and wildlife for breeding, the habitat is common and widespread in the RSA and beyond, and the species that use the area are also common and widespread. With proposed mitigation and environmental protection measures, the overall environmental effect of change in populations of SAR and SOCC is not significant. The magnitude of the effect on SAR and SOCC is low.</p>	<p>In the Marconi Peninsula, other projects are expected to largely be constructed on developed land or other disturbed or edge habitats, with low potential for SAR and SOCC. There would therefore not likely be any or substantive cumulative losses of natural terrestrial habitat.</p> <p>Indirect effects of added dust generation are likely to increase locally with the project expansions. No information on SAR and SOCC are available for the locations of these proposed potentially overlapping projects.</p>	<p>A forest fire caused by the Kami Terminal has the potential to burn forested habitat that has some potential to harbor rare plant species. A small isolated population of such plants, if present, could be lost as a result of such an event, depending on the species. The significance of such an event depends largely on the status, population size, range and extent of species, if present.</p> <p>No SAR and SOCC are likely present in the vicinity of the proposed railway loop in the event of a train derailment.</p>	<p><i>Species at Risk Act</i> <i>Québec Act</i> respecting Threatened or Vulnerable Species</p>	<p>Comments and concerns related to potential effects on species at risk.</p>	<p>Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.</p>

13.8 Historic and Cultural Resources

Historic and Cultural Resources were selected as a VEC because they contain the only physical information on Aboriginal lifeways prior to the arrival of Europeans in North America and are vital in helping to understand the history, land-use, and architecture of a region. They can also provide insight into the interactions that took place between different cultural groups and the connections each had with the environment in which they lived. Historic and Cultural Resources included archaeological sites and materials; cultural/spiritual sites; paleontological sites and materials; and architectural resources. There is no potential for paleontological resources and no registered architectural sites at the Port site. Therefore, the effects assessment focuses on archaeological resources.

The detailed assessment of the effects of the Kami Terminal on Historic and Cultural Resources is presented in Chapter 21 of this EIS.

Issues

Historic and Cultural Resources, while not identified as an area of concern by the general public and stakeholders for the PDA, have been discussed in detail in the EIS Guidelines. No issues were raised by stakeholders, Aboriginal groups or the public during the consultation process.

Methodology

The LSA for Historic and Cultural Resources includes the PDA plus a 200m buffer to account for offsite indirect effects (Figure 13.14). An archaeological potential study was carried out for the Kami Terminal within the LSA and eight zones of archaeological potential were identified. These were later surveyed, however no archaeological sites were found. This archaeological survey report has not yet been published. The RSA for Historic and Cultural Resources takes into account the overall cultural history of the region in which the PDA is located and is based on previously investigated locations in the general area of Sept-Îles. The RSA includes the City of Sept-Îles and Uashat Reserve as well as the islands in the baie des Sept-Îles and the area around Gallix where archaeological sites have previously been identified. Figure 13.15 presents the Historic and Cultural Resources RSA.

Administrative boundaries for Historic and Cultural Resources are determined by the Québec *ministère de la Culture, des Communications et de la Condition féminine* (MCCCF) who oversees and applies the *Cultural Property Act* (2006). The Act protects cultural property defined as “a work of art, a historic property, a historic monument or site, an archaeological property or site or a cinematographic, audiovisual, photographic, radio or television work” (*Éditeur officiel du Québec*, 2006, Ch.I, S.1). In October 2012, this Act will be replaced by the *Cultural Heritage Act* (2011), which will protect archaeological and cultural/spiritual and architectural resources, which may be considered implicitly as cultural heritage, depending on their ethnological or scientific value. Both acts require that a permit be obtained to perform archaeological assessment or excavations and that anyone who discovers archaeological resource either during archaeological excavations or fortuitously thereafter, must report the find to the Minister without delay (s.74). The monitoring of demands on Community Services and

Infrastructure is the responsibility of the relevant government departments and agencies, as part of their normal planning processes.

The Historic and Cultural Resources VEC presents a history of human settlement in the region and landform features suggesting a high potential for archaeological resources are presented. Information is also presented on previously identified archaeological sites within the RSA.

Existing Environment

Archaeological sites and materials have been identified throughout the majority of Québec including the Côte-Nord region and Sept-Îles. The inventory of archaeological resources for Québec reports the existence of 14 sites of archaeological significance within the RSA. These sites are located on the other side of the baie des Sept-Îles from the PDA along the coast. Several of these sites are related to the pre-Contact Aboriginal occupations of indeterminate date. Euro-Canadian historical and cultural resources dating between 1608 and 1950 have also been discovered there. There are no paleontological resources in the general area of Sept-Îles.

Effects Assessment

Effects on Historic and Cultural Resources, should they occur, are most likely to arise during construction in the case of a fortuitous discovery of archaeological resources within the LSA. Potential effects between the Kami Terminal and Historic and Cultural Resources in Sept-Îles during construction will be localized to the site and will be associated primarily with the disturbance of ground cover and soil during forest clearing and site preparation.

The Kami Terminal effects on Historic and Cultural Resources that may occur during construction are expected to be not significant as Alderon will follow protocol related to the discovery of archaeological resources as established by MCCCCF, which will result in the excavation and preservation of valuable resources or the alteration of plans in order to protect areas with a high concentration of archaeological resources.

The operations and maintenance and decommissioning / reclamation phases will not affect previously undisturbed ground and as a result is not expected to have an effect on Historic and Cultural Resources.

Avoidance and Mitigation Measures

Avoidance and mitigation measures will be specified in the development of the EPP for the Kami Terminal and implemented following the plan in the event of an unexpected discovery.

Figure 13.14 Historic and Cultural Resources Local Study Area

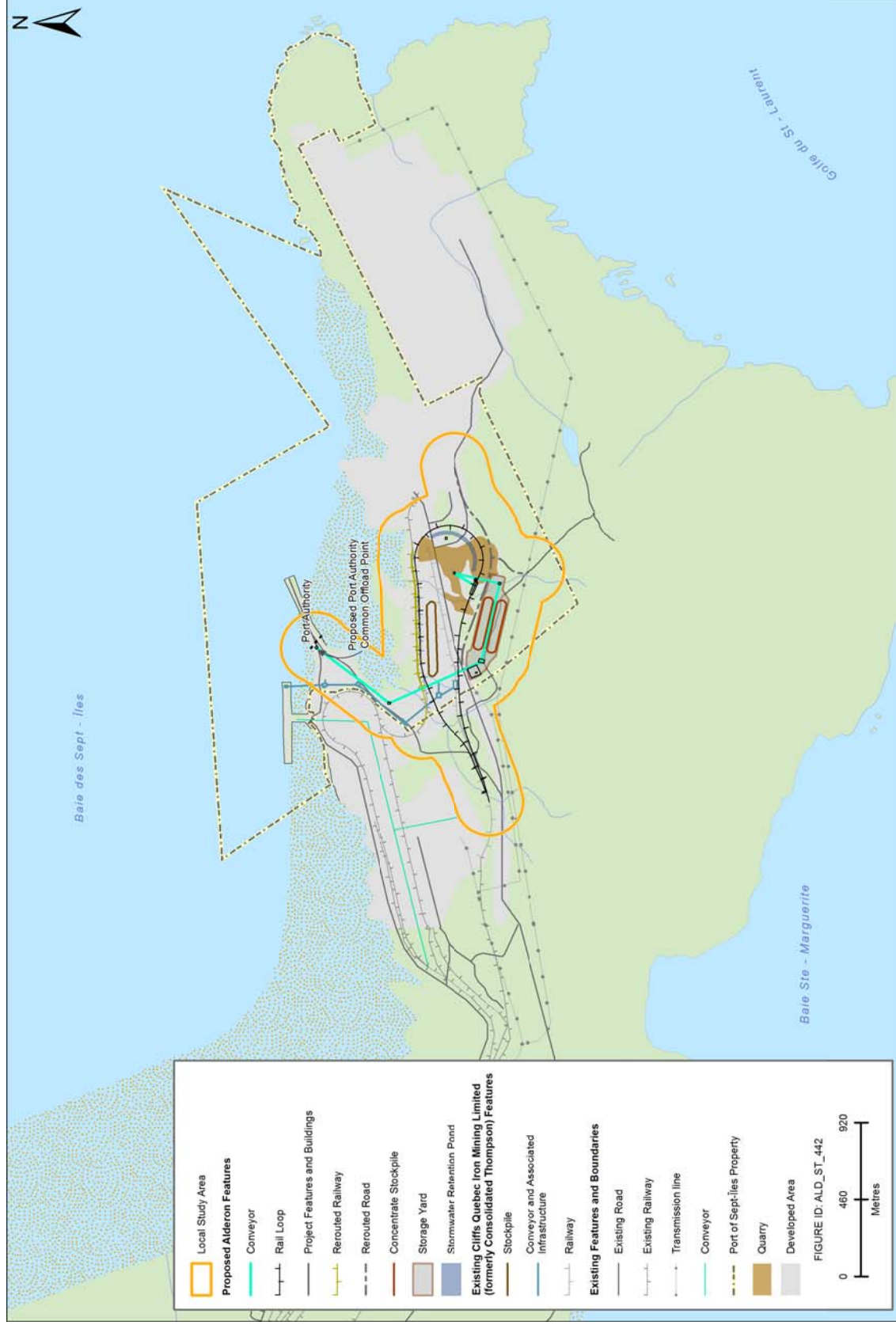
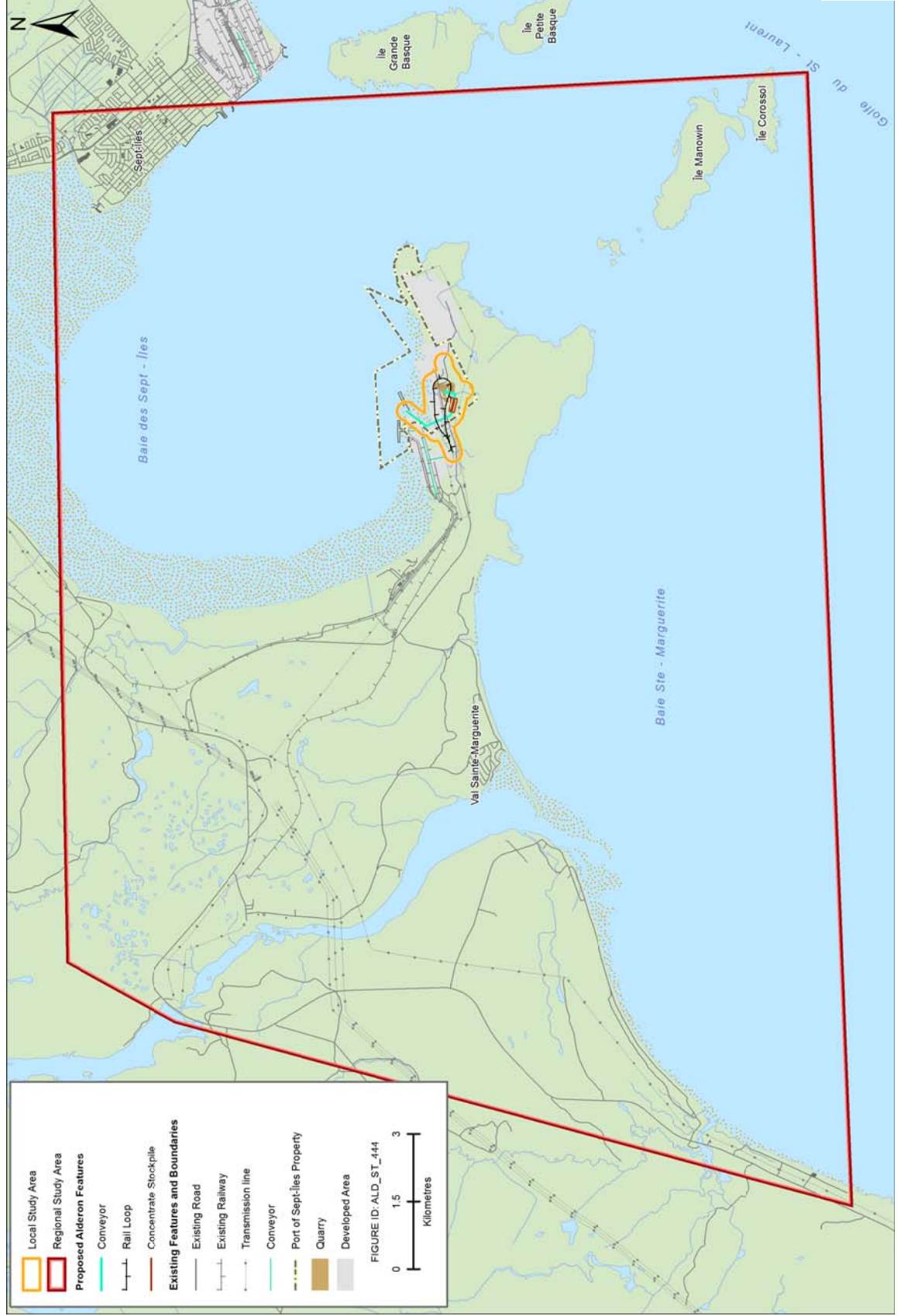


Figure 13.15 Historic and Cultural Resources Regional Study Area



Cumulative Effects Assessment

Cumulative effects of the Kami Terminal with existing and proposed projects in the area around the Pointe-Noire Terminal are not expected to affect Historic and Cultural Resources, which for this Kami Terminal only includes archaeological resources. The cumulative effects are predicted to be nil as all projects are required to respect the current *Cultural Property Act* (2006) and the *Cultural Heritage Act* (2011), which will come into effect in October, 2012. These acts state that if any archaeological resources are discovered during Kami Terminal construction or at any other time, all activities must cease and an assessment of the resources and permit to excavate the archaeological site must be obtained from the MCCCCF. This regulated protocol is designed to protect and preserve archaeological resources as part of Québec's cultural heritage.

Accidents and Malfunctions

Trail Derailment

A train derailment presents a low potential to affect Historic and Cultural Resources by disturbing previously unknown archaeological resources, particularly during clean-up and soil remediation activities. The residual adverse environmental effects are predicted to be not significant because environmental effects would be of low magnitude and geographically restricted to the site. The geographic extent of the environmental effects will be local; however they may overlap with zones of archeological potential. The likelihood of such a malfunction affecting archeological resources is low since the zone will be surveyed prior to construction and any resources will likely be removed by that point.

Forest Fire

A forest fire could have a significant effect on Historic and Cultural Resources in the vicinity of the Kami Terminal site. Forest fires could cause permanent disturbance to archaeological resources and a large forest fire could be regional in scale, thus extending to areas that may not have been previously disturbed. In this case, it is possible that Historical and Cultural Resources could be disturbed or destroyed by the fire itself or during subsequent clean-up. Working with municipal fire services, Alderon will put in place fire prevention and response plan to minimize the magnitude and extent of potential forest fires. The residual adverse environmental effects of a forest fire are predicted to be significant owing to the potential high magnitude and potential regional geographic extent of the environmental effects. However, with implementation of a forest fire prevention and response plan, forest fires are unlikely to occur and are likely to be contained to the Kami Terminal site.

Stormwater Retention Pond Breach

The residual adverse environmental effects of a breach or overflow at the stormwater retention pond on Historic and Cultural Resources during operation and maintenance are predicted to be not significant because environmental effects would be of low magnitude and local in their geographical extent. Effects are predicted to be largely or entirely limited to low-potential terrain.

Significance of Residual Adverse Environmental Effects

A significant adverse residual environmental effect on the Historic and Cultural Resources may be defined as an environmental effect related to the Kami Terminal that results in the loss or disturbance of a known Historic or Cultural Resource without the appropriate documentation, or salvage and retrieval of the material culture and the information it contains, and without prior approval from the regulatory agency.

An adverse environmental effect that does not meet the above definition is rated as not significant.

The significance of residual adverse effects for Historic and Cultural Resources is assessed in Chapter 21. Although significant residual adverse effects may occur in some instances of accidents and malfunctions occurring at a regional scale, the likelihood of these events occurring is low. The Kami Terminal is not likely to result in significant adverse environmental effects under normal operating conditions.

A summary of the findings of the EIS are presented in Table 13.5. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Historic and Cultural Resources VEC does result in a potential relationship to an Aboriginal group's potential or established Aboriginal and Treaty rights. There is no evidence of Historic and Cultural Resources in the Kami Terminal area, and therefore no significant adverse effects on an Aboriginal group's exercise of a potential or established Aboriginal right.

Table 13.5 Summary of the Findings of the Environmental Impact Statement – Historic and Cultural Resources

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Proponent
Disturbance or loss of archaeological sites or materials	Development and Implementation of EPP in the event of an unexpected discovery	<ul style="list-style-type: none"> Adhere to all federal and provincial archaeological legislation. On-site monitoring for compliance with the EPP. 	Not likely to occur because there are no known sites, and mitigation procedures will minimize the potential for presently unknown sites to be inadvertently disturbed or lost.	All development activities in the province are subject to the Québec Cultural Property Act, and if carried out after October 2012, to the Cultural Heritage Act. As such, any new or on-going projects will be governed by routine application of the legislation related to archaeological resources, which serve to minimize any potential adverse effects on Historic and Cultural Resources.	<p>Unidentified sites may be discovered and adversely affected during subsequent clean-up operations after spill (train derailment) involving earth-moving equipment and consequent ground effects.</p> <p>Forest fires would have an adverse effect on Resources located in the upper soil horizon and leaf litter.</p> <p>The effects of a stormwater retention pond breach on Historic and Cultural Resources would be low in magnitude and local in geographic extent.</p> <p>With implementation of a prevention plan and ERP, the effects of an accident or malfunction are unlikely to occur and are likely to be contained.</p>	Cultural Heritage Act	None reported	Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.

13.9 Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons

The Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is defined, as per the EIS Guidelines issued for the Project by the provincial and federal governments, as the “use of lands and resources of specific social, cultural or spiritual value to Aboriginal communities of Labrador and Québec, with a focus on current direct and indirect use by Aboriginal people for traditional purposes (i.e., fishing, hunting, and gathering)”.

A number of Aboriginal groups undertake traditional land and resource use activities in areas of Québec and Labrador. The land claims of these groups are at varying stages of progress, negotiation and settlement. The Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, and the potential effects of the Kami Terminal on these activities, are a key aspect and consideration in the EA, given the overall importance of these elements to the socioeconomic environment. This is further reflected in the *CEAA* definition of “environmental effect”, which specifically includes: “(a) any change that the project may cause in the environment, ...[and] (b) any effect of any change referred to in paragraph (a) on ... (iii) the current use of lands and resources for traditional purposes by aboriginal persons...”.

As reflected in the title of this VEC, the associated environmental effects assessment focuses on the *current* (existing) use of land and resources by Aboriginal persons for traditional persons, and potential changes to these activities that may occur (either directly or indirectly) as a result of the Kami Terminal.

Issues

Alderon has been making significant efforts to engage with each of the relevant Aboriginal communities and organizations in Québec and Labrador, to attempt to gather and provide information on current land and resource use, Aboriginal knowledge and community issues and concerns regarding the Kami Terminal and its potential environmental effects, for consideration and incorporation into the EIS. Where Aboriginal groups have chosen to participate in such initiatives, the information and insights obtained through these processes has been extremely valuable and were considered and incorporated throughout the EA. In other cases, the EIS uses existing and publicly available information.

During the consultation process, an issue was raised related to this VEC concerning interactions of the Kami Terminal with existing Aboriginal Rights or Title. The Innu of Uashat mak Mani-Utenam identified that they should be engaged on the Project as a whole, and not only the components at the Port of Sept-Îles. Alderon has been engaged with Aboriginal groups on an ongoing basis on the Project as a whole (mine site, port infrastructure). Alderon will continue to engage Aboriginal groups throughout the life of the Project.

Methodology

The assessment of potential Kami Terminal effects on this VEC included a general approach of “overlying” the proposed Kami Terminal components and activities (Chapter 2) with what is known about the nature and distribution of current Aboriginal land and resource use activities, in order to identify any potential interactions and any resulting effects on this VEC.

The PDA is the area represented by the physical Kami Terminal footprint as defined in the Project Description (Chapter 2). The LSA is defined as a larger area centered on the PDA that encompasses all Kami Terminal components and activities and the potential “zones of influence” of any disturbances related to the Kami Terminal. The RSA is generally defined as the overall geographic extent of traditional land and resource use activities by the various Québec and Labrador Aboriginal groups that are being considered in this assessment. The RSA is therefore somewhat “group-specific”, although for general analytical purposes it has been defined to fully encompass the overall known distribution of these activities by all of the groups under consideration. Both the LSA and RSA are shown in Figure 13.16.

Existing Environment

Traditional land and resource use activities have and continue to comprise an important and integral part of the lives and cultures of Aboriginal persons and communities, with a number of Aboriginal groups undertaking traditional land and resource use activities in areas of the Québec North Shore and/or in Western Labrador.

The Innu of Uashat mak Mani-Utenam share their ancestral territory with the Innu of Matimekush-Lac John, which stretches from the Québec Lower North Shore to north of Matimekush-Lac John, encompassing much of Western Labrador and Eastern Québec. Existing and available information on current land and resource use by these groups indicates that the Innu of Uashat Mak Mani-Utenam continue to use their traditional territory, especially the southern portions and other areas that are accessible by railway and road, and the Matimekush - Lac John Innu also primarily use the areas surrounding their communities and well to the north of the Kami Terminal areas.

Figure 13.16 Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons Local and Regional Study Areas



The site upon which Alderon's proposed Kami Terminal at the Port of Sept-Îles, Québec will be constructed and operated has been the location of on-going industrial activity for several decades. As a result of this significant and long-standing industrial activity within and surrounding the proposed Kami Terminal area, traditional land and resource use activities do not occur in this area. There are also no known sites of historical, cultural or spiritual importance in the area.

Alderon is likewise not aware of any future, planned land and resource uses that may occur within or near the Kami Terminal area and which may therefore be affected, given the existing industrial designation of the lands within and surrounding the Kami Terminal site.

Effects Assessment

Land and resource use activities may be affected by development projects both directly and indirectly. Direct effects occur where established activities are disturbed or otherwise interfered with by project-related components or activities during their construction or operations phases (e.g., reduced access to harvesting areas; avoidance or reduced use of areas due to project-related disturbances such as increased human presence, noise, dust; increased competition for land and resources with other local residents, etc.). Indirect effects to such activities can also occur when projects adversely affect vegetation, fish or wildlife, where such biophysical effects reduce the availability and/or quality of such resources and thus, their use and enjoyment for traditional purposes. In both cases, these direct and/or indirect effects may translate into a decrease in the overall quality and cultural value of these traditional activities by Aboriginal persons and communities.

The environmental effects assessment for the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons VEC is therefore focused on the following potential environmental effects:

- Change in Activity Distribution (Location and/or Timing);
- Change in Overall Activity Levels; and
- Resulting Change in Overall Quality and Cultural Value of the Activity

In addition to the direct footprint of the Kami Terminal, the construction phase of the Kami Terminal will result in disturbances such as those associated with air emissions (including dust and construction equipment exhausts), noise, light, vibrations, possible sedimentation of watercourses, the visibility of Kami Terminal equipment and physical works, and other potential emissions and related disturbances. Detailed modeling and analysis of the nature, magnitude and spatial and temporal distribution of the potential air and water emissions, noise, vibration and light that may be associated with the Kami Terminal has been presented in other chapters.

Again, the area upon which Alderon's proposed Kami Terminal at the Port of Sept-Îles will be constructed and operated has been the site of on-going industrial activity for several decades. The proposed port Kami Terminal will be located wholly on the Port of Sept-Îles lands, located in the Sept-Rivières Regional County and within the municipality of Sept-Îles, Québec. The PDA is

located in an industrial zone designated for Large-scale Industry, which covers the entire Marconi Peninsula, and is used extensively for these purposes at present. The proposed Kami Terminal will be located on the available land area that has been allocated to Alderon by the Port Authority, immediately within and adjacent to a number of existing industrial facilities and on-going activities, which is private property that is legally excluded from other uses.

As a result of this significant and long-standing industrial activity within the PDA and LSA, traditional land and resource use activities do not (and cannot) occur within the PDA or LSA. There are also no known sites of historical, cultural or spiritual importance to either group within these areas. The potential implications of the Kami Terminal for vegetation, fish, wildlife and other resources have also been assessed in detail in other VEC sections, which concluded that the Kami Terminal will not likely cause significant adverse environmental effects on any aspect of the biophysical environment. This, in combination with the fact that key resources (such as caribou) are not found in the area and/or likely to be affected, as well as the resulting and above described lack of Aboriginal land and resource use in the PDA and LSA at present, will mean that there is no potential for consequent effects on traditional use of lands or resources.

Therefore, and based on the information available to Alderon for use in this EA, the Kami Terminal is not likely to have any effect upon the distribution (location or timing) of the current use of land and resources for traditional purposes by Aboriginal persons.

In addition to the location and availability of land and resources for such activities and the geographic extent of disturbances related to the Kami Terminal, traditional activity levels may also be affected by any overall decrease in the amount of time available for undertaking these by Aboriginal persons and communities. The increasing participation of Aboriginal people in development projects and other aspects of the wage economy can, at times, present challenges for their ability and availability to participate in certain traditional activities. On the one hand, the work locations and times (schedules and rotations) that are often associated with the construction and operations phases of large scale resource development projects often result in extended periods away from the community, during which work commitments may interference with traditional activities and other cultural pursuits. On the other, participation in such activities may actually be facilitated and enhanced by the employment income that is associated with project-related work, which can aid in the purchase of required equipment and supplies.

In its on-going discussions with Aboriginal groups related to the Kami Terminal, Alderon will continue to assess potential time-related issues which may affect the ability of Aboriginal employees to participate in traditional activities, as well as exploring possible measures to address this.

As the Kami Terminal is not likely to adversely affect the location or timing of the current use of land and resources for traditional purposes by Aboriginal persons, nor the overall level of participation in such activities by Aboriginal persons and groups, no associated and consequent decrease in the overall quality or underlying cultural value of the current use of land and resources for traditional purposes by Aboriginal persons is therefore anticipated during either phase of the Kami Terminal.

Avoidance and Mitigation Measures

Some of the key measures that have been and/or will be implemented by Alderon to avoid or reduce any adverse effects to this VEC throughout Kami Terminal planning and implementation include:

- Siting of Kami Terminal components and activities within existing industrial area / zone; and,
- On-going engagement with Aboriginal communities and organizations.

Cumulative Effects Assessment

As a result of its location within an existing industrial area which is not used for such activities at present, the Kami Terminal not likely to adversely affect the location or timing of the current use of land and resources for traditional purposes by Aboriginal persons, nor the overall type and level of such activities by Aboriginal persons or groups. No associated and consequent decrease in the overall quality or underlying cultural value of the current use of land and resources for traditional purposes by Aboriginal persons is therefore anticipated during either phase of the Kami Terminal. The various mitigation measures outlined above and throughout this EIS will serve to even further avoid or reduce the potential for any such adverse effects. The proposed Kami Terminal would therefore not contribute to any cumulative effects to this VEC within the RSA.

The Kami Terminal will not likely result in significant adverse cumulative effects in combination with other projects and activities that have been or will be carried out.

Accidents and Malfunctions

Possible accidental events or malfunctions that may result in effects on this VEC include a fire or the accidental release of fuels, chemicals or other substances into the environment (such as through an accidental spill, train derailment, etc). Either of these events could potentially occur during the construction or operations phases of the Kami Terminal, the potential environmental effects of which would clearly depend upon the nature, magnitude, location and duration of the event. Alderon has and will develop and implement comprehensive Environmental Protection and Emergency Response Plans for the various phases of the Kami Terminal. No effects on Aboriginal communities or their land and resource use activities are anticipated.

Significance of Residual Adverse Environmental Effects

A significant adverse effect on the *Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons* is defined as one which would result in a change in the current spatial and temporal distribution and/or an overall decrease in activity levels by those Aboriginal communities who currently undertake such activities within the RSA, resulting in a reduction in the overall cultural value of such activities for the community over the long-term.

The Kami Terminal is not likely to interact with, or adversely affect, the location or timing of, the current use of land and resources for traditional purposes by Aboriginal persons, nor the overall type and level of such activities by Aboriginal persons and groups. No associated decrease in the overall quality or underlying cultural value of the current use of land and resources for traditional purposes by Aboriginal persons is therefore anticipated as a result of either phase of the Kami Terminal.

The Kami Terminal is therefore not likely to result in significant adverse effects on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, either in and of itself or in combination with other projects and activities within the RSA.

A summary of the findings of the EIS is presented in Table 13.6. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Current Use of Lands and Resources for Traditional Purposes VEC does result in a potential relationship to an Aboriginal group's potential or established Aboriginal and Treaty rights. There is no evidence of current land and resource use for traditional purposes in the Kami Terminal area, and therefore no significant adverse effects on an Aboriginal group's exercise of a potential or established Aboriginal right.

Table 13.6 Summary of the Findings of the Environmental Impact Statement – Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10 and 15)	Commitments made by Proponent
Change in Activity Distribution (Location and/or Timing)	<ul style="list-style-type: none"> The design and siting of the Kami Terminal (concentrate unloading, stacking, storage, and reclaiming facilities and rail loop) within an existing industrial area. On-going engagement with Aboriginal communities and organizations. 	Any follow-up and monitoring programs that have been identified and proposed for other VECs (particularly for the biophysical environment) will be indirectly applicable to land and resource use.	Aboriginal persons do not undertake traditional land and resource use activities within the PDA or LSA; as a result, the Kami Terminal is not likely to adversely affect the location or timing of the current use of land and resources for traditional purposes by Aboriginal persons.	The proposed Kami Terminal is not likely to interact with or affect the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, or therefore, to result in / contribute to any cumulative effects on this VEC.	The VEC may be affected by such accidental events as a fire or a spill / release of hazardous materials (depending upon the nature, magnitude, location and duration of the event). Development and implementation of the Kami Terminal EPP(s) and Emergency Response Plan.	In most cases there are no general or generic regulatory standards or guidelines that are designed to avoid or reduce possible effects on land and resource use.	Comments and concerns related to: <ul style="list-style-type: none"> Possible effects on hunting and fishing activities resulting from changes in wildlife and fish populations and habitats; Potential contamination of country foods or drinking water supplies; Changes in the nature, distribution and timing of traditional activities due to possible restricted access to the Kami Terminal area, or as a result of other Kami Terminal-related disturbances (e.g., noise, air emissions, etc); Modification of any existing use of the Kami Terminal area as a result of diminished air quality, noise and other disturbances; and The presence (and possible implications) of unresolved Aboriginal land claims in the region. 	Mitigation measures outlined above. On-going engagement with Aboriginal communities and organizations.
Change in Overall Activity Levels			The Kami Terminal is likewise not expected to adversely affect the overall type and level of such activities by Aboriginal persons and groups.					
Resulting Change in Overall Quality and Cultural Value of the Activity			No associated and consequent decrease in the overall quality or underlying cultural value of the current use of land and resources for traditional purposes by Aboriginal persons is therefore anticipated.					

13.10 Other Current Use of Lands and Resources

Other Current Use of Lands and Resources is defined as any current (i.e., 1990 to present) land use or harvesting, including industrial uses, undertaken by non-Aboriginal persons or communities in Sept-Îles, Québec. In particular, the analysis of this VEC focuses on current use of lands and resources in areas where direct physical disturbance is predicted to occur as a result of Kami Terminal activities

A detailed characterization of baseline conditions related to land use types is provided in the Socio-economics Baseline Study (Appendix H, Stantec 2012d). The detailed assessment of the effects of the Kami Terminal on Other Current Use of Lands and Resources is presented in Chapter 23 of this EIS.

Issues

One issue related to Other Current Use of Lands and Resources was identified three times by participants: the visual aesthetics of the port site, particularly in relation to the location of the stockpile. As a result of this issue, Alderon considered the views from the other side of the baie des Sept-Îles and determined that no impacts on visual aesthetics are anticipated.

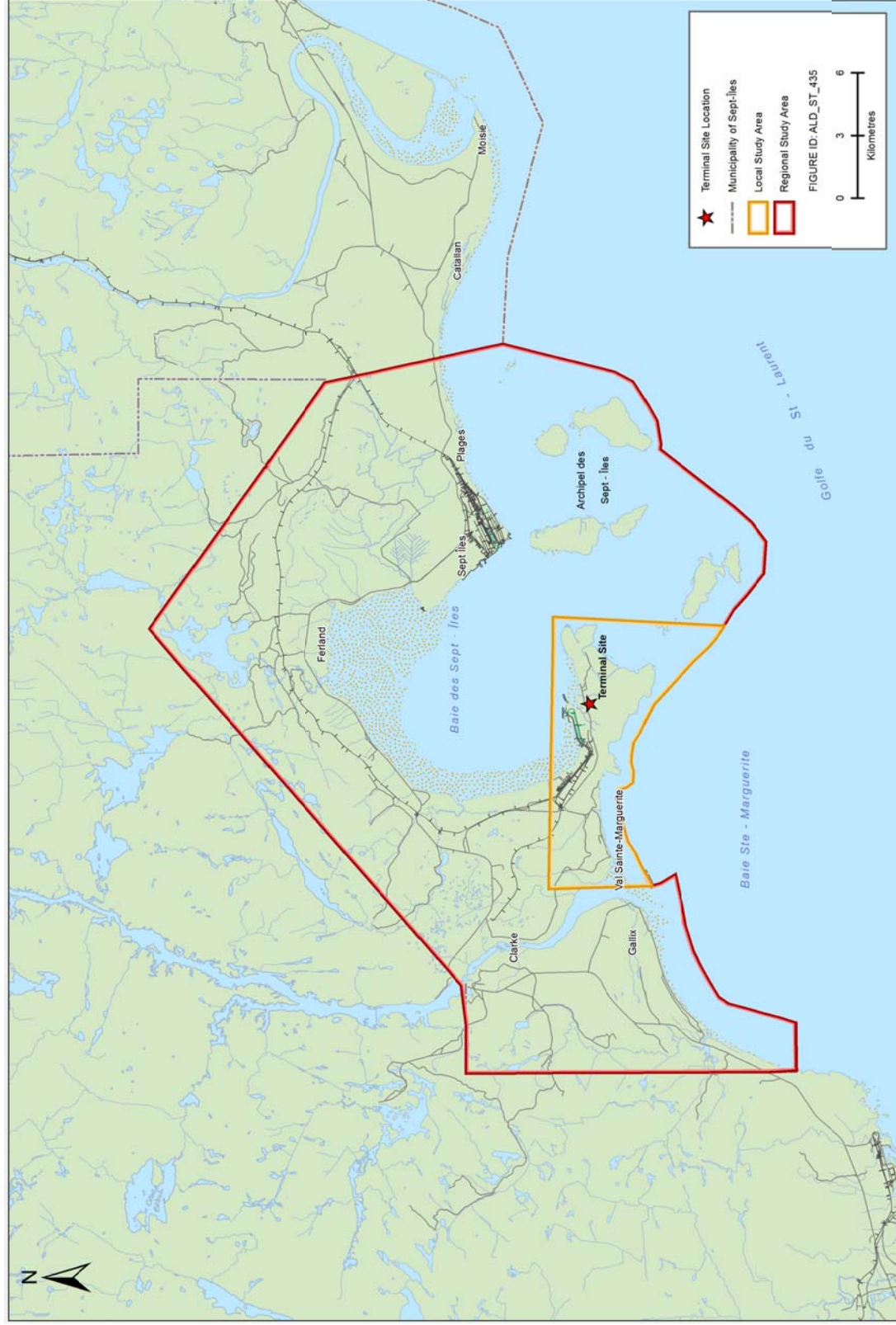
Methodology

Other Current Use of Lands and Resources is defined as a use of lands and resources related to the Kami Terminal infrastructure development within the Pointe-Noire Terminal, including industrial uses, with the Kami Terminal property boundaries and along the right-of-way of associated infrastructure. It was selected as a VEC due to the potential for Kami Terminal-VEC interactions that could result from the exclusion / promotion of industrial development at the site or from interactions with residential and recreational property at a certain distance from the site. Other Current Use of Land and Resources is discussed in detail in the Project Guidelines.

The LSA includes the PDA for the Kami Terminal infrastructure that is within the Pointe-Noire Terminal in its entirety and surrounding industrial development zones on the Marconi Peninsula, the low density residential and recreational area of Val Sainte-Marguerite and the low density residential areas located close to the railway tracks around the baie des Sept-Îles. The LSA is shown in Figure 13.17. The RSA takes into account the area of influence limited to the City of Sept-Îles beyond which no interactions between the Kami Terminal and this VEC are anticipated.

Administrative boundaries for industrial development at the Pointe-Noire Terminal fall under the purview of the Sept-Îles Port Authority, the City of Sept-Îles and the MRC de Sept-Rivières. The preservation of the value of residential and recreational property in the Val Sainte-Marguerite area as well as the low density residential areas located close to the railway tracks around the baie des Sept-Îles comes under the responsibility of the City of Sept-Îles and the MRC de Sept-Rivières.

Figure 13.17 Other Current Use of Lands and Resources Local and Regional Study Areas



Existing Environment

In accordance with the city of Sept-Îles Land Use Plan, the Kami Terminal site is located in an industrial zone, designated for large scale industry. The closest residential and recreational land uses to the Kami Terminal site are low density residential and recreational Val Sainte-Marguerite area located at the mouth of the rivière Sainte-Marguerite at a distance of about 1.5 km from the PDA, followed by low density residential areas around the baie des Sept Îles.

Effects Assessment

The environmental assessment of Other Current Use of Lands and Resources is focused on changes to industrial development and changes to residential and recreational property. Assessment of effects related to the Kami Terminal on industrial development considered activities that would lead to the exclusion or promotion of industrial activity at the port. Effects to residential and recreational property were considered in terms of the effects of potential changes in air quality, noise, vibrations and light quality. Potential Kami Terminal-VEC interactions for these two effects are associated with the two-year Kami Terminal construction phase, and the operations and maintenance phase. Kami Terminal-related changes to viewscales were considered to be not significant given the visibility of the proposed installations, their distinguishability from existing infrastructures at the site, and the distance of vantage points from the view subject. As such no further assessment was conducted for viewscales.

Potential effects between the Kami Terminal and industrial development during the construction phase will be associated primarily with the following Kami Terminal activities:

- Realignment of the access road and underground water main; and
- Stockpiling of rocks resulting from removal of overburden.

These Kami Terminal activities have the potential to affect industrial activities at the Aluminerie Alouette aluminum smelter located to the east of the PDA on the Marconi Peninsula. To prevent these possibilities, realignment and stockpiling activities will be minimized through appropriate site planning.

Potential effects of the Kami Terminal on residential and recreational property in the LSA during the construction phase will be associated primarily with the:

- Noise and vibrations from blasting rock;
- Noise and vibrations use of heavy machinery; and
- Lighting of construction area.

During the operations phase, residential and recreational property may potentially be affected by:

- Air, noise, vibrations and light emissions from train traffic in low density residential areas around the baie des Sept-Îles;
- Air and noise emissions at each transfer point; and,
- Lighting at facilities.

Due to their proximity to the PDA and railway, low-density residential areas along the baie des Sept-Îles will be the primary receptor for environmental effects associated with the Kami Terminal, especially in terms of noise and lighting. These residences are located at a sufficient distance to not be affected by vibrations associated with the construction and operations phases.

Construction of the rail loop and storage of the concentrate in stockpiles will result in changes to the viewscape. Lighting used in construction and operations and maintenance phases will also be visible from vantage points around baie des Sept-Îles. The effect, however, will be minimal given the resemblance of the Kami Terminal to existing industrial infrastructures at the Pointe-Noire Terminal site and the distance between the vantage points and the viewing subject.

Avoidance and Mitigation Measures

A number of mitigation measures will be put in place to limit these environmental effects on residential and recreational properties within the LSA, including:

- Proper muffler installation;
- Comprehensive vehicle and machinery maintenance program;
- Enforceable low-speed standards on-site;
- Blast design plans;
- Use of full horizontal cut off light fixtures;
- Locate lateral lighting fixtures on south side of facility;
- Direct lateral lighting away from the baie des Sept-Îles;
- Enclose conveyor transfer points; and,
- Vegetation buffers.

The mitigation measure to minimize the Kami Terminal effects on industrial development is:

- Realignment of the access road and water main and stockpile rocks to minimize effects on the Aluminerie Alouette aluminum smelter.

Cumulative Effects Assessment

Potential cumulative effects on Other Current Use of Lands and Resources may result from the interaction between the Kami Terminal and the ongoing and reasonably foreseeable future large-scale industrial, mining and infrastructure projects at the Port of Sept-Îles (as per Section 4.8 of the EIS Guidelines) are likely to overlap in space.

Due to its distance from the Port site, no overlap is expected for effects resulting from the Second Port-Cartier Pellet Plant. Increases in air emissions and noise are anticipated for construction activities associated with the Pointe-Noire Port Expansion, CFA and QNS&L railway upgrades, Aluminerie Alouette aluminum smelter expansion, Bloom Pointe-Noire Terminal Expansion (Cliffs Natural Resources) and Arnaud Apatite-Magnetite Mine. Additionally, increased air emissions and noise levels are expected to result from the operations of the Arnaud Apatite-Magnetite Mine.

In none of the cases are cumulative effects anticipated on other industrial activities in the vicinity of the Port. Potential cumulative effects may, however, create disturbances for residential and recreational users in the Val Sainte-Marguerite area, with the exception of CFA and QNS&L railway upgrades, which may result in potential air emission and noise level disturbances to residential and recreational property users around the baie des Sept-Îles. The CFA and QNS&L railway upgrades may also result in increased light emissions by increased rail traffic at night. This could potentially increase cumulative disturbances for residential and recreational property users in the baie des Sept-Îles. Nonetheless, with proposed mitigation measures, potential cumulative effects will likely not surpass baseline measurements.

Accidents and Malfunctions

Trail Derailment

A train derailment could affect Other Current Use of Lands and Resources. Industrial activities and residential or recreational uses in the vicinity of the Kami Terminal site could face interruptions, disruptions or disturbances as a result. The effects in this case are expected to be of short duration and could be managed to acceptable levels through standard operating practices and/or through the application of best management or codified practices such as immediate clean-up of the site, soil remediation and monitoring program to verify the success of soil remediation. Residential and recreational uses could be affected by noise and air emissions resulting from the derailment. Acoustic emissions would be sudden and large. There would also be subsequent emissions from the use of heavy machinery during the clean-up. These emissions would be similar in magnitude to those during construction and would last until completion of the clean-up.

Significance of Residual Adverse Environmental Effects

The criteria used to determine the significance of residual adverse environmental effects on Other Current Use of Lands and Resources are defined by interruptions, disruptions or disturbances to current or future lands or resources by Kami Terminal activities such that land

use activities are restricted or degraded or cannot continue at present levels. A significant residual adverse environmental effect on viewscales is one that results in a change in the view subject, a loss or change in vantage points, or a loss or narrowing of visual corridors.

With the implementation of commonly accepted avoidance and mitigation measures, overall effects resulting from construction and operation phases of the Kami Terminal as well as accidents and malfunctions are expected to be not significant. The predicted residual cumulative effects of all the projects under consideration on other industrial activities located in the PDA are considered to result in effects that are not significant. The predicted residual cumulative effects of all of the projects under consideration on residential and recreational property in the LSA are considered to result in effects that are not significant.

A summary of the findings of the EIS are presented in Table 13.7. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Other Current Use of Lands and Resources VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.7 Summary of the Findings of the Environmental Impact Statement – Other Current Use of Lands and Resources

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Proponent
Changes to industrial development	Realign access road and water main and stockpile rocks to minimize effects on the Aluminerie Alouette aluminum smelter.	None required.	The construction will required the realignment of an access road and water main connecting to the Aluminerie Alouette aluminum smelter. With mitigation measures, the effects on other industrial activities located in the vicinity are expected to be not significant. No constraints will be imposed on other industrial activities by operations and maintenance activities	No cumulative effects anticipated on other industrial activities in the vicinity.	Train derailment and forest fire could lead to interruptions, disruptions or disturbances on other industrial activities located in the vicinity of the Kami Terminal site. With prevention measures and emergency response procedures, the effects of Kami Terminal accidents are expected to be of short duration and to be managed to acceptable levels.		Comments and concerns related to visual effects of the port facilities, including stockpiles	Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.
Changes to residential and recreational property	<ul style="list-style-type: none"> • Proper muffler installation. • Comprehensive vehicle and machinery maintenance program. • Enforceable low-speed standards on-site. • Blast design plans • Use of full horizontal cut off light fixtures. • Locate lateral lighting fixtures on south side of facility. • Direct lateral lighting away from the baie des Sept-Îles. • Enclose conveyor transfer points. • Vegetation buffers. 	<ul style="list-style-type: none"> • Participate in air quality monitoring program initiated in Sept-Îles • Noise monitoring 	Anticipated increases of nuisances (dust, noise, vibrations, and light) related to Kami Terminal construction activities are expected to be small and of a short duration. During operation and maintenance, local and regional changes in air quality due to Kami Terminal-related emissions are not expected to be substantive. Measureable increases in sound pressure level will occur for some nearby sensitive receptors, but will not exceed Health Canada percent HA criteria. Lighting used in the operations phase could have different effects on residential and recreational land uses, depending on the type of lighting. However, with proper mitigation, these effects are predicted to be not significant.	With mitigation, noise and light emissions will amount to a negligible increase to nearby residential and recreational receptors.	Train derailment and forest fire could lead to interruptions, disruptions or disturbances for residential and recreational uses located at a certain distance from the Kami Terminal site. With prevention measures and emergency response procedures, the effects of Kami Terminal accidents are expected to be of short duration and to be managed to acceptable levels.		Comments and concerns related to visual effects of the port facilities, including stockpiles	Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.
Changes to viewscapes	None required		Considered not significant so no further assessment conducted.				Comments and concerns related to visual effects of the port facilities, including stockpiles	

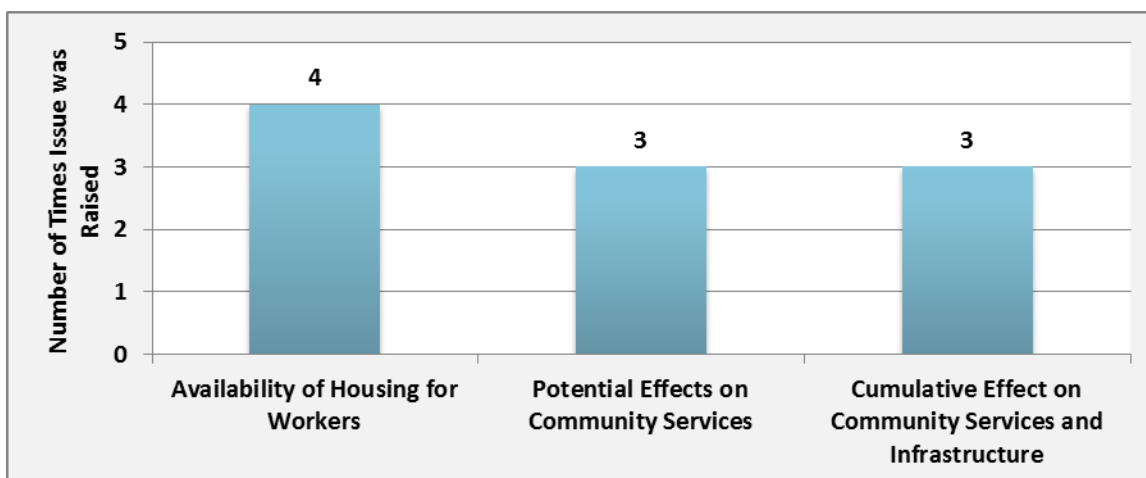
13.11 Community Services and Infrastructure

Community Services and Infrastructure was selected as a VEC due to potential Kami Terminal-VEC interactions that could result in reduced access to housing and increased traffic congestion in the City of Sept-Îles and in the surrounding MRC de Sept-Rivières. The detailed assessment of the effects of the Kami Terminal on Community Services and Infrastructure is presented in Chapter 24 of this EIS. A detailed characterization of baseline conditions related to community services and infrastructure is provided in the Socio-economics Baseline Study (Appendix H, Stantec 2012d).

Issues

During public consultations, stakeholders raised concerns around Community Services and Infrastructure. The frequency of issues identified by participants relating to community services and infrastructure is shown in Figure 13.18. Participants raised the issue of housing for the Kami Terminal workforce, particularly housing during the construction phase. Participants also raised concerns about community services and identified that access to the service industry may be an issue during the construction of the port facilities. In response to these issues, Alderon will engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed.

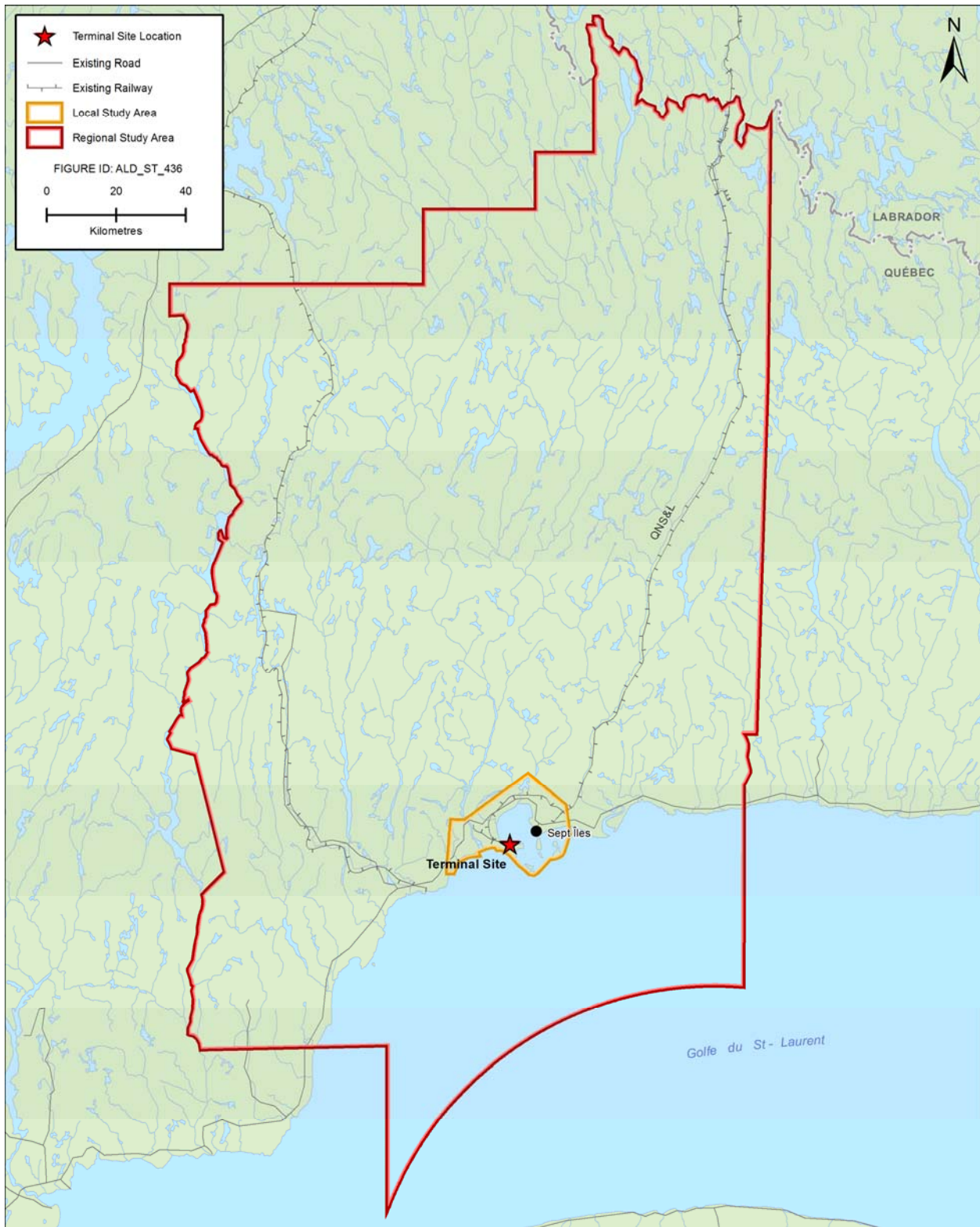
Figure 13.18 Frequency of Issues Raised Related to Community Services and Infrastructure



Methodology

The LSA for this VEC encompasses the PDA for the Kami Terminal infrastructure within the Pointe-Noire Terminal as well as the city of Sept-Îles as a whole. The RSA is limited to the MRC de Sept-Rivières. Both the LSA and RSA are shown in Figure 13.19.

Figure 13.19 Community Services and Infrastructure Local Study Area and Regional Study Area



Community services and infrastructure including housing fall under the purview of the City of Sept-Îles and of the MRC de Sept-Rivières. The management of health and social services is the responsibility of the *ministère de la Santé et des Services Sociaux du Québec* and is delegated to regional services. The prevention and management of traffic congestion on Highway 138 in the Sept-Îles Region is the responsibility of the municipal police forces of Sept-Îles and Port-Cartier, of the *Sûreté du Québec*, and of the *ministère des Transports du Québec*.

Existing Environment

Information on regional community services and infrastructure as well as related development trends in the MRC de Sept-Rivières is presented in Section 24.5. Provided information includes regional housing conditions and trends, regional public services and infrastructure, community services in Innu communities, as well as general infrastructure in Sept-Îles.

Effects Assessment

Potential effects between the Kami Terminal and Effects on Community Services and Infrastructure are only expected in association with the construction phase since the operations and decommissioning phases will not have large staffing requirements. An influx of up to 300 workers is expected for a period of two years for the construction of the Kami Terminal, including 50 workers for a period of two years for the construction by CFA of rail infrastructure in association with the Kami Terminal. A large part of the workforce required for construction will have to be recruited from outside the region due to the limited availability of qualified workers in the Sept-Îles area. The arrival of a number of workers from outside the region is expected to contribute to the ongoing scarcity of available housing and to put additional upward pressure on housing costs in the region. The transportation of personnel associated with this influx of workers could also worsen traffic congestion on Highway 138 between the downtown area of Sept-Îles and Pointe-Noire Terminal.

Avoidance and Mitigation Measures

To minimize the effects of Kami Terminal construction activities in the Pointe-Noire Terminal area on regional housing supply, Alderon will engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed. Alderon will also monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.).

Cumulative Effects Assessment

It is foreseeable that the Kami Terminal and other projects under consideration will contribute to cumulative effects on Community Services and Infrastructure as a result of the influx of several thousands of workers associated with this and other projects and the resulting increase in demand for services, including housing and road infrastructure. These effects are associated primarily with the two-year construction phase. Cumulative effects on regional housing supply are expected to occur with all projects except for the Arnaud Apatite-Magnetite mine, which will provide its own temporary housing for its additional workers. Cumulative effects on local traffic are expected to occur with all projects except for Second Port-Cartier Pellet Plant and the Arnaud Apatite-Magnetite mine.

However, after mitigation, the predicted residual cumulative effects of the Kami Terminal and other projects under consideration on the housing market in the RSA are considered to be short-term and not significant. The predicted residual cumulative effects of the Kami Terminal and other projects under consideration on traffic congestion in the LSA are considered to be short-term and not significant. No effects are anticipated in the mid-term or the long-term.

Accidents and Malfunctions

Given the distance between the Kami Terminal and the nearest residences and the city of Sept-Îles itself, forest fires, train derailments and stormwater retention pond breaches are unlikely to interact with Community Services and Infrastructure.

Significance of Residual Adverse Environmental Effects

A significant residual adverse environmental effect on Community Services and Infrastructure is one that results in interruptions, disruptions or disturbances to current or future services or infrastructure by Kami Terminal activities such that services and infrastructure are restricted, degraded, or cannot continue at present levels.

Given the mitigation measures proposed herein, the residual adverse environmental effects of construction activities on the regional housing market are expected to be of low magnitude, regional, short-term, continuous, reversible, and in a developed area. Likewise, through the above-mentioned mitigation measures, the residual adverse environmental effects of construction activities on local traffic conditions are expected to be of low magnitude, local, short-term, continuous, reversible and in a developed area. Overall, the residual adverse environmental effects on the Community Services and Infrastructure VEC are not likely to be significant.

A summary of the findings of the EIS are presented in Table 13.8. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Community Services and Infrastructure VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.8 Summary of the Findings of the Environmental Impact Statement – Community Services and Infrastructure

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Proponent
Changes to Housing Supply	Engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed.	Monitor local housing indicators (vacancy rates, rental prices, sale price, etc.).	The current vacancy rate in the Sept-Îles area housing market is very low. However, with mitigation, the effects on the regional housing market of an influx of workers during the Kami Terminal construction phase are expected to be not significant.	Construction activities from all projects in the region will require a workforce of several thousands of workers over the next few years. After mitigation, cumulative effects of the Kami Terminal are anticipated to be not significant. No residual cumulative effects are anticipated in the mid-term or the long-term.	Residual adverse environmental effects of accidents or malfunctions related to train derailments in the Sept-Îles area on housing and accommodations in the RSA are considered to be not significant.		Comments and concerns related to: <ul style="list-style-type: none"> • Cumulative effect on community services and infrastructure • Availability of housing for workers • Railway traffic • Issues with community services 	Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.
Changes to Traffic Conditions	Engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed.	None recommended	With mitigation, the effects on local traffic conditions of an influx of workers during the Kami Terminal construction phase are expected to be not significant.	Construction activities from all projects in the region will require a workforce of several thousands of workers over the next few years. After mitigation, cumulative effects of the Kami Terminal are anticipated to be not significant. No residual cumulative effects are anticipated in the mid-term or the long-term.	Residual adverse environmental effects of accidents or malfunctions related to train derailments in the Sept-Îles area on municipal services and infrastructure in the LSA are considered to be not significant.		Comments and concerns related to: <ul style="list-style-type: none"> • Cumulative effect on community services and infrastructure • Availability of housing for workers • Railway traffic • Issues with community services 	Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.

13.12 Health and Community Health

Health and Community Health are identified in the EIS guidelines in recognition of the fact that, changes that are brought about by projects in some instances may affect the health of individuals as well as community health and wellbeing at large.

In view of the characteristics of the Kami Terminal infrastructure within the Pointe-Noire Terminal and its distance from the main population center in Sept-Îles, the atmospheric environment has been established as having the only possible pathways with possible consequences on health. These include dust generation, increased noise levels and vibrations. Health issues associated with the atmospheric environment are assessed in Chapter 14. There, readers will find information regarding pertinent acts, guidelines and directives regarding health. No further assessment is therefore warranted with regards to health as a consequence of Kami Terminal development within the Pointe-Noire Terminal.

13.13 Economy, Employment, and Business

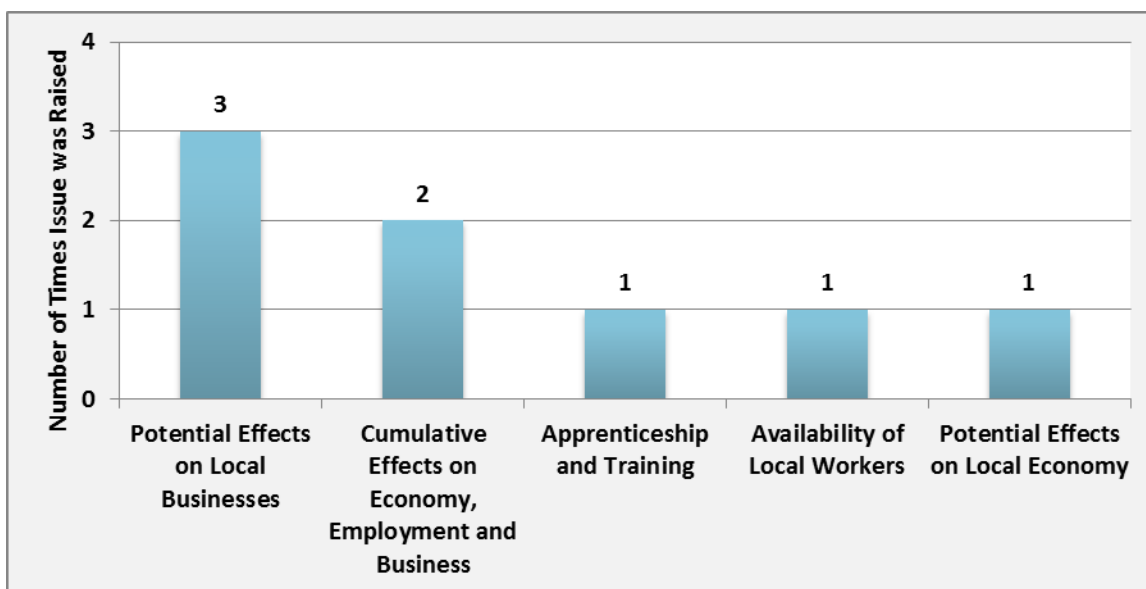
Economy, Employment, and Business was selected as a VEC due to potential Kami Terminal-VEC interactions that could result in improved economic conditions, increased levels of employment and increased business activity in the city of Sept-Îles and MRC de Sept-Rivières, in the Côte-Nord Administrative Region and in the Province of Québec as a whole. Understanding the Kami Terminal's effects on Economy, Employment, and Business is fundamental to assessing socio-economic implications for the wellbeing of residents and businesses.

The detailed assessment of the effects of the Kami Terminal on Economy, Employment, and Business is presented in Chapter 26 of this EIS. A detailed characterization of baseline conditions related to community services and infrastructure is provided in the Socio-economics Baseline Study (Appendix H, Stantec 2012d).

Issues

Issues and concerns related to this VEC were raised by the public and other stakeholders during the public consultations conducted for the Kami Terminal in Sept-Îles. Figure 13.20 shows the frequency of issues relating to the economy, employment and business identified by participants. Potential effects on local businesses from the Kami Terminal were discussed and stakeholders identified that Alderon should work with the local community and businesses to involve local businesses in the procurement process. Participants identified economic development organizations, and regional suppliers and contractors as stakeholders that should be informed of procurement requirements for the Kami Terminal. The City of Sept-Îles identified that they are investing to increase economic activity in the region over the next three years. Cumulative socio-economic effects are an issue of concern. In response to this issue, Alderon will collaborate with the regional economic forum to promote regional subcontracting for material and services. Alderon will also promote opportunities for local and Aboriginal businesses and workers.

Figure 13.20 Frequency of Issues Raised Related to the Economy, Employment, and Business



Methodology

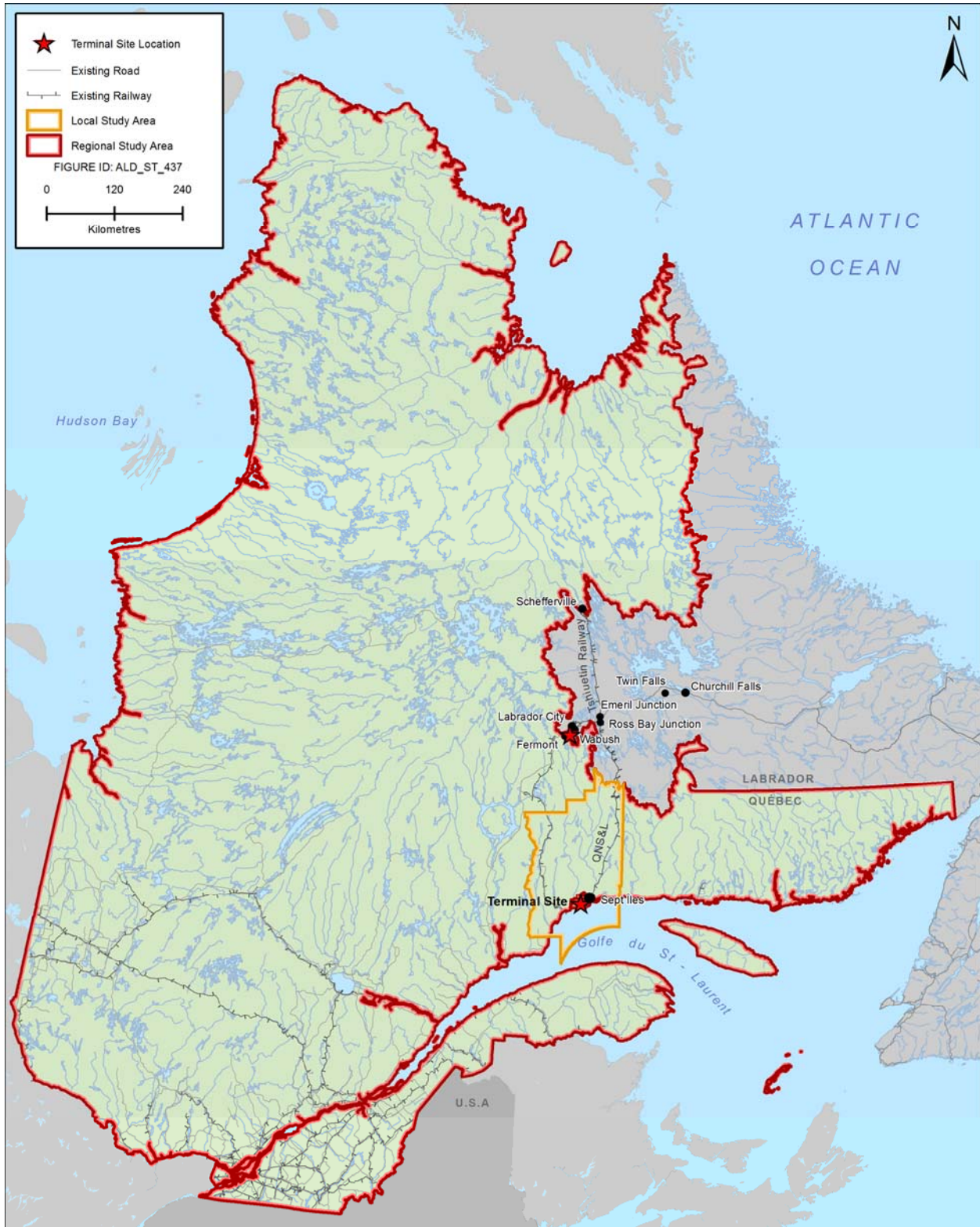
Potential Kami Terminal effects assessed for Economy, Employment, and Business are: 1) changes to regional employment; and 2) changes to regional businesses. Up to 300 workers will be required over the two-year construction phase, including 50 workers per year for the construction of rail infrastructure associated with the Kami Terminal. An estimated 17 workers will be employed during the operation and maintenance phase.

More significantly, the Kami Terminal will result in the disbursement of an estimated \$56 million in salaries and \$132 million in capital expenditures over the two-year Kami Terminal construction phase, as well as important but as yet unknown additional disbursements for goods and services during the approximately 17-year Kami Terminal operations and maintenance phase.

The LSA for the environmental effects assessment of the VEC on Economy, Employment, and Business includes the PDA and encompasses the MRC de Sept-Rivières in its entirety. Although it is recognized that some of the economic benefits of the Kami Terminal may extend beyond the Province of Québec, the RSA takes into account the area of influence limited to the Province of Québec. The LSA and RSA for Economy, Employment and Business are shown in Figure 13.21.

The responsibility for maximizing local and regional economic, employment and business benefits related to the Kami Terminal falls under the purview of the City of Sept-Îles, of the MRC de Sept-Rivières and of the Côte-Nord Administrative Region.

Figure 13.21 Economy, Employment, and Business Study Areas



Existing Environment

With a population of approximately 96,000 in 2009, Québec Côte-Nord Administrative Region accounted for 1.2 percent of the population of the province. The region's main resource processing centers, Baie-Comeau and Sept-Îles, account for a large share of the population. The main sources of employment in the region are manufacturing, health care and social assistance, retail trade, public administration, education, accommodation and food services as well as mining. In the City of Sept-Îles, the service sector employs the greatest number of workers.

Effects Assessment

The potential environmental effects to Economy, Employment, and Business relate mainly to the construction and operations and maintenance phases. It is expected that the construction phase will result in a positive effect on regional employment. Though a large part of the workforce required for construction will have to be recruited from outside the region due to the limited availability of qualified workers in the Sept-Îles area, it will increase opportunities for unemployed workers or young apprentices from the surrounding regions of Eastern Québec and elsewhere that are affected by high levels of unemployment. The construction phase may also produce positive effects for regional business. An estimated amount of \$132 million dollars in capital expenditures will be required over a period of two years for the construction of the Port operations component of the Kami Terminal. It is considered likely that it will be possible to source a certain amount of the materials and equipment required for construction from businesses located in the MRC de Sept-Rivières. However, the construction phase will also offer potential business opportunities to contractors and suppliers from elsewhere in the Province of Québec and beyond. The types of works that appear to be the most accessible to regional businesses represent about 46 percent of total construction-related capital expenditures.

Mitigation Measures

To enhance positive changes to regional employment, Alderon will incorporate the following measures:

- Collaborate with the regional economic forum; and,
- Promote opportunities for local and aboriginal workers.

To enhance positive changes to regional businesses, Alderon will incorporate the following measures:

- Collaborate with the regional economic forum;
- Promote regional subcontracting for materials and services;
- Promote opportunities for local and aboriginal businesses; and,
- Coordinate disruptions to utilities and infrastructure to minimize effects.

Cumulative Effects Assessment

The Kami Terminal is expected to contribute to cumulative effects with the six other projects considered. Both the Arnaud Apatite-Magnetite mine and Second Port-Cartier Pellet Plant are expected to have cumulative effects on regional employment over the short-term and long-term. The other four projects are only anticipated to have cumulative effects on regional employment over the short-term. With regard to regional business, all projects are expected to result in a significant positive effect over the short-term as well as the long-term.

The predicted residual positive cumulative effects of the projects under consideration on regional employment are considered to be long-term and significant. The predicted residual positive cumulative effects of the projects under consideration on regional businesses are considered to be long-term and significant.

Accidents and Malfunctions

Trail Derailment

A train derailment could also be expected to affect Economy, Employment, and Business through interruptions, disruptions or disturbances to employment activities and business activities in the vicinity of the Kami Terminal site. With restoration of service with minimal delay, the effects of Kami Terminal accidents such as a train derailment are expected to be of short duration and to be managed to acceptable levels through standard operating practices or through the application of best management or codified practices. Therefore, the resulting adverse environmental effects are not likely to be significant.

Significance of Residual Environmental Effects

The significance definition for potential environmental effects on Economy, Employment and Business is as follows: Environmental effects resulting from the Kami Terminal on this VEC are defined by increases or improvements to current or future economic conditions, levels of employment, or business activity by Kami Terminal activities such that economic conditions, levels of employment and business activity are increased or improved beyond present levels.

The predicted residual positive cumulative effects of the projects under consideration on regional employment are considered to be long-term and significant. The predicted residual positive cumulative effects of the projects under consideration on regional businesses are also considered to be long-term and significant.

Residual positive environmental effects of operations and maintenance activities on regional businesses are expected to be of high magnitude, regional, long-term, continuous and in a developed area. They are therefore considered to be significant.

A summary of the findings of the EIS are presented in Table 13.9. Section 4.15 of the Guidelines requires that the proponent summarize the relationship of each VEC to an Aboriginal group's potential or established Aboriginal and Treaty rights. The definition of the Economy, Employment, and Business VEC does not result in a relationship between that VEC and an Aboriginal group's potential or established Aboriginal and Treaty rights.

Table 13.9 Summary of the Findings of the Environmental Impact Statement – Economy, Employment, and Business

Potential Adverse Environmental Effects of Kami Terminal	Mitigation and Compensation	Follow-up	Residual Environmental Effects	Cumulative Effects	Effects of Accidents and Malfunctions	Applicable Standards or Guidelines	Comments from Aboriginal Groups and the Public (Responses are included in Chapter 10)	Commitments made by Proponent
Changes to regional employment	<ul style="list-style-type: none"> Collaborate with the Regional economic forum. Promote regional subcontracting for materials and services. Promote opportunities for local and Aboriginal businesses and workers. 	<ul style="list-style-type: none"> Promote opportunities for local and Aboriginal businesses and workers. Promote regional subcontracting for materials and services. 	<p>Up to 300 workers will be required for Kami Terminal construction. This represents 940,000 person-hours of work and an estimated \$56 million in salaries. Staffing requirements during the operations and maintenance phase are estimated to be in the order of 17 persons.</p> <p>Following application of enhancement and mitigation measures, the predicted residual positive effects of the Kami Terminal on regional employment are considered to be short-term and significant.</p>	<p>Construction activities required for a number of large-scale industrial and mining projects in the Sept-Îles area will require several thousands of workers over the next few years as well as hundreds of additional employees over the life of several of these projects.</p> <p>The predicted residual positive cumulative effects of the projects under consideration on regional employment are considered to be long-term and significant.</p>	<p>The most likely accident or malfunction linked to the Kami Terminal and this VEC would be a train derailment. The effects of a train derailment are expected to be of short duration and to be managed to acceptable levels through the coordination of disruptions to utilities and infrastructure to minimize effects.</p> <p>Residual adverse environmental effects of accidents or malfunctions related to train derailments in the Sept-Îles area on regional employment are therefore considered to be not significant.</p>		<p>Comments and concerns related to:</p> <ul style="list-style-type: none"> Cumulative effects to economy, employment and business Apprenticeship and training Availability of local workers Local businesses Potential effects on local economy 	<p>Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.</p>
Changes to regional businesses	<ul style="list-style-type: none"> Collaborate with the Regional economic forum Promote regional subcontracting for materials and services Promote opportunities for local and Aboriginal businesses and workers. Coordinate disruptions to utilities and infrastructure to minimize effects 	<ul style="list-style-type: none"> Promote regional subcontracting for materials and services. 	<p>An estimated \$132 million dollars in capital expenditures will be required for Kami Terminal construction. Even if the level of expenditures for the operations and maintenance phase is unknown at the present time, it should also represent important potential sources of income for regional businesses. Following application of enhancement and mitigation measures, the predicted residual positive effects of the Kami Terminal on regional businesses are considered to be long-term and significant.</p>	<p>Regional businesses are likely to benefit from contracts for materials and services both in the short-term and the long-term. The predicted residual positive cumulative effects of the projects under consideration on regional businesses are considered to be long-term and significant.</p>	<p>Residual adverse environmental effects of accidents or malfunctions related to train derailments in the Sept-Îles area on regional businesses are also considered to be not significant.</p>		<p>Comments and concerns related to:</p> <ul style="list-style-type: none"> Cumulative effects to economy, employment and business Apprenticeship and training Availability of local workers Local businesses Potential effects on local economy 	<p>Develop mitigation/effects management measures and monitoring after release from the EA process for implementation at the appropriate Kami Terminal phases.</p>

13.14 Conclusion

Although significant residual adverse environmental effects may occur in some instances of accidents and malfunctions, there is low likelihood of Kami Terminal-related accidents and malfunction to occur. The Kami Terminal is not likely to result in significant adverse residual environmental effects under normal operating conditions. In the case of Economy, Employment and Business, the residual effects will be positive.



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